

What's Love Got to Do with It? Diamonds and the Accumulation of De Beers, 1935-55

David Troy Cochrane

A Dissertation Submitted to
the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of
Doctor of Philosophy

Graduate Program in Social & Political Thought

York University

Toronto, Ontario

December 2015

©David Troy Cochrane 2015

ABSTRACT

What is accumulation? Visibly, accumulation is a quantitative process, demarcated in financial quantities. However, what is the meaning of those quantities? This question has been the subject of great debate within political economic thought. A new theory of accumulation, capital as power (CasP), argues that the financial quantities of accumulation express the distribution of power among the owners of capital over the qualitatively diverse, complex and mutating social order. With this dissertation, I explore the relationship between the quantities and qualities of accumulation by examining the De Beers diamond cartel, focusing on the period 1935-55. What does it mean to say ‘capital is power’ in the specific setting of the global diamond assemblage? Research and analysis led me to focus on four important relationships that De Beers had to establish, maintain and transform in its struggle for differential accumulation: with diamonds themselves; with potential and actual diamond buyers; with governments; and, with families, especially the Oppenheimer family that controlled De Beers for over 80 years.

ACKNOWLEDGEMENTS

My amazing partner, Shelley Boulton, deserves more praise than I can give for putting up with this PhD. Together with our children, Tigerlily and Daisy, she reminded me that life doesn't begin and end with my scholarly work. I could enjoy this project only because they occasionally freed me of its seemingly endless demands. Time spent with my family was a respite that helped me survive this degree. They cannot be thanked enough.

Next, I have to give special thanks to my supervisor, Jonathan Nitzan. It was his work with Shimshon Bichler that brought me to York. For a disillusioned economics major, Nitzan and Bichler's theory of capital as power offered a critical opening for my desire to understand business. I feel fortunate to have encountered an exciting, new intellectual framework like capital as power so early in its development and I hope to continue to participate in developing the theory and its analytical practices.

My engagement with capital as power depended on more than just Professor Nitzan. There were thoughtful, inquisitive fellow travellers similarly disillusioned with political economy, seeking a different approach to understanding the capitalist social order. Discussions with Sandy Hager, Joseph Baines, Jong-chul Kim, James McMahon and Joe Francis helped to develop my perspective on capitalist power. Jordan Brennan and Sean Starrs were frequent interlocutors offering my nascent ideas vociferous debate. The presenters and attendees at the Forum on Capital as Power conferences also deserve thanks for the numerous intriguing ideas and provocative criticisms they offered.

I have to acknowledge the importance of three other conferences influential for this project. The first was the 2008 Great Lakes Radical Political Economy Conference, where I received a positive, though critical, reception to my first presentation on capital as power. In particular, Daniel Moure, who was familiar with capital as power and happened to give one of the most cogent presentations I had ever heard, complimented my presentation. Considering he was someone I had only just met, his affirmation was very meaningful and I continue to value our conversations, even if he is half a world away. The second important conference was the Strategies of Critique organized annually by my department. In 2009, the topic was 'Love.' As a political economist, I was unsure what I could possibly present on. But, the idea of love led me to diamonds, which led me to De Beers. The third pivotal conference was the 2009 Rethinking

Marxism conference, where I presented on De Beers for the second time. After my presentation, Tim Di Muzio encouraged me – against my resistance – to make it my dissertation topic.

The other members of my committee, Professors Mark Peacock and J.J. McMurtry, deserve thanks for helping oversee this project. Their open-mindedness to novel approaches to political economy, combined with their bases of knowledge, helped me to see many aspects of this dissertation in new ways. Additionally, I'd like to give thanks to two of the professors for whom I was a teaching assistant. Professor Sharada Srinivasan encouraged my eclectic interpretations and offered much needed support and cajoling. Professor John Dwyer offered a model both for dynamic teaching and for philosophical curiosity.

I have been fortunate to make and keep some amazing friendships with people who have shown genuine interest in my research (and feigned some also, I'm sure). Certain friends will always be more important at certain times. But, their overall importance cannot be quantified or ranked, so, in order of when we met, as best as I can remember, thank you: Shawn Fulton, Scott Fulton, Laine Gable, Sarah Garden, Pete Garden, Colin Hall, Kendra Kemble, Jenn Hannotte, Jo-Anne McArthur, Adam Evans, karen emily suurttamm, Karen Hawley, Steph Kimball, Gordie Wornoff, Zac Vance, Linsey McGoey, Jeff Monaghan, Andréa Schmidt, Pete Vance, Kelly Fritsch, Eliot Che, Angela Mooney, Manon Gagnon, Lee Knuttila, Alessandra Renzi, Alison Porter and Jill Hannotte. Unfortunately, undoubtedly there are numerous others who deserve recognition, but whose importance I have failed to recall. I'm nervously certain that after this entire thing is finalized I will conjure up an overlooked friend from the past. If you are one of those people who deserved to be mentioned, I apologize, although I cannot help but wonder what you're doing surveying the acknowledgements of a PhD dissertation.

Missing from the list above are a few friends who have provided concrete material support for this dissertation in the form of research assistance, housing, copy editing, feedback or something else of tangible consequence for the project. They may consider their assistance a little thing, but its role in this work is irreducibly important. Thank you karen emily suurttamm, Etienne 'You'll always be Steve to me' Turpin, Jeff Monaghan, Aaron Gordon, Laura Kane, Andréa Schmidt and Anna Feigenbaum.

Two groups of friends outside those listed above also deserve to be mentioned. The first are the people I got to know through the online photography site Flickr. Their shared passion for photography gave me an outlet for a creative pursuit that did not fit into my graduate studies.

Online communities are real communities and this one deserves to be acknowledged here. The second group of friends are the newly developing ones at West Toronto Crossfit. I want to mention by name my coaches Jeff MacWilliams and Zeyna Shah, plus my frequent lifting partner, Ben Wilkinson. Without them, the final year of writing this dissertation would have been immeasurably more difficult.

Last, but not least, thanks goes to my extended family. I grew up in the same small town that both of my parents grew up in. I was surrounded by aunts and uncles and cousins. I didn't realize, at the time, what a special thing that was. But, now, as an adult, on the rare occasions when we get together, the timelessness of our bond becomes apparent. There are few people I feel more comfortable with than these people whom chance made me related to. The same is true, only more so, for my brothers, Cory and Ryan Cochrane. The three of us are very different people. I suspect they've considered me a big weirdo for our entire lives. Like all brothers, we fought. But, I know that they, together with their amazing wives and children, Christa, Holly, Kenzie, Kaida, Vaya and Hayes, will always throw open their doors for me and my family. As we get older, the time apart becomes longer. Yet, we're always welcome. It is heartening to know that their homes are our homes too, at least for three days at a time!

Among all my amazing family members special mention must be given to my Auntie Reenie Barnett. Without her support half of the research for this dissertation would have been impossible. She has also encouraged me at every step to continue to pursue academia.

As well, I want to take a moment to remember my grandparents, Errol and Lily Cochrane, and Dudley and Irene Barnett. I was lucky enough to have all four grandparents in my life into my 20s. The influence of their quite different personalities shaped me a great deal. In various ways, the best parts of myself, I owe to them.

Finally, my parents, Kirk and Cathy Cochrane, get the clean-up position in these acknowledgements. They fostered in me an intense curiosity, which is perhaps the most important ingredient to any academic undertakings. Beyond that, my Mom made sure I understood that there can be different answers to the same question. She helped me recognize that there is always more than one way to look at the world. My Dad made sure that I never got away with unsupported declarations and challenged me throughout my intellectual development.

For all these people, thanks are not enough, but I offer it anyway. Thank you.

TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
TABLE OF CONTENTS.....	vi
List of Figures.....	ix
List of Tables.....	x
List of Images.....	xi
Chapter 1: Introduction.....	1
I. The Introduction’s Introduction.....	1
II. Some Qualities of Diamonds and De Beers.....	17
i. The Pre-South African History of Diamonds.....	18
ii. The Pre-De Beers South African History of Diamonds.....	21
iii. The Early History of De Beers.....	24
iv. The Production of Gems.....	28
v. Conclusion to the Qualitative Introduction.....	31
III. The Quantities of Accumulation and Profit.....	32
i. Quantifying the Diamond Assemblage.....	42
ii. Conclusion to the Quantitative Introduction.....	60
IV. Introduction’s Conclusion.....	61
Chapter 2: Power and Price Construction in CasP.....	65
I. Introduction.....	65
II. Constructing Prices.....	67
III. Theorizing Power: Hobbes and Machiavelli.....	73
IV. Theorizing Power: Political Economy.....	78
V. The Theoretical Foundations of the State-Capital Distinction.....	83
VI. State of Capital / Capitalist Mode of Power.....	86
VII. Accumulating Power.....	89
VIII. Conclusion.....	99
Chapter 3: The Role of Diamonds in Accumulation I: What Diamond Is.....	101
I. Introduction.....	101
II. Commodities: Use, Exchange, Desire and Knowledge.....	105
III. Materiality.....	111
IV. Properties: What a Diamond Is.....	119
V. Proto-Conclusion.....	129
Chapter 4: The Role of Diamonds in Accumulation II: What Diamond Can Do.....	132
I. Introduction.....	132
II. Capacities: What a Diamond Can Do.....	135
i. Expressive Capacities.....	139
ii. Material Capacities.....	145
III. Classification: Putting Diamonds in their Place.....	150

IV. Conclusion	157
Chapter 5: Researching Diamond Knowledge among the Masses	160
I. Introduction	160
II. Theorizing Advertising	163
III. Researching the Actual and Possible Diamond Market.....	172
i. Trade Survey.....	173
ii. Consumer Survey.....	177
IV. Constructing the Diamond Market	187
V. Conclusion	198
Chapter 6: Advertising Diamonds as a ‘Mundane Objects’	202
I. Introduction	202
II. Differential Advertising	206
i. Differential Appearance.....	212
ii. Differential Content	214
iii. Differential Outlets	217
iv. Differential Objects.....	221
III. Advertising to Transform the Diamond Assemblage	223
i. Relations with the Generations	225
ii. The Diamond Knowledge of the Masses.....	231
iii. Relation between Meaning-making and Knowledge.....	239
iv. Relations with the Jewellers	241
v. War’s Transformations	247
vi. Men’s Relations with Diamonds.....	254
IV. Conclusion	259
Chapter 7: The Differential Governing of Diamonds	262
I. Introduction	262
II. Navigating De Beers Within the Capitalist Mode of Power	270
III. Mode of Power or Modes of Power?	277
IV. The Nationality of Capital	292
V. Other Logics.....	296
VI. The State of Sovereignty and Differential Accumulation	304
VII. Conclusion.....	311
Chapter 8: The Intersections of Family and Diamonds	318
I. Introduction	318
II. Theorizing the Family and Accumulation.....	328
i. Family and Marxist Value Theory.....	328
ii. Family and Neoclassical Value Theory	330
iii. Family and Theories of Business History.....	332
iv. Family Among the Powerful.....	336
III. Diamonds and Family	343
i. Family and the Masses.....	346
ii. Family and the Traders	350
iii. De Beers and the Oppenheimer Family.....	356
IV. Conclusion.....	370

Chapter 9: Conclusion: Diamonds & De Beers Between Then & Now	374
I. Introduction	374
II. Political Economy and the Constructions of Accounting	379
III. The Quantities of De Beers' Accumulation: 1967-2001	382
IV. The Qualities of De Beers' Accumulation: 1967-2001	387
V. De Beers: 2001 and Beyond.....	393
VI. Beyond Diamonds and De Beers: Lessons and Questions	397
i. The Political Economy of Things	398
ii. The Political Economy of Purchase and Use.....	400
iii. The Political Economy of the Elite.....	404
VII. Conclusion: The Need for Accumulation Studies.....	407
Constructing a Profit Series	413
Bibliography	418

List of Figures

Figure 1: Wartime Accumulation: De Beers v. US, UK and South Africa, 1889-1952.....	2
Figure 2: Labouring for Profits: Diamond Workers and De Beers Profits, 1911-55.....	13
Figure 3: Losing & Gaining Power: Differential Profits, De Beers vs. S&PComp, 1904-60	35
Figure 4: From Profits to Accumulation, De Beers vs. S&PComp, 1904-73.....	38
Figure 5: Shared Dynamics, Changes in Profits and Capitalization, 1909-1952.....	39
Figure 6: Diamond Imports: Industrials v. Gems, 1929-55.....	46
Figure 7: Diamond, Copper and Steel Use, 1900-55.....	47
Figure 8: Diamond Production and Purchase, 1929-56.....	48
Figure 9: Catalyzing Tradition: Diamonds & Marriage, 1929-60.....	51
Figure 10: Wartime Departure: Advertising and Mass Purchases, 1921-65	54
Figure 11: Producing & Controlling Diamonds: De Beers' Income Sources, 1904-52.....	58
Figure 12: The Nodes of Power Over & Power To	93
Figure 13: Covering the Market, Diamond Retail Prices, 1939-65	233
Figure 14: Import Volumes & Prices, Cut & Rough Diamonds, 1929-55	235
Figure 15: Conflicting Logics I: U.S. Corporate Profits Before and After Tax, 1929-2010.....	286
Figure 16: Conflicting Logics II: U.S. Corporate Profits relative to GDI, 1929-60.....	288
Figure 17: Gaining & Losing Power II: Differential Profits, De Beers vs. S&PComp, 1967-2001	383
Figure 18: The Slow Decline Resumes: De Beers v. U.S., 1967-2001	385
Figure 19: Marriage Matters: The Accumulation of De Beers and U.S. Marriage Rate, 1967-2001	391

List of Tables

Table 1: Jewellery Stands Out: Correlation of yearly change in spending by the masses with yearly change in advertising spending.....	55
Table 2: Closing the Gaps, changes in advertised diamond retail prices, 1939-65	234

List of Images

Image 1: Differential Appearance, De Beers Advertisement, <i>Life</i>	209
Image 2: Different From, Real Silk Advertisement, <i>Life</i>	210
Image 3: Different From, RCA Victor Advertisement, <i>Life</i>	211
Image 4: Targeting the Elites, Class Outlet Advertisement, multiple outlets.....	218
Image 5: Differentiating Diamonds and Other Commodities, multiple outlets.....	219
Image 6: Permanent Value and Dynastic Aspirations, multiple outlets	227
Image 7: Concerned with Windows, <i>National Jeweler</i> , September 1941	244
Image 8: War Affects the Diamond Campaign, multiple outlets.....	250
Image 9: For Brides or Bombers?, multiple outlets	251
Image 10: Brown Diamonds for Men, <i>The New Yorker</i> , December 1941	256

Chapter 1: Introduction

“Between the wish and the thing the world lies waiting.”

— Cormac McCarthy, *All the Pretty Horses*

“There’s more than one answer to these questions,
pointing me in a crooked line.”

— Indigo Girls, *Closer to Fine*

I. The Introduction’s Introduction

What is accumulation? Visibly, accumulation is a quantitative process, demarcated in financial quantities. However, what is the meaning of those quantities? This question has been the subject of great debate within political economic thought. The dominant theories of accumulation — neoclassical utility theory and Marxist labour value theory — are both dual quantity theories of value. By this, I mean, both theories postulate unobservable quanta as the determinants of the observable financial quantities. They bypass the complex and diverse qualities of the capitalist social order. A new theory of accumulation, capital as power (CasP), argues that the financial quantities of accumulation express the distribution of power among the owners of capital over the qualitatively diverse, complex and mutating social order. With this dissertation, I explore the relationship between the quantities and qualities of accumulation by

examining the De Beers diamond cartel, focusing on the period 1935-55.¹ What does it mean to say 'capital is power' in the specific setting of the global diamond assemblage?

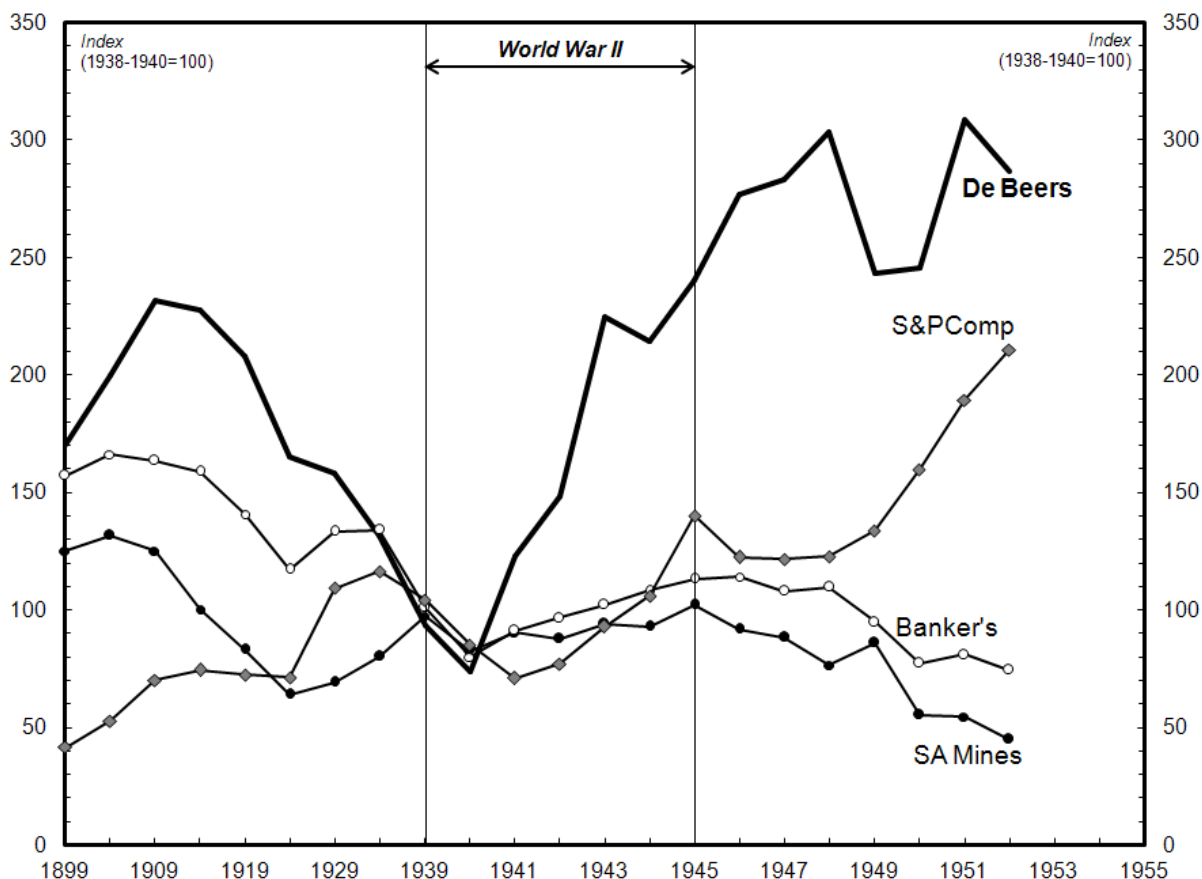


Figure 1: Wartime Accumulation: De Beers v. US, UK and South Africa, 1889-1952

DATA: De Beers: The Times (London), various issues; Investor's Monthly Manual Project, Yale School of Management; S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm); Banker's and SA Mines: Global Financial Data, series GBALLVM and GBBSAFMM, respectively.

NOTE: De Beers is the indexed market capitalization (preference and deferred shares, plus debentures). S&PComp, Banker's and SA Mines are indexes constructed for public corporations in the US, the UK and South Africa, respectively. De Beers, Banker's and SA Mines are adjusted for the UK-US Exchange Rate. 1899-1934: Data points are every five years and represent a ten-year moving average. 1939-1952: Data points are annual.

CasP originators Jonathan Nitzan and Shimshon Bichler (2009) theorize that the values of capital become meaningful in comparison with a benchmark. In other words, accumulation is a

¹ These years are an imprecise delineation. The boundary is fuzzy on both sides as I trace relations that defy such strict temporal demarcation.

differential process. Comparison of the market capitalization of De Beers with various benchmarks indexing American, British and South African capital results in a V-shape expressing long-term accumulatory decline reversing into gain with a 1940 inflection point (Figure 1).¹ The sharp inflection point in De Beers' capitalization became an analytical pivot as I tried to understand the qualitative changes that were translated into De Beers' capital values. Why had the company's power waned over the first part of the 20th century only to dramatically climb again with the outbreak of World War II?

To answer that question, I first performed additional quantitative analysis germane to the diamond trade. That analysis provided the firmament from which I explored the global diamond assemblage and the socio-physical conditions on which De Beers' accumulation depended. That exploration led me to focus on four important relationships that De Beers had to establish, maintain and transform in its struggle for differential accumulation: with diamonds themselves; with potential and actual diamond buyers; with governments; and, with families, especially the Oppenheimer family that controlled De Beers for over 80 years. Such considerations conflict with the standard value theories, which theorize accumulation as necessarily actualized through production.

The analytical chronology, and the relationship between the quantitative and qualitative analysis, are replicated in the dissertation, resulting in a somewhat unusual structure. The introduction is lengthy as it includes the quantitative findings that ground the subsequent chapters. In places, those chapters go into extensive detail to demonstrate just how granular the concerns of capitalists can become. As I discuss in the course of this dissertation, differential accumulation can be affected by entities and processes as diverse as the global conflagration of

¹ This graph is explained in more detail below.

WWII and the attitudes of New Jersey college students. Capitalists cannot take anything for granted; in principle, anything could become relevant in the translation of qualities into financial quantities. The importance of the very small-scale for accumulation can become lost in quantitative analysis when it agglomerates years into a single graph, table or figure. For example, I argue that among much else contained within De Beers' value was the seemingly minor reality of jewellers' window displays. Capitalists recognize the importance of such matters for their accumulation and, I argue, social scientists must also.

This dissertation falls under the presently non-existent field of 'accumulation studies.' The thesis treats the quantities of accumulation as a map to the on-going redistribution of capitalist power. Using that map, I have tried to move in a direction opposite to the construction of capital values, so as to understand the qualities these values express. Through the analysis of the qualities of De Beers' accumulation as a case study, I have cobbled together a range of methods for moving from the quantities to the qualities of accumulation. I make particular use of the actor-network-theory concepts of 'matters of concern' and 'mediators' (Latour 2005). The former are distinguished from 'matters of fact' and denote entities and processes accessible to intervention and transformation. The latter are distinguished from 'intermediaries' and include everything that makes a difference.

Actor-network-theory informed the nascent methodology of my approach as I traced concrete relations that comprised part of the global diamond assemblage. In this, I refrained from turning to sweeping concepts such as 'ideology' or 'hegemony' to explain De Beers power. The concept of power within my analysis is not used to explain De Beers' accumulation. Rather, power is what gives the analytical meaning to the quantities of the companies' accumulation and

it is power that must then be explained. In other words, power is the *explanandum*, not the *explanans*.¹ As much as possible, I tried to keep my explanations firmly rooted in the empirical.

The concepts of ‘matters of concern’ and ‘mediators’ focused my research and analysis as I followed associations among people and things that affected De Beers and diamonds. I set no *a priori* boundaries on where those associations might take me, although I had to contend with the availability of materials pertaining to the qualities of De Beers accumulation. With this analysis, I do not seek to establish a universal qualitative methodology attendant to the power theory of value. Rather, I deployed analytical tools that can initiate the development of accumulation studies as a field.

The fascination with diamonds is widespread with heavy doses of both attraction and repulsion. It is impossible to dissemble that intrigue from De Beers, the company that has dominated the trade to varying degrees for over a century. The 20th century history of the stone is indelibly wrapped up with the company’s history. Every decade since the 1980s, there is a new book from the popular press that ‘exposes’ De Beers, diamonds or both. In the 1980s there were David Koskoff’s *The Diamond World* (1981) and Edward Jay Epstein’s *The Rise and Fall of Diamonds* (1982b).² The 1990s saw Stefan Kanfer’s *The Last Empire* (1993), while the 2000s brought Janine Roberts’ *Glitter & Greed* (2003), as well as Tom Zoellner’s *The Heartless Stone* (2007). These texts are all highly critical accounts with varying degrees of hysteria and hyperbole. The authors treat De Beers as a uniquely devious company and grant the cartel far greater power and capacity than it actually possessed.

¹ The question of whether differential accumulation as an expression of power is the *explanans* or the *explanandum* was raised by Bob Jessop at the 2011 Capital as Power conference.

² Epstein has made the full text available online: <http://www.edwardjayepstein.com/diamond/prologue.htm>.

Since, as noted above, my analysis in this dissertation is grounded by a theory called ‘capital as *power*,’ it may seem strange that I am suggesting the company is less powerful than it is in these popular accounts, as well as in the popular perception. However, I am trying to understand how De Beers actually achieved and maintained its power. I am arguing that over the early part of the 20th century, the company’s power trended downward. Then, the company managed to reverse this decline during WWII and the immediate aftermath of the war. It did so in part through guile, in part through luck and always as a complex and indeterminate process of relationship formation and transformation.

I concur with the popular accounts that Ernest Oppenheimer was a genius businessman, as De Beers founder Cecil Rhodes had been before him. I also agree that both men engaged in unsavoury activities. However, I do not grant Ernest, his son Harry, or the company more generally, the almost omnipotent ability to get their way, as the popular authors do. As the epigraph notes, the world lies waiting. No matter how powerful De Beers became, the world always posed a challenge, not least because other entities had conflicting wishes. The on-going conflict and contention among these entities, some more powerful than others, is a recurring theme in this dissertation.

The above mentioned popular accounts depended on at least some of the same archival material that I accessed. But my analysis approached these materials rather differently. The authors of the popular accounts have generally accepted as fact the U.S. Department of Justice’s interpretation of events. These accounts also all appear to be rife with confirmation bias. Generally, the starting hypothesis of these books is that the social perception of diamonds is a myth and De Beers is responsible for that myth. The authors properly identify De Beers’ goal as profit and do an admirable job of mapping De Beers’ activities in pursuit of that goal. However,

they inappropriately portray De Beers as invariably capable of imposing its will on the world. According to this view, De Beers wanted to hoodwink the American consumers, and it succeeded. It wanted to sabotage the American government's legal actions against it, and it succeeded. It needed a docile, subservient British government and it got that. When it faced opposition, that opposition is invariably presented as a force for good against the evil corporation.

Absent from these accounts is the messiness — and frequent failures — of trying to transform a social order. Absent are those who could not be fully subsumed to De Beers' wishes and had to be reconciled with. Absent are the self-interested opponents who were not valiantly standing up to a greedy corporation but instead looking out for their own gains. Absent are the confusions, the missteps, the abandoned strategies and tactics, the failed goals, the internal conflicts, the shifting contexts, and the enormous efforts required to affect even the smallest change. I attempt to account for more of this messiness, the missteps, the failures — as well as the successes. This richer accounting is intended to exemplify what I argue is necessary to understanding corporate power, as opened up by the power theory of value. While the popular accounts adopt a vernacular focus on profits, my approach, framed by CasP, is a return to political economy's emphasis on value and accumulation.

Profits are an indelible aspect of accumulation. As will be explained in Chapter Three, expected profits are one of the 'elementary particles' of capitalization, which Nitzan and Bichler (2009) have emphasized as the defining mechanism of capitalism. The standard theories of value and accumulation theorize 'real' quanta as the determinants of nominal capital prices. In contrast, CasP conceives of capital prices as the emergent result of an intersubjective process that assesses all the qualities of the world that bear on capitalist power. Those prices become

meaningful when brought into comparison with some benchmark. The movement of this comparative figure expresses whether the capitalized entity is differentially accumulating or deaccumulating value. Within the CasP interpretative framework, this is synonymous with claiming that the owners of that entity are becoming more or less powerful relative to other owners. The question of what is being translated via capitalization is an open one and the one I explore through analysis of De Beers.

Accumulation is a political economic concept and has been deemed a political economic process. The analytical approach, grounded by the standard value theories, is to make accumulation dependent on production. Further, by these approaches, accumulation is treated as a generalized, aggregate process. Particular businesses are treated as undifferentiated and their qualitative differentiation is rendered political economically meaningless.

I argue that the differential approach to accumulation makes individual businesses, and their particularities, relevant for political economic analysis. As such, I am drawing on two fields that ought to be in constant communication, but remain largely separate: business history and political economy. My analysis can be viewed as business level political economy. Yet, in moving to the level of the business, and trying to understand accumulation by focusing on a specific business, the power theory of value transcends politics and economics, as well as the conjunction of the two. Instead, businesses in general affect, and are affected by, entities and processes typically reserved for other disciplines. My analysis, grounded by De Beers' accumulatory fortunes, led me to marriage, rocks, nationalism, wires, magazines and much, much more.

Political economy's emphasis is on general 'structuring' mechanisms. However, particular businesses are the necessary locales from which the 'structures' emerge. There is no

‘capitalism’ without the decision-making of capitalists. How are those decisions made? Are they fully determined or do the different entities involved make a difference? What is the relationship between these ‘particles’ and the entities they comprise? Fordism was bigger than Henry Ford and his eponymous company, but it nonetheless needed Ford – both man and company – as a high-profile progenitor of the attributes condensed under the term ‘Fordism.’ I argue that the study of accumulation by particular companies can offer insights into how structures emerge and proliferate.

The features of capitalist society have to be *universalized*. They are not instantly adopted everywhere as a logically necessary progression. For example, Frederick W. Taylor’s means and methods of ‘scientific management’ became widespread through the writings and lecturing of Taylor and his acolytes to managers, foremen and manufacturers (Nelson 1992). The way the principles of scientific management were actually implemented were affected by numerous factors, not least the specific output of the rationalizing factory.

Even though capitalization is the fundamental process of capitalism, capitalization is not distributed uniformly and universally. Instead, the practices of capitalization continue to be spread and altered. Similarly, the manufacturing processes encapsulated by the concept of Fordism had to be propagated. Propagation results in boundaries between those who have and those who have not adopted the practices. For example, when Alfred Chandler (1990) identified the ‘strategy and structure’ of corporate decentralization, he and his followers mistook a bounded collective for a universal necessity. This results in inattention to both the spread of the principles and the variation and evolution of practices of strategy and structure. The various mechanisms of proliferation would have affected the implementation of decentralization. Further, those who did not adopt the decentralized strategy and structure should not be treated as analytically irrelevant.

This becomes important for my argument in Chapter Eight, where I claim that family remains a potent force within business, even if it operates according to a logic that conflicts with the rationalizations emphasized by Chandler and business studies more generally.

This introduction consists of two broad sections. The first is a qualitative introduction to De Beers and the diamond assemblage. This section will include the history of diamonds and De Beers before the era on which I focus, 1930-55. The second is a quantitative introduction to De Beers' accumulation. It includes the chart that motivated this dissertation and subsequent quantitative findings. These offer a map for the remainder of the dissertation, which explores important qualitative actualities accounted for by those quantities in the 1935-55 period.

Jonathan Nitzan and Shimshon Bichler (2009) wrote, "To understand capitalism is to decipher the link between quality and quantity, to reduce the multifaceted nature of social power to the universal appearance of capital accumulation" (p. 124). Capitalists make sense of the world quantitatively. Capitalization constitutes what Michel Callon (1986) called an 'obligatory passage point' for calculative accounts that continually translate the world into commensurable units. Eventually, those quantities get translated into the financial quantities of capital. In capitalist society, capitalization is *the* obligatory passage point.

As will be developed more fully in Chapter Two, capital values are meaningful to market participants not as an absolute, but as a differential measure of the distribution of power among owners.¹ Against the standard theories of value, which locate value creation entirely within production, capital as power (CasP) understands financial values as a measure of power over the

¹ The term 'market participants' is chosen as a catch-all for all who perform the calculative activities that become capital values: investors, traders, executives, accountants, market makers, fund managers, etc. It is deliberately amorphous, in part due to the opacity of the calculative processes, including the buying and selling that move share valuations second-by-second during a trading day. Those decisions are informed by yet other calculations performed by analysts, researchers and others. I will eventually adopt the term 'assayers,' which is explained in Chapter Two.

diverse social order of which production is just one facet. From this viewpoint, the differential market capitalization of De Beers offered a map for analysis of the qualitative entities and processes that bear on its accumulation.

The dissertation is structured around relationships that were relevant to De Beers' capitalization and accumulation. De Beers did not simply accept these relationships as given but actively intervened to transform them in its interests. The objects of intervention will be considered *matters of concern*. Matters of concern are contrasted with *matters of fact*.¹ Matters of fact are, for my purposes, established, stabilized entities that are considered transcendent and immutable from the perspective of difference-makers. In this analysis the primary difference-makers are capitalists whose decisions are motivated by accumulation. Other difference-makers and other motives will be considered as they come into conflict with capitalist action.

As an example, the atomic crystal structure of diamonds — described as isometric-hexoctahedral — is a matter of fact that transcended De Beers accumulatory struggles. It is this structure that allows carbon to exist as diamond. De Beers treated the structure as a given fact. Conversely, the process of diamond formation was a matter of concern. Through the company's history the threat of synthetic diamonds loomed (Hazen 1999). A cheap, easy process of making diamonds would destroy the foundational strategy of De Beers' value: supply control. As such, the company intervened in the form of diamond research. De Beers eventually developed its own methods for manufacturing diamonds. However, it went further and allegedly formed an illegal trust with GE, which also developed a method for synthesizing diamonds.²

¹ This distinction between matters of fact and matters of concern comes from Bruno Latour (2005).

² In 2004, De Beers pled guilty to price fixing in the industrial diamond market. The bulk of industrial stones are now artificial.

Matters of concern can exist at any scale, from the globe spanning British Empire to an individual diamond. Although social scientific analysis can deploy any sort of transcendent entity, such as production or ideology, with relatively little cost, capitalists must intervene in costly, concrete ways. Intervening in the British Empire takes place not within its transcendent ‘form’ — what Timothy Morton (2013) would describe as a hyperobject — but in a specific locale, face-to-face with a representative of the Colonial Office, or perhaps in a letter to the Prime Minister. Intervening in a single diamond can be a nerve wracking endeavour if that stone is worth millions of dollars as misapplied force shatters it.

The matters of concern considered in this dissertation are: diamonds themselves (Chapters Three and Four); the diamond buying masses (Chapters Five and Six); the governing of the diamond trade (Chapter Seven); and the relationships between family and diamonds (Chapter Eight). These matters are far from constituting a comprehensive tally of De Beers’ concerns. One of my analytical stances is that no analysis of accumulation can account for every relationship that has been translated into the quantities of accumulation. The standard value theories offer *a priori* validation of certain analytical choices as relevant to accumulation, namely the focus on production and, in the case of Marxist theory, labour. CasP offers no such boundaries. Instead, the possible entities that bear on a company’s accumulation are endless, once we start unfolding the ‘black boxes’ that comprise the qualities of accumulation.

It is perhaps notable that there is no chapter on De Beers’ relationship with labour. The labour of diamond extraction actually earns a mention in volume one of Karl Marx’s *Capital*:

Diamonds are of very rare occurrence on the earth’s surface, and hence their discovery costs, on an average, a great deal of labour time. Consequently, much labour is represented in a small compass. Jacob doubts whether gold has ever been paid for at its full value. This applies still more to diamonds (Marx 1967a, p.47).

So, why does labour get excluded from my analysis? On the one hand, this is a consequence of my analytical impulses, which are partially a response to the productivist bias of political economy. That response lead me to focus on non-labour and non-production components of De Beers' accumulation. On the other hand, labour's relevance for the dynamics of De Beers' accumulation during the period of my analysis is questionable. Production is obviously important. However, it is not singularly important as in the standard value theories.

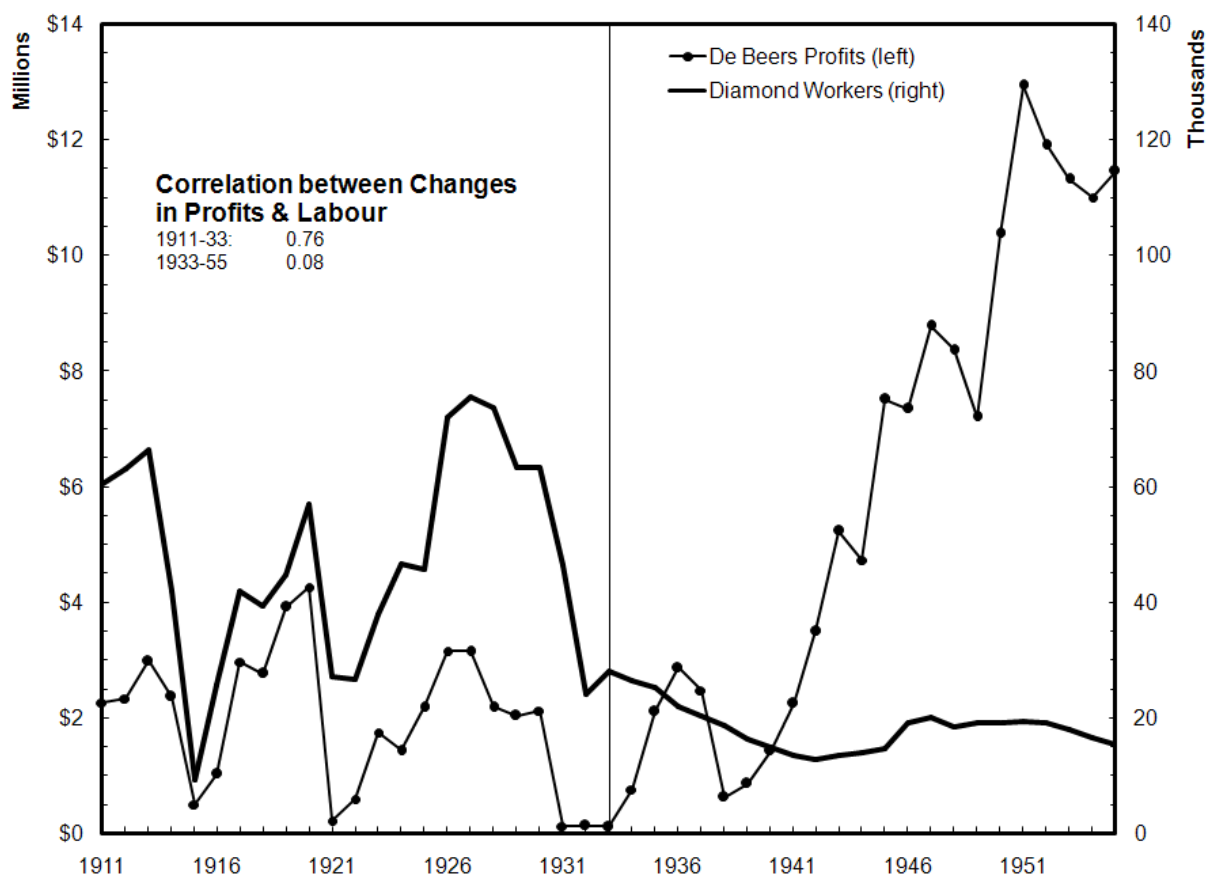


Figure 2: Labouring for Profits: Diamond Workers and De Beers Profits, 1911-55

DATA: Diamond workers: Union Statistics for Fifty Years, series G4-5; South Africa Retail Prices: ibid, series H23; De Beers Profits: The Times (London), various issues; selected De Beers' annual reports (Guildhall City Archives).

NOTE: Diamond workers are all the South African workers employed in the diamond industry. 'Real' profits are nominal profits divided by a price index for South Africa retail prices (1938-40 = 100). Correlations are between the year-to-year change in profits and diamond workers.

Labour was not a uniquely important, or decisive, factor in the dynamics of De Beers' accumulation during the period of my analysis. Figure 2 compares De Beers' profits with the number of workers in South Africa's diamond industry. The vast majority of South Africa's diamond workers were employed by De Beers. As well, over most of the time frame of the graph, almost all of De Beers' diamond miners were employed in South Africa. What the graph expresses is a decisive break in the relationship between De Beers' profits and the labour of diamond extraction. From 1911 to 1933 the correlation in the year-to-year change in profits and workers was very high at 0.76. From 1933 to 1955 the correlation was insignificant.¹

This strong shift in the correlation suggests that before 1933, before the Great Depression, during the years largely before Ernest Oppenheimer gain control and re-organized the cartel, diamond labour was much more important for diamond profits. After 1933, which includes the period on which I'm focused, there is little connection between De Beers' profits and the number of diamond workers they employed. As will be explained in more detail below (Figure 11), De Beers' earnings came increasingly from its role coordinating the diamond market and less from its own extraction activities.

I am not suggesting labour was unimportant for De Beers' accumulation. Part of my argument is that the qualitative aspects of accumulation cannot be wholly discerned through quantitative reduction. Rather, quantitative analysis provides a map of accumulation. However, the exploration of the qualities mapped will lead to other than those directly quantified. Labour and production are undeniably important. However, other relationships – generally overlooked by political economy – are also important to accumulation. For example, there is little chance of

¹ It has become axiomatic in the social sciences that “correlation does not imply causation.” However, the axiom ought not be taken as an indictment of correlation, but rather of quantitative analysis without a qualitative account.

correlating De Beers' accumulation to some measure of family. Nonetheless, Chapter Eight examines myriad ways family is consequential for the global diamond assemblage and, therefore, relevant to De Beers' accumulation. A chapter could have been devoted to labour and production. I made an analytical choice because I could not consider all the relationships of consequence to De Beers' differential gains.

Marx was not the only early political economist to note the value of diamonds in his writing. In *The Wealth of Nations*, Adam Smith (2000) used diamonds, which he referred to as "the greatest of all superfluities" (p. 237), and water to highlight the importance of the distinction between 'use value' and 'exchange value' (p. 31-2). Frédéric Bastiat (1996) employed diamond in his explanation for why scarcity, rather than labour, is the determination of value (Ch. 5). The diamond's peculiarity as a commodity was such that, already by 1850, Bastiat could observe how economists used diamond "to elucidate the laws of value or to indicate the so-called disturbances of these laws" (p. 109).

In a way, I am resurrecting a tradition of writing on value through the diamond. A key difference is that my classical predecessors merely used diamond as an passing exemplar, intending to demonstrate how their theory functions even among unusual, rare objects at the extreme of the usefulness-price dichotomy. If the 'greatest of all superfluities' could be understood with their value theory then surely the value of more everyday objects like coats, iron and corn could be understood with that theory. Despite important difference among them, Smith, Marx and Bastiat all theorized value such that the peculiar qualities of the objects are of no consequence. Observable *nominal* quantities are, by these theories, determined by underlying *real* quantities.

For example, in the diamond-labour quote above, Marx is making the distinction between real *value* and nominal *exchange-value*. He suggests that the real value — the value of the labour necessary to produce a diamond — is greater than the money realized through the sale of a diamond. The question of how, precisely, real value relates to exchange value is the core of Marxist value debates.¹

While standard value theories begin at the bottom, with the commodity, CasP begins at the top, with accumulation. Diamonds are valued neither on the basis of the labour required for its extraction nor on the differences between the desires to buy and sell the stones. Rather, they are valued according to the distribution of power among those who vie for the stones. The determinants of the distribution of power are a complex, murky, intertwined mess of the objective and the subjective, including labour, production, desire, and much besides. According to CasP, capitalization is a translation of the mess of reality into relatively simple financial quantities that express the power distribution.

Returning to the matter of what has been included and what has been excluded in my account, the relations that comprise and organize the chapters of the dissertation constitute just a few of the qualities of De Beers accumulation. Other relations such as with labour, other mining companies, South Africa's racial policies were — and are — relevant to the valuation of De Beers and, as such, have been matters of concern. No account of the qualities of accumulation can be definitive. Such accounts can do a better or worse job of helping us understand the actions of a capitalist entity as they bear on its valuation. However, moving from the 'universal

¹ For the details of these debates see Nitzan & Bichler (2009 Chs. 6-7). Some Marxist scholars deny that Marx intended to explain nominal prices in a quantitative manner. Rather, these scholars argue, Marx was supposedly developing a so called 'value theory of labour' (Elson 1979). However, other Marxists dispute this and insist that the transformation problem - how exchange value relates to real value and vice versa - is a tempest in a teapot and Marx's intended calculative translation is sound (for instance Kliman 2007).

appearance of capital accumulation' to the actual qualities that constitute a corporation's social power is like zooming in on a fractal: the picture never resolves into absolute determinants, but continuously unfolds new complexities. Analysis can do a better or worse job, but such assessments will always be dependent on the purpose of the analysis.

II. Some Qualities of Diamonds and De Beers

This part of the introduction sets up diamonds and De Beers for the subsequent analysis. Although the section is historical in its scope, the intention is to present structural features of the diamond assemblage that can be considered 'matters of fact' for the remainder of the dissertation. That is to say, while they may not have been matters of fact for De Beers for the entirety of the time period of my analysis, they are matters of fact for the analysis.

For example, the political and cultural life of the city of Kimberley, South Africa is undoubtedly as variable as those of any other city. Diamonds and mining are vitally important to the city, and the city continues to play an important role in the global diamond assemblage. That importance drew Ernest Oppenheimer into the city's politics, a foray which gets briefly discussed in Chapter Seven. The city was certainly a matter of concern for De Beers, earning frequent mention in the Chairman's annual address to shareholders. However, I do not consider the myriad transformations within the city that would have occurred over the period of my analysis or the effects of those changes on the diamond assemblage. Instead, the city is treated as a 'black box.' From the perspective of my analysis, the city's existence was simply a fact with which De Beers had to contend.

Another example is the legacy of Cecil Rhodes. Rhodes was celebrated for his business successes and for his contributions to the British Empire. Rudyard Kipling described Rhodes as a

“Dreamer devout.”¹ However, even during his life, Rhodes’ legacy began to tarnish as the European colonial project was increasingly considered both a humanitarian and a financial disaster. There is no evidence that De Beers worked to counter the worsening legacy of its founder. Had it done so, it may have worked against the company’s interests when, after WWII, it negotiated with post-colonial governments to remain in the cartel.

Metaphorically, these facts are akin to geology’s place in the history of a city. Geology is relevant to all cities, and some more than others. However, the make-up of the ground on which cities are built need not be considered by the historian to construct a meaningful and useful narrative of the city. With this section, I quickly set up some of the interesting and relevant facts that comprise the bedrock on which De Beers and the global diamond assemblage stood as the company intervened in and was affected by the world.

i. The Pre-South African History of Diamonds

Diamonds themselves have played an indispensable role in the construction of their history (R. Tappert & M. C. Tappert 2011, p.93). Given that diamonds are born hundreds of kilometres below the Earth’s surface, knowledge of diamonds’ origins depends on access to the materials found there. However, the Earth at such depths is out of our reach. We depend on the materials travelling to regions of the Earth more accessible and hospitable to our probing. Usually, when materials from deep in the crust travel toward the surface they are transformed, erasing much of their own history. Diamonds, though, are an important exception.

¹ Kipling’s tribute to Rhodes, titled ‘The Burial,’ is available on Wikisource: [https://en.wikisource.org/wiki/The_Burial_\(Kipling\)](https://en.wikisource.org/wiki/The_Burial_(Kipling))

When diamonds form, they often envelop other bits of deep crust. For the gem and industrial trade, these foreign inhabitants, called inclusions, are unwelcome. However, for geologists, they are precious. Protected by the diamond, this geological material is preserved in its original state. Using this material, geologists have been able to construct a narrative of the origin of diamond. De Beers has been an important participant in this research, providing researchers with diamonds in exchange for access to the knowledge created.

More details about the current science of diamond origins is provided in Chapter Three, but briefly, when carbon containing fluids come into the right combination of chemicals, heat and pressure, the carbon crystallizes out of the solution (Stachel & Harris 2009). Outside the right heat and pressure conditions, the carbon crystallizes into graphite. Diamonds only become accessible to humans if an eruption of magma originating below the crystal's location carries them toward the surface. Therefore, the distribution of diamonds across the Earth's surface depended on the improbable combination of the chance production of diamonds with a chance eruption.

These eruptions formed the pipes that are now mined for diamonds. Most of the pipes were churned back into the Earth's crust by on-going tectonic activity. Those that survived are within the oldest parts of continents known as cratons. However, hydrologic and meteorologic activity distributed some of this material, including the diamonds, over the surface of the Earth, forming what are known as alluvial deposits. It was these diamonds that were first discovered by humans.

The earliest source of diamonds to be systematically exploited was in India, possible as early as 800 B.C.E. It was these diamonds that were the basis of the early myths about the stones, such as conflicting claims that the stones were poisonous and could be used to cure disease. It

was also from these sources that some of the world's most famous diamonds came. These famous diamonds have an on-going social role to play in the meaning — and therefore the value — of the diamonds available to the masses. For example, the mystique of the Hope diamond, with tales of misfortune that befell its owners, get distributed among the masses and contributes to the popular mystique of diamonds.

Eric Bruton (1971) suggested that the historical social role of diamonds is owing to the fact they are “possibly the greatest concentrated form of wealth which is negotiable almost anywhere” (p. 5). It was said about the Koh-i-Noor that it was equal in worth to a half day of the entire world's labour. This notion of a windfall contained in a stone was a popular association of diamonds when most people would never have seen one. The idea is recirculated whenever movies like *A Fish Called Wanda*, *The Pink Panther* or *Reservoir Dogs* have diamonds as the object of criminal desire.

Indian production was very low, at about 50,000 to 100,000 carats per year (A. A. Levinson 1998). With India as the only source of diamonds for over 2,000 years, these low quantities ensured the diamonds would be available only to the most powerful. Additionally, for centuries there were export restrictions on the Indian stones, which meant the few stones that made it to Europe were effectively reserved for royalty. This was a component in diamond's association with luxury and power.

In 1730, diamonds were discovered in Brazil. The marked increase in diamonds available for sale in Europe — from about 3,500 carats per year to over 50,000 carats — caused prices to drastically decline “with rough stones selling for as little as 30 percent of their previous prices” (A. A. Levinson 1998, p.75). Even at these lower prices, diamonds remained well out of the budget of the average European.

One of the responses to the new source of diamonds was to claim that the stones were not actually diamond. Similar claims were made in 1866 when diamonds were discovered in southern Africa. It is likely that the jewellers selling to the monied few who could afford diamonds in the 18th and 19th century were differentiating among the stones according to their supposed, with implicit or explicit claims about what that meant. Claims about stone quality based on geographical origins continued into the 20th century. Mail order jewellers even listed the South African mines from which stones supposedly originated.

India's diamond production has remained meagre and it has had little impact on the global trade. However, as will be discussed below, India has become an important diamond trade and cutting centre. Diamonds from South America were important during WWII as the U.S. negotiated for the entirety of the industrial quality stones produced.¹ Yet, the demands for industrial diamonds during the war were far greater than what the South American sources could produce, which meant the Americans had to turn to De Beers, as will be discussed in Chapter Seven.

ii. The Pre-De Beers South African History of Diamonds

The quantities of diamonds coming out of Africa dwarfed both Indian and Brazilian production. Alfred Levinson (1998) noted that it took Brazil only 200 years to match over 2000 years of output from India (p. 79). The South African sources produced an equivalent quantity in just 15 years. This extraordinary increase in quantity caused diamond prices to wildly fluctuate

¹ Subsequent to the diamonds discovered in Brazil, marginal sources of stones were found in Venezuela and Guyana

and led both to the stones becoming available to the masses and to the monopolization of production by De Beers.

The first stones found in Southern Africa were alluvial, just as they had been in India and Brazil. However, the stones were soon traced back to the pipes that had brought them within human reach. The discovery of the new pipes was more important than just the increase in initial quantity as it augmented the knowledge of geologists and prospectors, which helped in the location of additional diamond sources. With the knowledge gained about kimberlite pipes, the initial pipe soon became two and then three.

The discovery of diamonds in southern Africa fundamentally changed the global diamond assemblage. The enduring consequence closest to the new source was the establishment of Kimberley, which continues to be an important hub in the global trade. The stones also played an important role in the early history of South Africa. The story that in 1867 colonial secretary Sir Richard Southey held up a large rough stone in Parliament House and declared, “This diamond is the rock upon which the future success of South Africa will be built” is likely apocryphal. However, the invention of the story evidences the importance of the stones to South Africa, then called the Cape Colony.

The impact of diamonds on South Africa meant they had an impact on the British Empire. Although the diamond rush produced much wealth, it also created problems for the colonial British government. At the time diamonds were discovered, the region was a divided among British colonial provinces, native African lands and Boer states. The so-called ‘mineral revolution,’ which was the discovery of diamonds and gold in southern Africa, resulted in heightened tensions among the groups living in the region (Farnie 1956; Worden 2012).

The Boers controlled much of the interior of southern Africa, having pursued land suitable for agriculture. The discovery of mineral wealth brought prospectors, who were primarily British. Eventually, diamond diggers who flocked to the Boer-controlled regions and then declared independence.

In 1871, as part of the fall-out from the warring between the diggers and the Boers, the British annexed Griqualand West, the site of Kimberley, to its Cape Colony. Simmering discontentment among the Boers, combined with the colonial ambitions of the British, reached a head in 1880 with the First Anglo-Boer War. The conflict was a series of minor skirmishes in which the British were largely bested. A peace was achieved in 1881. However, the sources of the tensions were not resolved and, in 1899, the Second Anglo-Boer War broke out. This time, the trigger was a raid organized by Cecil Rhodes, who was the Prime Minister of the Cape Colony, in addition to being the chairman of De Beers. The Boer offensive following the raid led the British to mount a much more vigorous campaign than during the first war. The result of the war was the annexation of the two Boer states in 1902 and the creation of the Union of South Africa in 1910.

The wars and the annexations meant South Africa's population was a mix of indigenous Africans and whites of both British and Boer descent. This would be an important factor in South Africa's politics in which De Beers found itself a frequent target of Boer-supported Nationalist governments. The wealthy Oppenheimer family, of Jewish and British origins, was a scapegoat for Boer resentments, especially after both Ernest and Harry Oppenheimer became high profile opponents of Apartheid. As *The Economist* described the matter: "The South African Nationalists play a complicated game of politics with only three well-thumbed cards. These are the black bogey, the British connection and [the anti-Semitic Jewish caricature] 'Hoggenheimer.'

... It is no accident that ‘Hoggenheimer’ rhymes with Oppenheimer” (quoted in Hocking 1973, p.244).

Much of South Africa’s wealth depended on mining. Yet, this made the mining companies convenient temporary enemies for the government. As a British diamond company controlled by the most famous capitalist in the country, who also happened to be Jewish, in a country where racial enmity was both anti-black and anti-Semitic, De Beers was a particularly compelling target.

iii. The Early History of De Beers

The discovery of diamonds led to a diamond rush and numerous diggers worked small plots. Cecil Rhodes had travelled to South Africa to work on a farm with his brother. When his brother left the farm to join the diamond rush, Rhodes went with him. He initially intending to work as a digger. However, his efforts were futile and he turned to selling water. He had the luck or foresight – depending on the account – to have acquired a water pump as the deepening claims began to require them.

Initially, the Colonial government imposed restrictions on the size of plots. However, these were difficult to maintain as the individually owned diggings moved deeper and deeper. The walls separating the plots became unstable. The restrictions were removed in 1876, which allowed for amalgamation and ownership concentration.

Rhodes used the profits from his equipment rentals to buy up plots at a discount as diggers abandoned them as empty of diamonds and therefore, worthless. He also entered into partnerships with diggers who were unwilling to completely sell their claims. A drop in diamond prices due to the increased quantity of stones coming from the South African mines helped to

lower the price of the claims. The instability of diamond prices, which De Beers' would later seek to eliminate with its monopoly control, was an important component of Rhodes' eventual consolidation the monopoly.

By 1880, Rhodes was one of the largest owners of claims and he formed the De Beers Mining Co. He continued to buy up claims and increase his control of South Africa's diamond mines. By 1887 he had fully secured one of the three major diamondiferous pipes, also named De Beers. Rhodes encountered resistance to his growing domination, particularly from Barney Barnato who had also amalgamated a large ownership of the mining claims. Through persuasion and financial maneuvering, Rhodes eventually gained Barnato as an ally. Then, together with Barnato, and with the backing of the Rothschild bankers and a coterie of London jewellers, Rhodes successfully deposed the remaining opposition and secured an effective monopolization of South Africa's diamond production. De Beers Consolidated Mines Ltd. brought together De Beers Mining Co. and Barnato's company, Kimberley Central, and was incorporated in 1888.

With accumulation as its goal, the guiding principle of De Beers' operations was supply control. The strategy had twin components. The first component was production level management. One of the first things Rhodes did when he gained control of the South African mines was to slash production by 40-50 percent. Rhodes would die in March 1902 never knowing a major challenge to De Beers' production monopoly. However, a major new source had already been discovered several years earlier and would be important in the destabilization of the De Beers' monopoly. The meaning of the exploitation of this new source by the Premier mine will be discussed below.

The second component of the supply control principle was single channel selling. The original cartel was actually comprised of two entities that are now generally conflated into De

Beers. The first entity, the diamond company, was responsible for production and, for the first few years after it succeeded in monopolizing Southern African production, the company extracted between 90 and 95 percent of the world's diamonds. The second entity, the single channel of diamond marketing, was known as The Syndicate. It was a coalition of ten London jewellers that divided up De Beers' production. The jewellers had helped fund De Beers' monopolization. As such, the two entities were closely aligned, and effectively jointly managed, since the jewellers owned a large portion of De Beers shares. However, De Beers and The Syndicate were not synonymous and over the decades after the cartel's formation there was frequent friction. That friction would be important in the ability of Ernest Oppenheimer to gain control of De Beers, as will be discussed in Chapter Eight.

One point of contention was The Syndicate's obligation to purchase the entirety of De Beers' annual production. Although the two sides tried to closely coordinate supply with expected sales at prevailing prices, in line with the central principle of supply control, divergences occurred for various reasons. First, it took time to discern the state of diamond desire and possible sales. Second, production could not be slowed or shut down in an instant. Later, when there was more substantial production outside De Beers, The Syndicate reached agreements with some producers to also market their stones. They committed to buy certain quantities of stones and had to meet their obligations even in times of low demand. In such situations, given the cross-directorships between the Syndicate and the mining company, De Beers' production was treated as a buffer. Instead of all producers sharing in the reduction of supply, De Beers was expected to much more drastically cut their own. This practice was upsetting to both De Beers' shareholders and the government of South Africa. The other

producers were largely outside South Africa and the government considered it unfair that it was losing jobs and income due to the production shutdowns by De Beers.

De Beers' share of production began to dwindle as other diamond sources were discovered. The first major new source outside De Beers' control was the Premier mine. The pipe exploited by the mine was discovered in 1898. However, production did not begin until 1903. The mine's annual production matched that of all the Kimberley mines.

Although De Beers did not own the mine, Premier's output was marketed through The Syndicate. Additionally, as will be explained more fully in the chapter on family, owing to the role of Ernest Oppenheimer, Premier's position in the trade began pulling apart The Syndicate members. Anton Dunkelsbuhler, one of the ten London jewellers involved in The Syndicate, invested in the mine, while other members had passed on the opportunity. The wealth generated from that investment would later be used as part of Ernest Oppenheimer's coup against The Syndicate.

When a large source of alluvial diamonds was discovered in German controlled South-West Africa, neither De Beers nor The Syndicate were able to gain control of the stones extracted from this new source. The German mining company, together with German jewellers, set up a rival selling channel that threatened De Beers' monopoly. With WWI, the territory was expropriated by the British, who turned it over to South Africa to manage. This change in sovereign control of the territory was instrumental in the ascendancy of Ernest Oppenheimer. He managed to gain control of this diamond source, which gave him control of a significant portion of global production. He leveraged that control to challenge The Syndicate, eventually collapsing it. From there, he was able to grab the chairmanship of De Beers and from that position he fully

consolidated the two components of supply control — production management and marketing — under the company.

Enrolling members into the cartel was a matter of convincing them that the diamond market required the centralized coordination that De Beers provided. Once enrolled, however, members had to be continually convinced to abide by the production levels that De Beers ordered. There were constant complaints that the levels set by De Beers were in the company's interests and not the interests of the other members. De Beers put much effort into reassuring the cartel members that continued participation was in their interest. The post-war continuation of production coordination under De Beers was a seemingly unlikely achievement: a corporation from Apartheid South Africa convinced black nationalist governments to maintain the cartel arrangement. The argument made by Ernest and Harry Oppenheimer must have been persuasive.

iv. The Production of Gems

De Beers' direct power is over rough stones, which they sell to intermediary traders. Nonetheless, as Chapters Five and Six will explain, the company intervened among the masses to provoke diamond desire, since it is this desire that drives the diamond flow. That desire is for the cut stones. Between the sale by De Beers and the purchase by the final consumer, the rough stones have to be cut into gems. As such, De Beers has an interest in the cutting process. The cutting industry as a matter of concern is considered in Chapter Seven. After the Low Countries were occupied by the Nazis, and Antwerp was lost as the world's premier cutting centre, De Beers worked with the British government and Jewish quasi-governmental officials in British Mandate Palestine, to construct a new cutting centre. However I will give very little

consideration to the actual production process of cut diamonds. Instead, I will examine some of these facts of production here.

A rough diamond is quite different from the cut gems with which we are familiar. Rather than the sparkling bauble, a rough diamond is somewhat nondescript. Diamond is lipophilic, meaning it attracts fats, making the rough stones greasy and lacklustre. Diamond crystals come in a wide variety of shapes and sizes as a result of different growing conditions. However, the ideal rough diamond shape is an octahedron, one of the Platonic solids, composed of eight equilateral triangles. If the three dimensional stone were compressed into two dimensions, it would resemble the abstract 'diamond' that makes up one of the suits in a deck of cards – ♦. Yet, this ideal rough diamond still does not have the colourful sparkle of a cut gem.

The technology for cutting diamonds has changed very little over centuries of gem production. A cutter will examine a rough stone to determine the cuts they believe will actualize the stone's greatest profits. Multiple gems can come from a single rough diamond. The final gems have to be visualized in terms of the qualities that determine price. Cutters may have to decide between cutting a bigger stone that contains internal flaws or cutting a smaller stone of greater clarity. They may cut a larger stone that produces a lot of non-gem waste, or several smaller gems, with less waste.¹

As will be explained further in Chapter Three, the cuts made into a diamond have to be aligned with the orientation of the stone's crystalline structure. Although very hard, diamond is also very brittle. Cutters exploit this feature and the initial cuts are achieved by striking the stone to cleave off pieces. If the stone is struck incorrectly, it could shatter. Historically, to cleave a

¹ The waste of the gem cutting process is not really wasted, since the diamond removed can be used in the cutting process.

stone, another diamond was used to mark the position of the cleavage and create a groove for the splitting tool. Today, the markings are made with a laser.

Once the initial shape has been cleaved, facets will be ground down to achieve the desired shape, also known as the cut. This process also polishes the stone. Cutting and polishing the facets uses a spinning wheel imbued with diamond dust. The stone is placed in a 'dop' and held against the spinning diamond wheel. It must be moved across the face of the wheel to prevent the stone from cutting a groove in the wheel. As necessary, the stone is rotated to cut each facet. The diamond that is ground off the emerging gem is collected, mixed with oil and used to coat the wheels as they are worn down.

Another step in the process that may occur before or after the facet cutting and polishing is known as 'bruting.' This step involved attaching two stones to the ends of spindles that spin in opposite directions. The stones are then brought together so each rounds off the other. Diamond in some form is intimately involved in every stage of gem production.

The cut of a diamond is an important factor in its value. The best-known shape is the 'brilliant,' which adorns most engagement rings. The mathematically optimal angles and proportions of the facets were calculated in 1914. This calculation has set the standard to which cutters aspire. Achieving that standard depends on both the skill of the cutters and the possibilities available in the rough stone. Diamond cutting is labour intensive and requires a high degree of skill. Compromises have to be made by the cutter to work around inclusions and other internal blemishes. These compromises require constant communication between the cutter and the stone as the former continually reassesses the state of the cut. It is for this reason that cutting to actualize a stone's greatest possible value is considered to be both an art and a science.

v. Conclusion to the Qualitative Introduction

In this section, I have dealt with the socio-material history of diamonds, including the early history of De Beers and the production of gemstones from rough diamonds. These preambles were intended to set up ‘matters of fact’ that are largely taken for granted in the chapters to come. For example, the history of diamonds is implicated in the politics of South Africa. The country’s political history is a complex matter that has had serious effects on De Beers. However, many of the particularities of that relationship, although consequential for De Beers accumulation, are excluded from the account to come.

For example, De Beers’ ability to capitalize on WWII, as will be described in greater detail in the quantitative introduction, was likely contingent on South Africa honouring its commitment to the U.K. as a member of the Empire. Had the anti-British Nationalists succeeded in turning South Africa’s support to Nazi Germany, the consequences for De Beers and the global diamond assemblage would have been profound. As it was, the fact that Ernest and Harry Oppenheimer both sat as Members of Parliament evidences the importance of South African politics for De Beers. The relationship between De Beers and the South African government will be given some treatment in Chapters Six and Seven. However, the dynamics of South Africa’s politics are largely ignored.

As with my exclusion of labour and production, this exclusion is not intended to suggest South Africa’s politics were unimportant for De Beers’ accumulation. This exclusion was largely a practical matter. Chapter Seven, on De Beers’ relationship with governments depended on accessing archival materials of both the U.S. and U.K. governments. This allowed me to go into greater detail. I used that detail to argue that the particular capitalist entities have differential relationships with governments that must be considered consequential to their accumulation. The

addition of South Africa to the analytical mix would have greatly augmented this argument. However, disappointingly, I was unable to travel to South Africa to access its national archives.

All of the matters considered to this point — the history diamonds, of South Africa, the diamond cutting industry — can be considered part of the *infrastructure* of the global diamond assemblage as found in my account. The actualities that emerged from the histories, as well as the production of gems that is an obligatory passage point between diamond extraction and purchase by the masses, are all running through, supporting and affecting the relationships that I analyze. In other words, they comprise part of the structural realities of those relationships. However, from the perspective of my accounts, they are *infra-*, the etymology of which is ‘under’ and ‘among.’ This introduction was intended to acknowledge some of the more glaring omissions, but it could not be a comprehensive acknowledgement of every consequential contributor to De Beers’ accumulation.

III. The Quantities of Accumulation and Profit

Shortly after its formation, De Beers’ fortunes began to decline. As mentioned above, Figure 1 is a comparison of De Beers’ market capitalization with three indices, all of which have been converted to the British pound: the S&P 500, the Banker’s Index of London traded companies and an index of South African (SA) mines. The indexes roughly benchmark three areas where De Beers operated. Its mines were in South Africa. It traded on the London Stock Exchange. The U.S. contained its primary customer base. All four series were indexed for 1938-40=100. From 1899 to 1934 the series are expressed as ten year moving averages, with a point every five years, i.e. 1899, 1904, 1909, etc. This construction clears away the noise of fluctuation to express the long-term decline of De Beers relative to the indexes. From 1939 to 1952 the data

points are annual values. The compression of De Beers' pre-war accumulation relative to the war and post-war years places a visual emphasis on the inflection point in 1940 and the years of my analytical interest.

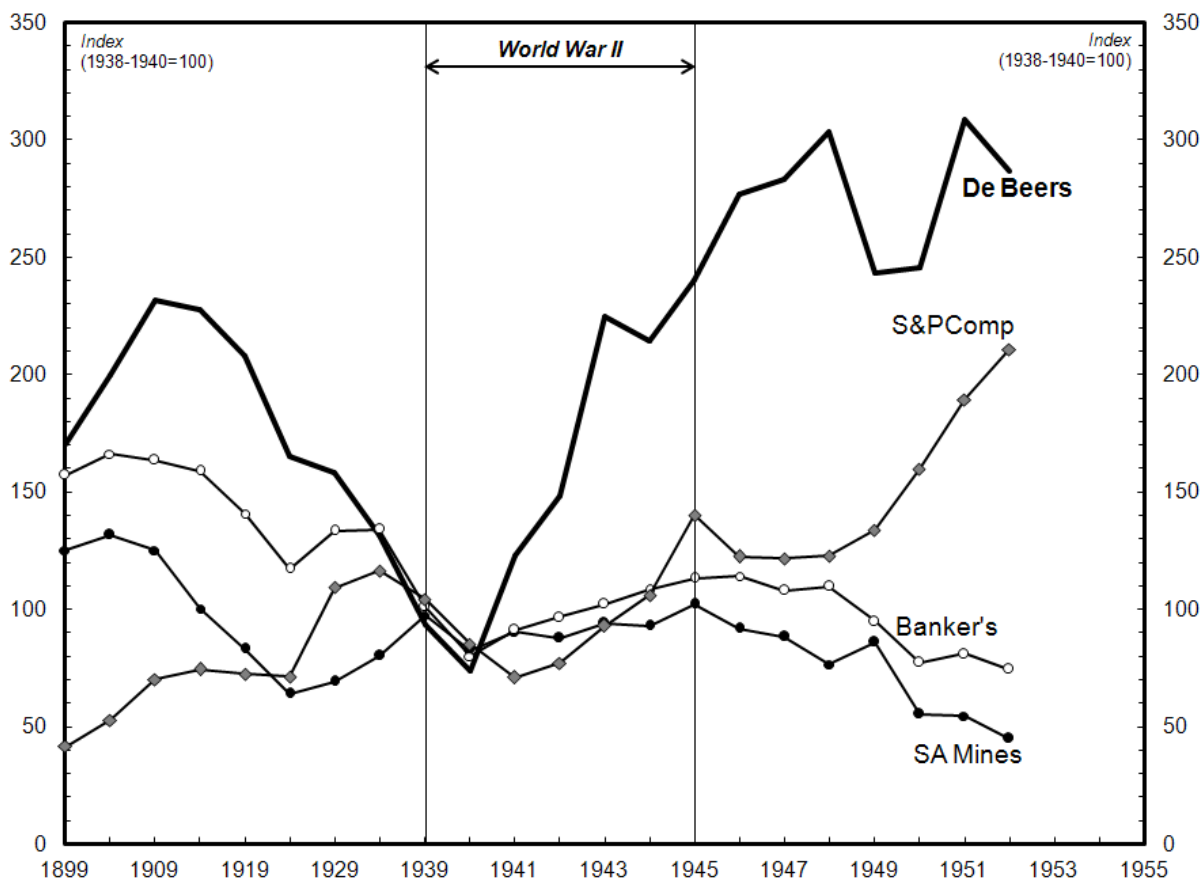


Figure 1: Wartime Accumulation: De Beers v. US, UK and South Africa, 1889-1952

DATA: De Beers: The Times (London), various issues; Investor's Monthly Manual Project, Yale School of Management; S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm); Banker's and SA Mines: Global Financial Data, series GBALLVM and GBBSAFMM, respectively.

NOTE: De Beers is the indexed market capitalization (preference and deferred shares, plus debentures).

S&PComp, Banker's and SA Mines are indexes constructed for public corporations in the US, the UK and South Africa, respectively. De Beers, Banker's and SA Mines are adjusted for the UK-US Exchange Rate.

1899-1934: Data points are every five years and represent a ten-year moving average. 1939-1952: Data points are annual.

In the pre-war era only the S&P Composite showed an overall absolute increase. Both the Banker's Index and the SA mines were lower in 1939 than 1899. The start of the war sent all four series lower. However, 1940 was a significant turning point for De Beers, both absolutely

and differentially. From its market capitalization peak in 1909 to its nadir in 1940, De Beers declined 68 percent, compared to a 22 percent gain for the S&P 500 and declines of 34 percent and 51 percent for the SA mines and Banker's indexes, respectively. Then, the next seven years saw a compound annual growth rate (CAGR) of 22 percent for De Beers compared to 5.3 percent for the S&P 500. The Banker's index grew at a slightly lower 4.6 percent while the SA mines index declined by one percent. The war period brought an incredible reversal of De Beers' long-term differential misfortunes.

The proximate cause of De Beers' reversal in valuation would appear to be the resumption of its dividend in 1941, which it had stopped in 1937.¹ That resumption was predicated on an invigoration of the company's profits. Figure 0.3 is a differential comparison of De Beers' profits with the profits of the S&P 500.² De Beer's profits are converted to U.S. dollars at prevailing exchange rates, divided by those of the S&P 500, and the resulting ratio indexed to 1939=1. Three series are expressed. In light grey is the yearly differential. A thick black line is a centred five year moving average while the dashed line connects data points for the cumulative profits of De Beers and several companies that eventually became its wholly or majority owned subsidiaries. The value for 1906 amalgamates De Beers' profits with those of New Jagersfontein and Premier (Transvaal) while 1929 and 1939 add the profits of Consolidated of South-West Africa as well.

The annual series expresses the extreme volatility of De Beers' profitability. For example, between 1913 and 1915, the company suffered an 80 percent differential decline. That decline reversed into a 366 percent gain by 1919. However, throughout this volatility was a long-

¹ This refers to the deferred shares, which made up the bulk of the company's available shares and were much more heavily traded than the preference shares held by insiders.

² The profits of U.S. firms may not be the best comparison for De Beers, which traded in London and South Africa. Unfortunately, the only index for which there are profit figures available was the S&P Composite.

term downward trend expressed by the moving average. The long-term pattern of differential profits is roughly aligned with De Beers' capitalization. This impressionistic alignment will be confirmed as an actual correlated movement in Figures 4 and 5.

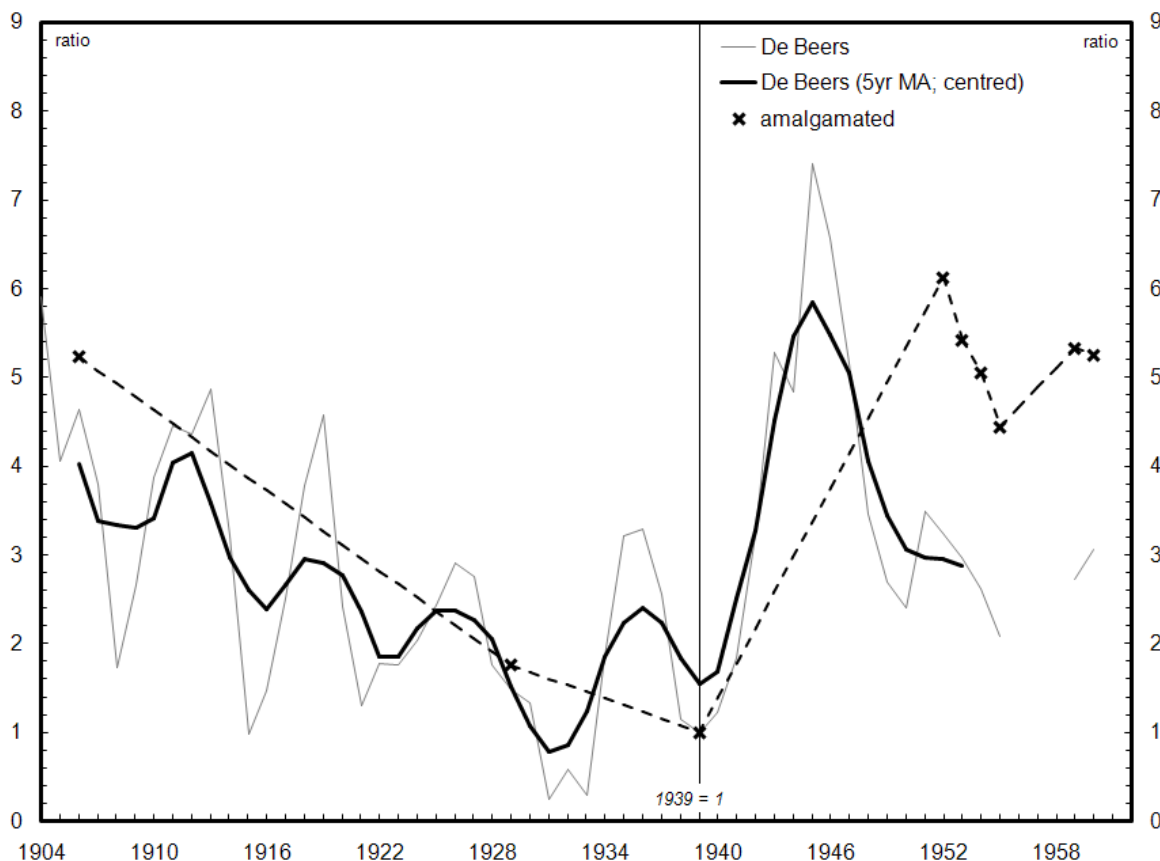


Figure 3: Losing & Gaining Power: Differential Profits, De Beers vs. S&PComp, 1904-60

DATA: De Beers and amalgamated: The Times (London), various issues; selected De Beers' annual reports (Guildhall City Archives); S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm). NOTE: Series are the differential value of De Beer's profits with the S&P Composite index profits in the denominator (1939=1). Amalgamated data points for 1952-5 and 1959-60 from De Beers annual report. Previous data points constructed from reports of De Beers, Premier (Transvaal), New Jagersfontein and Consolidated of South-West Africa. De Beers and amalgamated data adjusted for US-UK exchange rate.

The absolute differential nadir in the company's profits was in 1931. However, this low point was mostly a consequence of the Great Depression. Desire for a luxury product is unlikely to fare well in such a political economic context. The company climbed from these differential

lows in the mid-1930s. However, the recovery was short-lived, and by 1939 its differential profits were 33 percent below their pre-depression levels.

From 1940-5, the company's differential profits grew at a CAGR of 37 percent. From that point, if we remain focused on the profits of De Beers, which signifies De Beers Consolidated Mines (DBCM), it appears that the differential gain was short lived and diamond profits suffered another differential reversal. However, at that point De Beers' accounting changed. In 1952, the company's annual report included the profits of DBCM as well as those of DBCM plus its partially or wholly owned subsidiaries. If we consider these amalgamated profits, rather than those of the parent company alone, then De Beers maintained its differential position.

The amalgamated series opens a window into the ownership and accounting complexities of De Beers over its history. This matter was mentioned in the qualitative introduction and gets more consideration in Chapter Eight. Briefly, the cross-ownership of South African mining companies has impacted my research and analysis by requiring some calculative finesse to construct a series for appropriate comparisons (see Appendix A). As noted, to gain control of the De Beers cartel, Sir Ernest Oppenheimer secretly cobbled together ownership of multiple mines. He used various means to hide the consolidation of ownership in order avoid drawing the attention of rivals within the cartel. Had they been aware of his maneuvers, the powerful members of De Beers may have taken steps to subvert Oppenheimer's efforts. The outcome of these ownership machinations was a complex network of cross ownerships.¹

In order to construct figures comparable to the consolidated figures reported in 1952-5 and 1959-60, I compiled early profit data for individual companies that became De Beers

¹ This cross-ownership had impacts until recently, when Anglo American became the majority owner of De Beers. Analysts suggested there was a lack of clarity due to De Beers owning a sizeable portion of Anglo American, and Anglo American owning a sizeable portion of De Beers. The claim was made that this remnant of Ernest Oppenheimer's financial maneuvers resulted in a valuation discount.

subsidiaries in subsequent years, and for which public information is available. For 1906, the amalgamated De Beers profits are calculated as the sum of the profits of DBCM, New Jagersfontein Mining and Exploration Company, and Premier (Transvaal) Mining Company. In 1929 and 1939, to these three companies were added the profits of Consolidated Diamond Mines of South-West Africa. In all of these years, DBCM accounted for more than 80 percent of the amalgamated profits. Later on, DBCM's domination declined. In 1952, when De Beers reported both its core DBCM profits and the consolidated profits with its subsidiaries, DBCM alone accounted for less than 45 percent. Partially, this decline can be attributed to the fact that De Beers' South African mines were producing much less. However, this reduction might also be the result of accounting maneuvers designed to improve the amalgamated company's profitability. The comparison between the constructed figures of De Beers' amalgamated profits and those reported by the company in this thesis is, of course, rough. But that comparison is needed if I am to evaluate the overall power of De Beers, which extended beyond the nominal firm DBCM with tentacles spread throughout the cartel as a whole. As such, this comparison makes the picture expressed in Figure 0.3 a richer and perhaps more accurate expression of differential decline turned into differential gain.

The matter of concern for this dissertation is the qualitative make-up of De Beers' power as it was translated into the company's capital and accumulation. De Beers initiated, managed and transformed many relations. Regardless of how those undertakings might affect society, they become relevant to capitalists in as much as they affect profitability. The calculations that generate market capitalization are based on *expected* profits, rather than actualized profits. However, past profits are frequently used as a proxy for such forward-looking calculations (Thomas & Gup 2010). Profits are then the long-term component of capitalization, although the

latter cannot be wholly reduced to the former. While many events that do not directly impact on earnings will be translated into capital values, *all* events that affect earnings will be calculated into capital values.

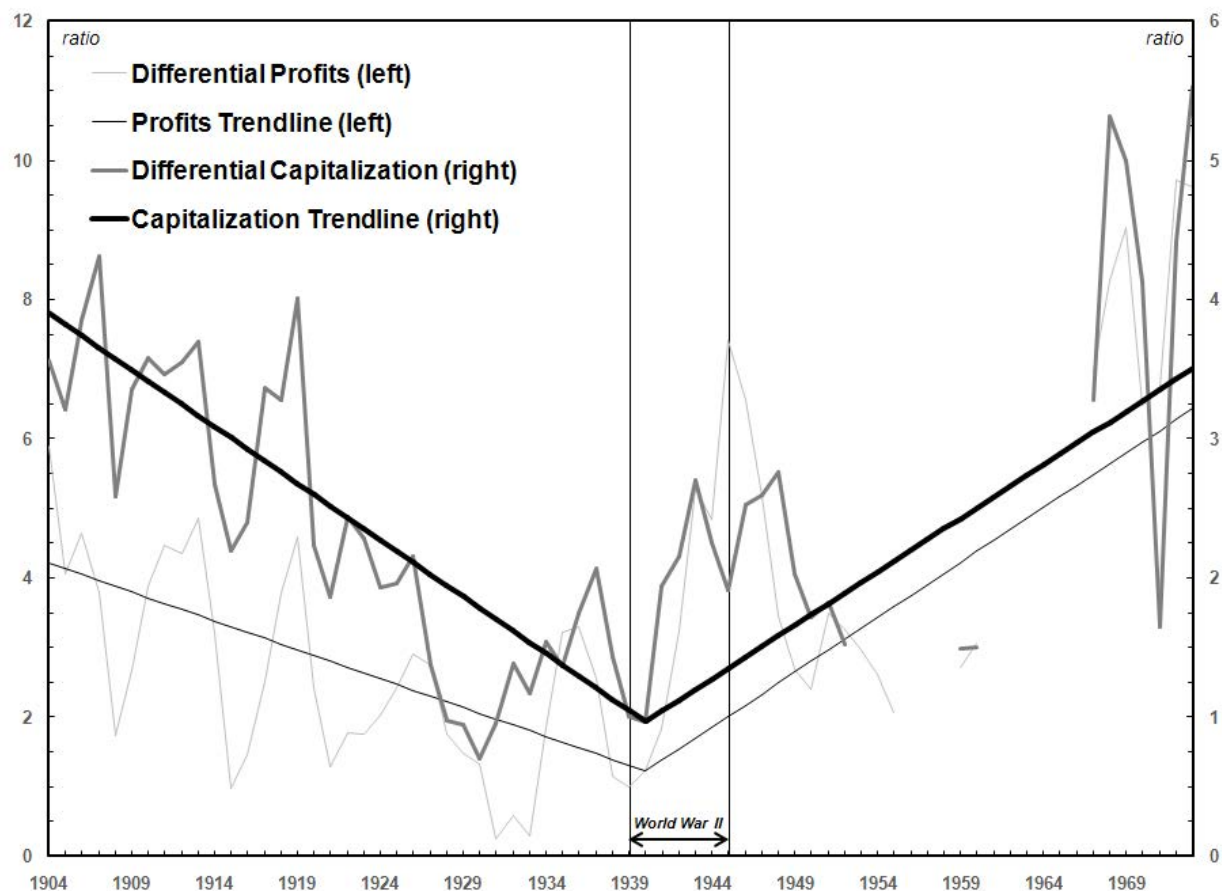


Figure 4: From Profits to Accumulation, De Beers vs. S&PComp, 1904-73

DATA: De Beers: The Times (London), various issues; selected De Beers' annual reports (Guildhall City Archives); S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm).

NOTE: Series are the differential value of De Beer's profits and capitalization with the S&P Composite index profits in the denominator (1939=1). De Beers data adjusted for US-UK exchange rate.

Figure 4 combines De Beers' differential capitalization and differential profits to portray the shared dynamic between De Beers' profits and its capitalization. The series in Figure 4 are the indexes for De Beers capitalization and profits divided by their respective indexes for the S&P Composite. The indexical year for the differential is 1939=1. The two series are not perfectly aligned – and we would not expect them to be – however, they shared a well correlated

movement (correlation = 0.6). Figure 4 offers a longer snapshot than either Figure 1 or 0.3. Figure 1 is limited in its time horizon owing to the availability of the Banker's and SA Mines series data. Figure 0.3 is limited to the continuous data available for the years leading up to, and immediately after the war. A gap in my data for De Beers means market capitalization values are missing for the years 1953-8 and 1961-6. Note that the profit values for De Beers are those reported in the financial so include the immediate post-war decline.

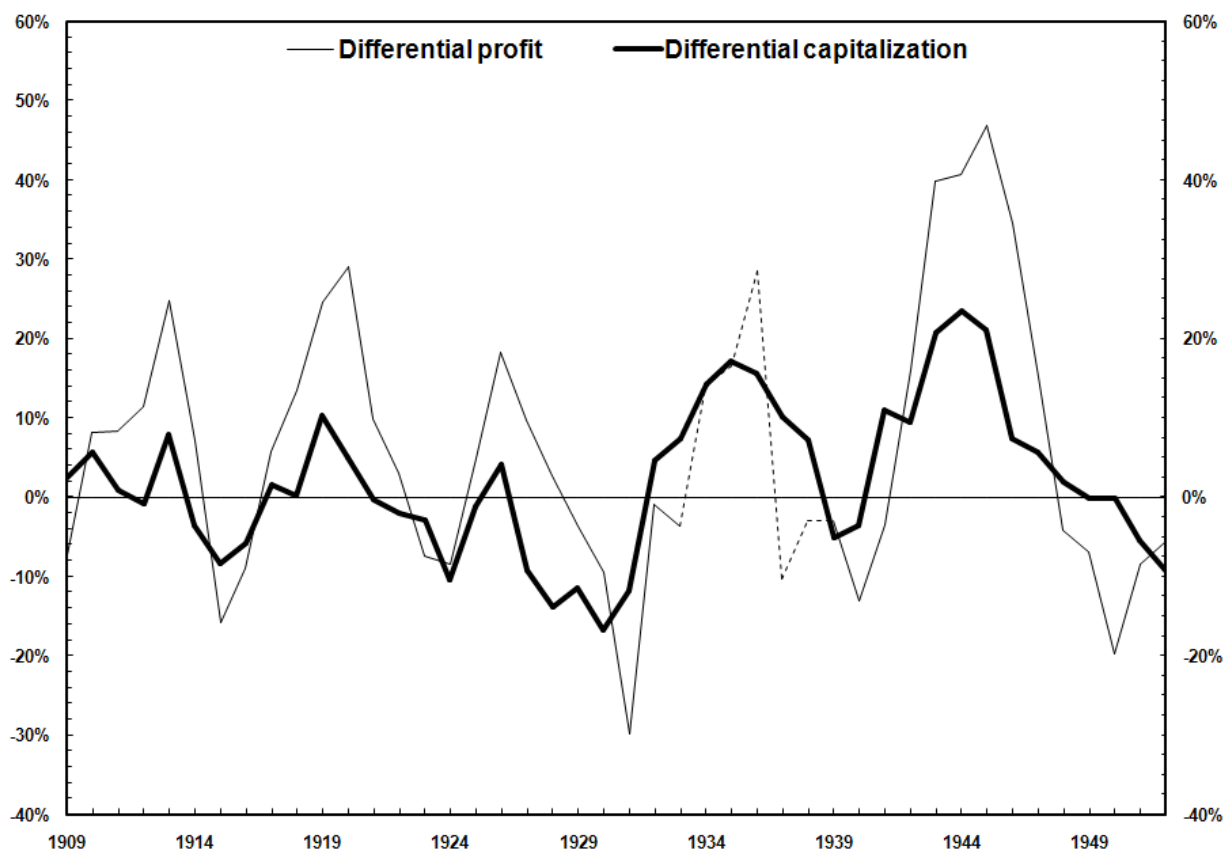


Figure 5: Shared Dynamics, Changes in Profits and Capitalization, 1909-1952

DATA: De Beers: The Times (London), various issues; selected De Beers' annual reports (Guildhall City Archives); S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm).

NOTE: Series are the year-to-year change in value of the differential, with the S&P Composite in the denominator, expressed as a five-year moving average. Data points in the profit series for 1934-8 are adjusted to exclude the value in 1934.

With Figure 4 I wanted to display what I argue are the longer-term accumulatory consequences of wartime events that transformed the global diamond assemblage. Namely, that throughout the intense volatility of De Beers' profits and capitalization, the company endured a long-term differential decline from the early part of the 20th century until the war, at which point its fortunes reversed. That reversal was sustained until about 1973 years when it returned to its long-term decline. This subsequent differential deaccumulation will be discussed in the dissertation's conclusion. The body of the dissertation is devoted to the qualities of the accumulatory inflection point in 1940.

Figure 5 is a different comparison between De Beers' differential profits and capitalization. The series are the year-to-year change, calculated as a five-year moving average. When the series is above zero, there is differential growth, below zero means differential decline. The profit series has been adjusted for the years 1934-8 to exclude the value in 1934, when De Beers' profits grew 538 percent, owing to the company's recovery from the worst years of the Great Depression. This adjustment shifts that segment downward, but keeps the same dynamic. Figure 5 expresses the shared dynamic between the profit and capitalization series. Again, they do not move in lockstep, however, they are clearly resonant.

The differential capitalization and the differential profits in Figure 4 are on separate axes, owing to the more extreme highs and lows of De Beers' profits. What is particularly relevant is the shared long-term dynamic between the two series, which is expressed by the trend lines.¹ It is also worth remarking on the fact that that the absolute nadir of De Beers' differential capitalization is 1930. This is largely owing to the company's primary product being a mass market pure luxury during the Great Depression, a time of general want and thrift. The company

¹ The trend lines were created by connecting the values at the temporal endpoints of the series to the values at 1940.

recovered, but the recovery was short-lived and it did not achieve a significant, long-term reversal of its long-term decline until the war. Although De Beers' differential profits and capitalization experienced extreme ups and downs in the post-war era they never dropped below their 1940 values.

The maps of De Beers' differential capitalization and differential profit both generate the same pattern of long-term decline with a marked reversal in 1939-40 into a dramatic gain. Of course, they do not map directly onto each other, since market participants make many other assessments in deciding to buy and sell shares. However, my concern is with the long-term pattern as it expresses the qualities translated into the quantities of profit and capitalization. Therefore, I can focus on the actions of De Beers as if they were intended solely or at least principally to affect profitability, while setting aside the assessments by market participants of those actions.

The focus of this dissertation is the war years plus the years immediately prior to and after. In this sense, it only opens a narrow window into De Beers' 120+ years of existence. On the one hand, it remains a relatively long time period from the perspective of investors. In 1899 or 1909 or 1939 few, if any, of those holding and trading De Beers' shares were considering what the company's financial situation would be in 1949.¹ On the other hand, the qualitative changes that are expressed in De Beers' differential capitalization can continue to be a factor in its accumulation long after those changes were made. The wartime inflection point in De Beers' capitalization provided an analytical pivot. What were the qualities of De Beers' power that were

¹ An important exception to this may be the Oppenheimer family whose financial stake in De Beers endured until 2011. This remarkable endurance appears to emerge from an interest in the company that transcends the accumulatory. Sir Ernest Oppenheimer reportedly had an affection for diamonds that attracted him to the business and the family valued the legacy of Sir Ernest, which was tied to the fate of De Beers. This will be discussed in Chapter Eight.

waning? What were the qualities that comprised De Beers growing more powerful? How did the war factor into this reversal?

i. Quantifying the Diamond Assemblage

De Beers' 1939-40 reversal of fortune occurred shortly after it began to advertise directly to the masses in 1939. This apparent link offers an enticingly simple explanation: advertising increased diamond desires, which led to greater sales and greater profits. Of course, even such a simple explanation masks the complexities involved in provoking demand, which will be examined in Chapters Five and Six. The focus on advertising alone also overlooks the dramatic increase in the use of industrial diamonds during the same period. Although the masses' are much more aware of diamonds in their gemstone role, industrial diamonds arguably have a greater impact in people's lives as an indispensable input to many manufacturing processes, from the drawing of wire to the precision shaping of pistons. It was during WWII that industrial diamonds took on this indispensable role. De Beers' control extended to both gem and industrial diamonds and that control translated into profits although not in any straightforward manner. The rest of the dissertation is about the complications involved in actualizing those profits.

World War II's transformative role in the qualities and quantities of the diamond assemblage operated through both the gem and industrial categories of stones. While wartime industry drastically increased the need for industrial stones, the war also separated young men and women. That separation gave marriage a meaning and urgency that De Beers' advertising was able to leverage. As will be explored in Chapter Six, De Beers tried to justify the purchase of diamond jewellery during wartime by making them a 'necessary luxury,' needed to signify the distant soldier's promise to his loved one. In accordance with De Beers' policy of supply control,

and trying to maximize the value of every quality of stone, the company was concerned with both the industrial and gem markets and tried to benefit from the war's effects on both.

Consistent data on the breakdown of De Beers' diamond sales between gem and industrial stones are difficult to find. However, various sources, including the USGS *Minerals Yearbook*, and the De Beers' annual reports, suggest that during the years of my industrial stones made up a growing share. Less focused, but more consistent data series are U.S. imports of gem and industrial diamonds. Although not perfect, these data can serve as a proxy for the relative make-up of U.S. gem and industrial sales, and perhaps also for De Beers' sales, owing to the importance of the U.S. market for the company.

The bottom series of Figure 0.3 display the dollar value of the import of industrial and gem quality stones. The gem value sums the import of uncut rough stones as well as cut gems. To remove the value of cutting, the value of the latter has been adjusted using the quantity imported, in carats, and the imputed per carat value of the rough stones. The import series are displayed on a logarithmic scale. The top of Figure 6 shows two series for the share of industrial stones. The first is their share of U.S. imports. The second is their share of sales by De Beers as estimated by diamond expert Sydney H. Ball.¹

Figure 6 shows both series trending upward over the long-term, but the import value of industrial diamonds increasing faster. The growth rate of the industrial imports was 13.9 percent over the period shown, compared to 8.4 percent for the gems. Prior to the war, industrial stones made up just 14 percent of the value of diamond imports. During the war, this share rose to 33

¹ Ball wrote the yearly entry on diamonds for the USGS Minerals Yearbook, as well as a yearly review for the Jewellers' Circular-Keystone. Ball also did work for De Beers in the U.S. and was implicated in the U.S. antitrust suit against the cartel. Ball's reports included precise figures for the total diamond sales by De Beers' Central Selling Organization (CSO), which likely came from the CSO itself. He did not identify the source of his information on the sales breakdown between gem and industrial stones, but he may have been given some approximate figures by the CSO.

percent, with industrials making up more than half the imports by value in 1942. Then, in the post-war era, the share dropped below 20 percent until levelling out between 30 and 40 percent.

This pattern is generally confirmed by the irregularly reported data on the relative value of diamonds sold by De Beers during this time period. In 1940, industrial stones made up just over 10 percent of the value of diamond sales. By 1942, they made up almost 40 percent. In 1946, the share had fallen back to 11 percent, while it was close to 30 percent through the end of the 1940s and early 1950s.

There is an important difference between the U.S. import values and the estimated De Beers' sale figures. While the absolute value of gem imports into the U.S. fell from 1939 to 1942, De Beers' estimated sales show an increase. Additionally, the total sales of gem quality diamonds over the duration of WWII grew much more than the U.S. gem imports: 254 percent compared to 84 percent.¹ One possible reason may be the effect of an inaccurate construction of a gem import value from the values of cut and uncut stones.² Despite this inconsistency between the two series, both give the same picture of the changing composition of sales between gem and industrial quality stones. Namely, the relative share of industrial sales grew markedly.

Although the relative share of industrials grew, the sale of gems was still more valuable. Unfortunately, it is impossible to identify the impact of the change in composition on De Beers'

¹ The value of the De Beers' sales, as estimated by Ball, has been adjusted for the U.K.-U.S. exchange rate.

² The import series is intended to express the importance of industrial and gem diamond sales for De Beers. Therefore, I constructed a series that would express the value of rough stones. The implied value for De Beers of the imported cut stones was calculated from the volume of cut stones and the imputed per carat price of the imported rough stones.

It is possible that a large quantity of cut stones being imported into the U.S. were sold as rough by De Beers in years prior, since many of the stones passed through traders and cutters outside the U.S. before their import. If I assume that the import of cut gems in a given year were sold as rough stones the year prior, then I can alternatively impute a value on that basis. For example, the estimated value of De Beers' sales for 1942 would be the import of rough stones for 1942, plus the implied value of rough contained in the cut stones imported in 1943. This does close the gap, with the estimated sales based on U.S. imports growing 193 percent from 1939 to 1945.

profits, as no data are available on relative profit margins of the two types of stones. The gems were more valuable per carat, but the volume was much lower. Also, De Beers had to negotiate the value of the stones they purchased from other cartel members who would not have been oblivious to the growing importance, and potential value, of the industrial stones. This value negotiation involved frequent disagreements about the quality of stones, which will be discussed in Chapter Four. Briefly, De Beers' power did not allow it to completely dictate terms to the cutters and jewellers downstream in the gem trade. Before the war, industrial stones made up a small portion of their sales, and they were almost entirely off the company's radar, earning no mentions in De Beers' annual chairman's address until 1941. Then, during the war, industrial diamond users argued that the company manipulated the quality mix to effectively increase the price of the stones.

Contrary to the presentation of the popular exposés, despite De Beers' significant power within the diamond trade, the company still had to contend with demands from the multitude of U.S. traders. The national identities of the two sides prominently came into play. The U.S. diamond traders in both the gem and industrial markets were able to leverage the U.S. Department of Justice (DoJ) in the differential struggle. Within the gem trade there were important differences in strategies adopted by traders with respect to De Beers. Many accepted the company's coordinating role and protection role and refused to cooperate with the DoJ. All of these machinations would have impacted how profitable both the gem and industrial stones were. While I cannot quantify the relative importance of industrial or gem diamonds for De Beers' profits, I can say that both were important matters of concern to the company. Further, and importantly for my general argument, the qualitative differences within the two markets required qualitatively different courses of action.

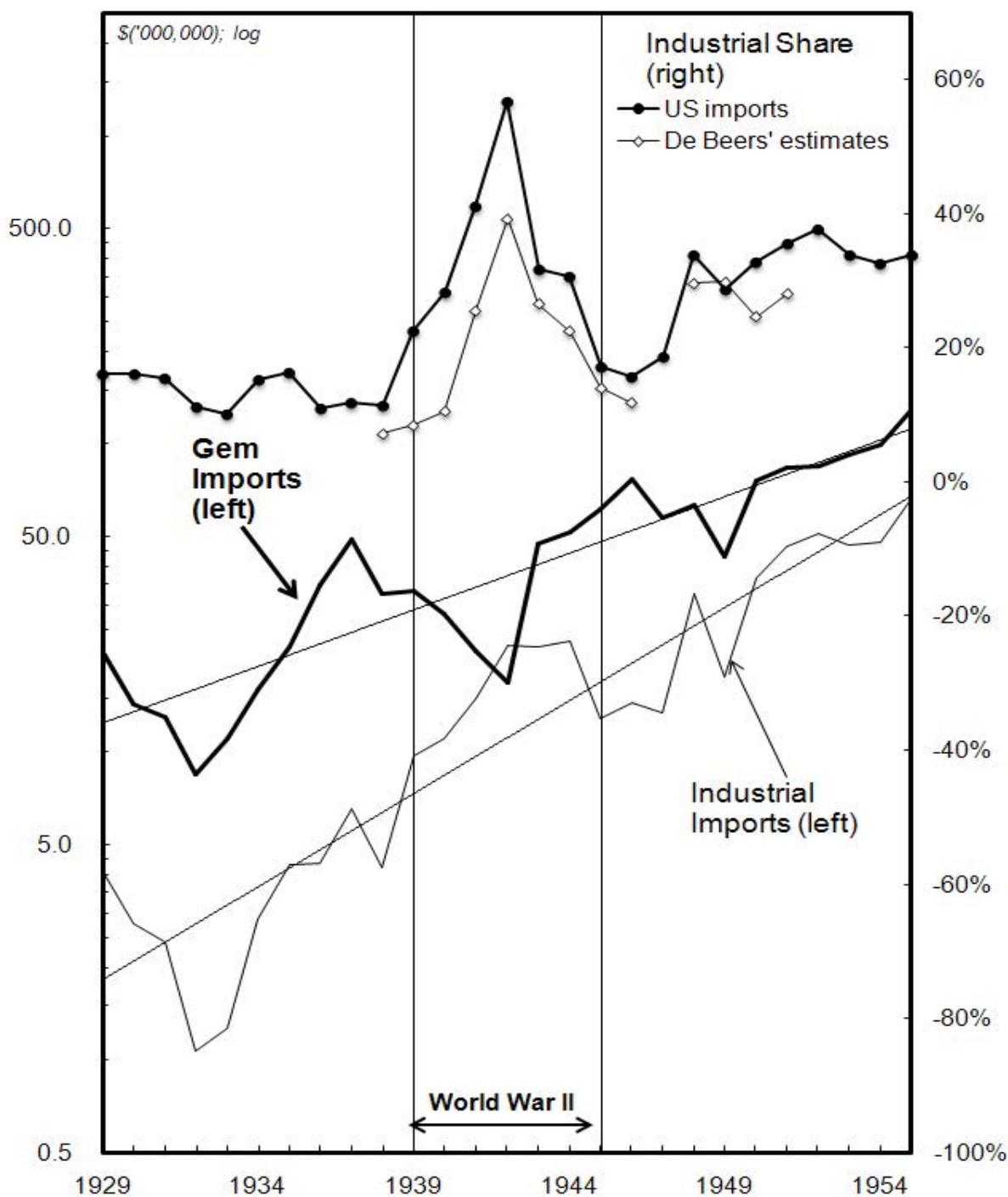


Figure 6: Diamond Imports: Industrials v. Gems, 1929-55

DATA: USGS, Minerals Yearbook; Jewelers Circular-Keystone, annual Diamond Industry in Review.

NOTE: The gem and industrial series are the dollar value of imports. Industrial diamonds are the value of all imports. Gem imports are the value of rough stones plus cut stones. The value of cut stones have been adjusted by the imputed price of rough stones to exclude the value added from cutting. The 'US imports' industrial share is the ratio of industrial imports to total diamond imports. The 'De Beers' estimates' industrial share is based on estimated sales figures from Sydney H. Ball.

a. Industrial Market

As noted above, the war was responsible for a quantitative and qualitative change in industry's use of diamonds. Figure 7 illustrates the dramatic increase in industrial stone use by comparing diamonds with the use of steel and copper, two other vital inputs to wartime production. All three series have been indexed for 1931-40=100.

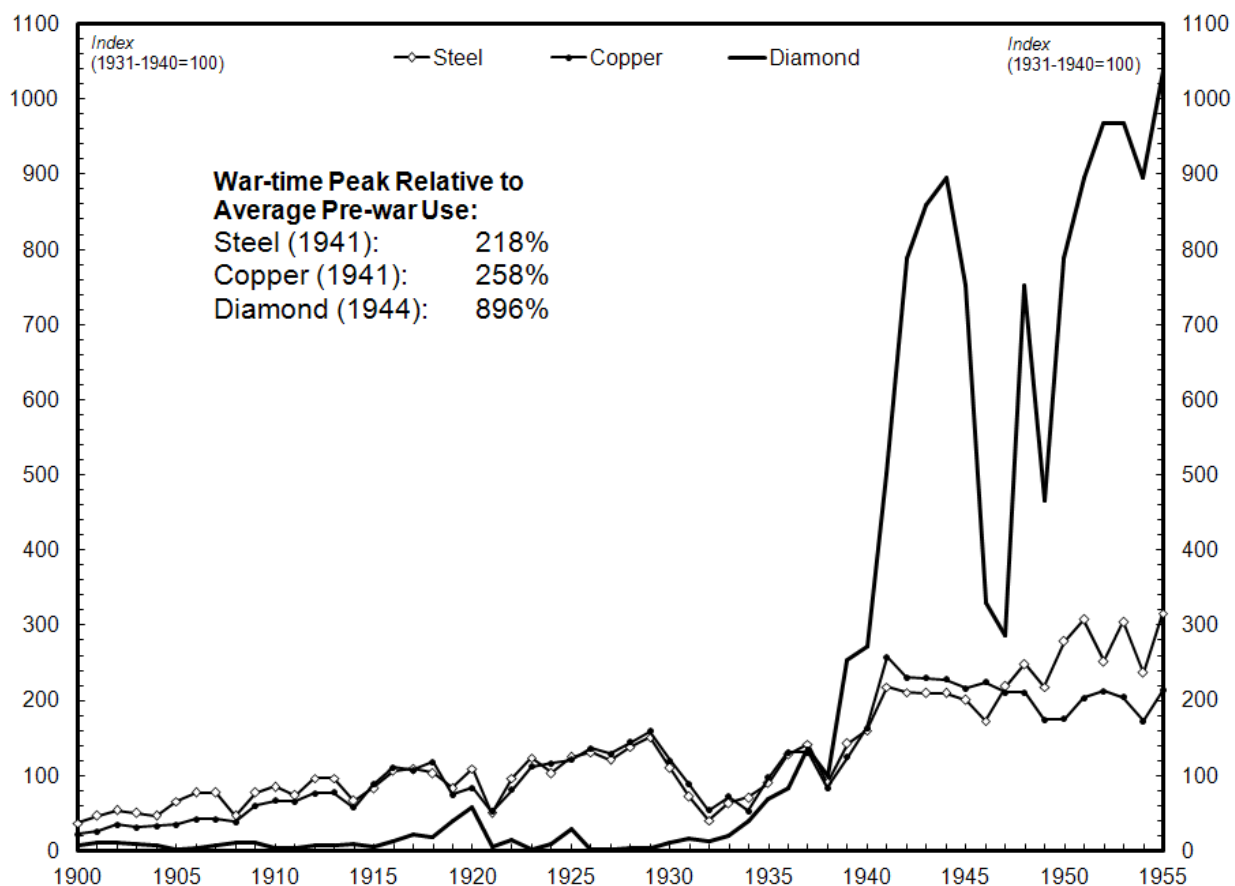


Figure 7: Diamond, Copper and Steel Use, 1900-55

DATA: USGS Minerals Yearbook.

NOTE: Series are indexed (1931-1940 = 100). Use is based on 'apparent consumption' as reported in the USGS Minerals Yearbook. Apparent consumption is calculated as production plus imports minus exports minus change in stockpiles.

The peak wartime use of steel and copper were both early in the war effort at 218 and 258

percent of the 1931-40 average use, respectively. Use of industrial diamonds continued to rise

throughout the military campaign, peaking at 896 percent of pre-war use in 1944. The chosen index years actually cause an under-estimation of just how drastic the wartime increase was, since the mid-to-late 1930s already saw a sizeable increase in the use of industrial diamonds. This pre-war increase, combined with the continued post-war escalation, suggests that diamonds would have become an important industrial input even without the war. However, it is unlikely they would have been incorporated into manufacturing as deeply or as rapidly. The industrial aspect of WWII required a pace and precision of production that diamonds enabled.

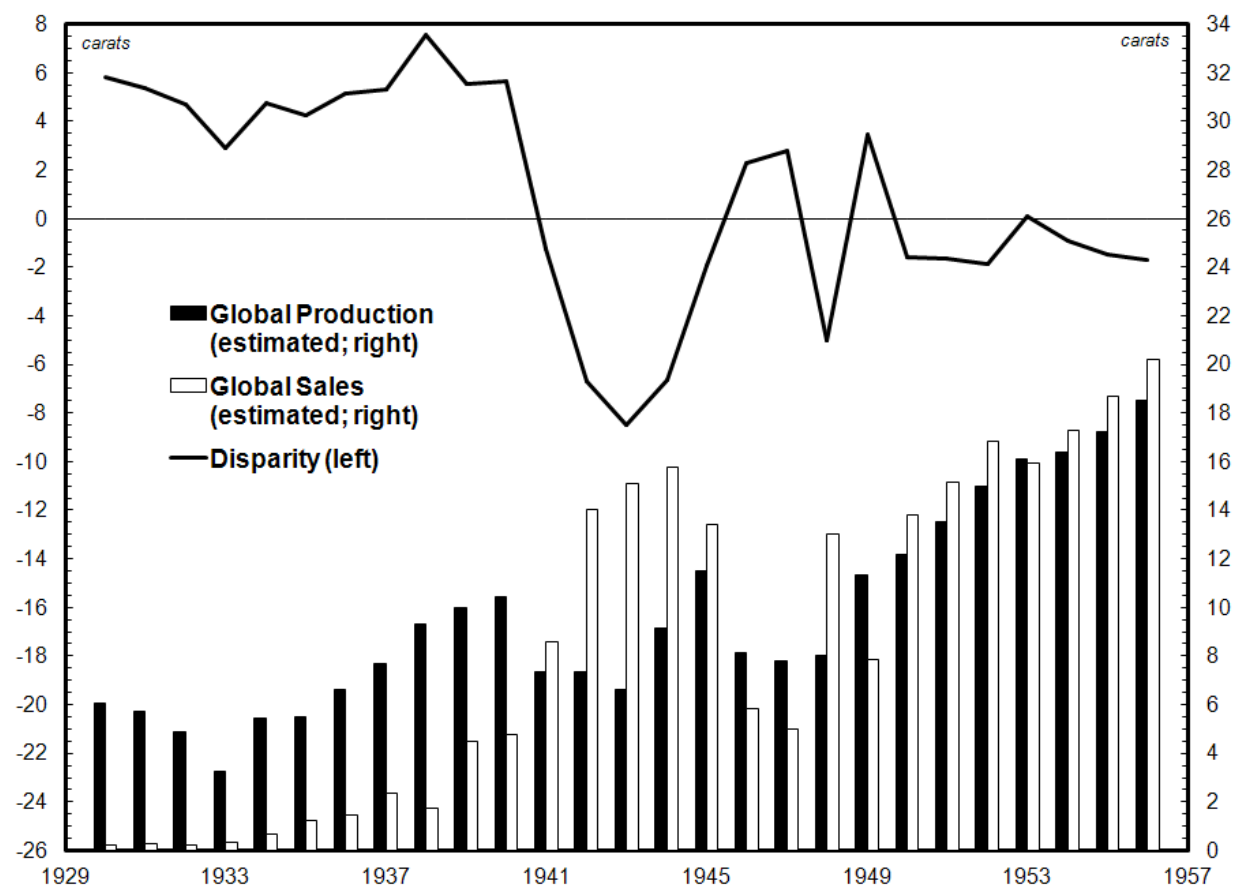


Figure 8: Diamond Production and Purchase, 1929-56

DATA: USGS, Minerals Yearbook; Diamond Report, *Jeweler's Circular-Keystone*.

NOTE: Production is for industrial stones calculated from reported total production, based on an estimate that 80 percent of excavated stones by weight are industrial quality. Sales is calculated from reported figures for US imports of industrial stones based on estimates that the US was responsible for 70 to 90 percent of global consumption. An estimate of 80 percent was used. Disparity is production less purchase. Values greater than zero represent a surplus that would have to be stockpiled. Below zero would require drawing down the

stockpile. The global production values for 1942-4 are not estimates, but come from the Diamond Reports found in the *Jeweler's Circular-Keystone*.

Throughout the early part of the 20th century, the use of industrial diamonds was almost non-existent. Between 1900 and 1930, U.S. industry's total apparent consumption was just less than one ton.¹ However, use quickly escalated. U.S. industry consumed the next ton in just seven years. Then, in 1941 alone, almost a ton and a half of industrial diamonds went into American manufacturing processes. By 1944, that figure had risen to 2.5 tons. Although the war made industrial diamonds a much more widespread input to production, industry was already heading in that direction prior to the war. The incorporation of diamonds into American industry was a qualitative change that would endure beyond the war. While diamond use by industry dropped precipitously in the post-war demobilization, it quickly recovered and then surpassed wartime use.

With the war, De Beers was able to satisfy growing demand from the stockpile of stones it had been acquiring as part of its efforts to keep Belgian companies in the cartel. The Belgian companies controlled diamond extraction in the Belgian Congo, and the stones were largely industrial quality. Figure 8 compares the annual global extraction and sale of industrial diamonds. The global production series is estimated from a total diamond production figure and an estimate that industrial quality stones comprised 80 percent diamonds of the total extracted by volume. Global purchase is estimated by taking the apparent consumption by U.S. industry and estimating that U.S. industry used 80 percent of the annual flow. Until the war, production was generating millions more carats than were being used. Then, the war saw the purchase of stones well outstrip production. After the war, production levels were much closer to the level of purchase. Beyond providing the immediate benefit of sales, and the prospect that industrial

¹ USGS calculates apparent consumption by subtracting from imports the value of exports and changes in stockpiles. I have substituted 'use' as a synonym for the awkward term 'apparent consumption.'

stones would remain an important source of earnings, the growth in industrial diamond use also dramatically reduced a cost De Beers had borne — buying up large quantities of industrial quality stones with no ready outlet. Figure 7 suggests that after the war De Beers more aggressively applied its strategy of supply control to the industrial market by tailoring stone availability to use levels.

b. Gem Market

Although De Beers' advertising campaign cannot provide a simple, straightforward explanation for the company's differential accumulation, it certainly played an important role. While all stones can be put to industrial purposes, the segment of stones that can be gems is small. A stone sold to become a gem is many times more valuable than one sold for industrial purposes. Although many stones are not suitable to be gems, the precise dividing line between gem and industrial stones is not objectively determined. Rather, we might consider the divide as quasi-objective (Serres 2007). The divide emerges from the relationship between the stones, which have objective properties, and the state of subjective diamond desire. That relationship is further translated by De Beers, which is responsible for the sort demarcating the boundary between gem and industrial stones.

There are lower quality stones of all sizes that could be used as gemstones. The greater profitability of gems and the fact that many industrial stones can be made into gems means De Beers' greatest interest will always be higher gem sales. It was this interest, combined with concerns about falling diamond sales that provoked the unprecedented advertising campaign in the U.S. The campaign began in August-September 1939 at the same time as WWII began. It ran almost monthly until early 1942, ceasing shortly after the U.S. entered the war. After about a

year hiatus, the advertising resumed. However, the campaign's most important effects on the U.S. diamond market occurred after the war.

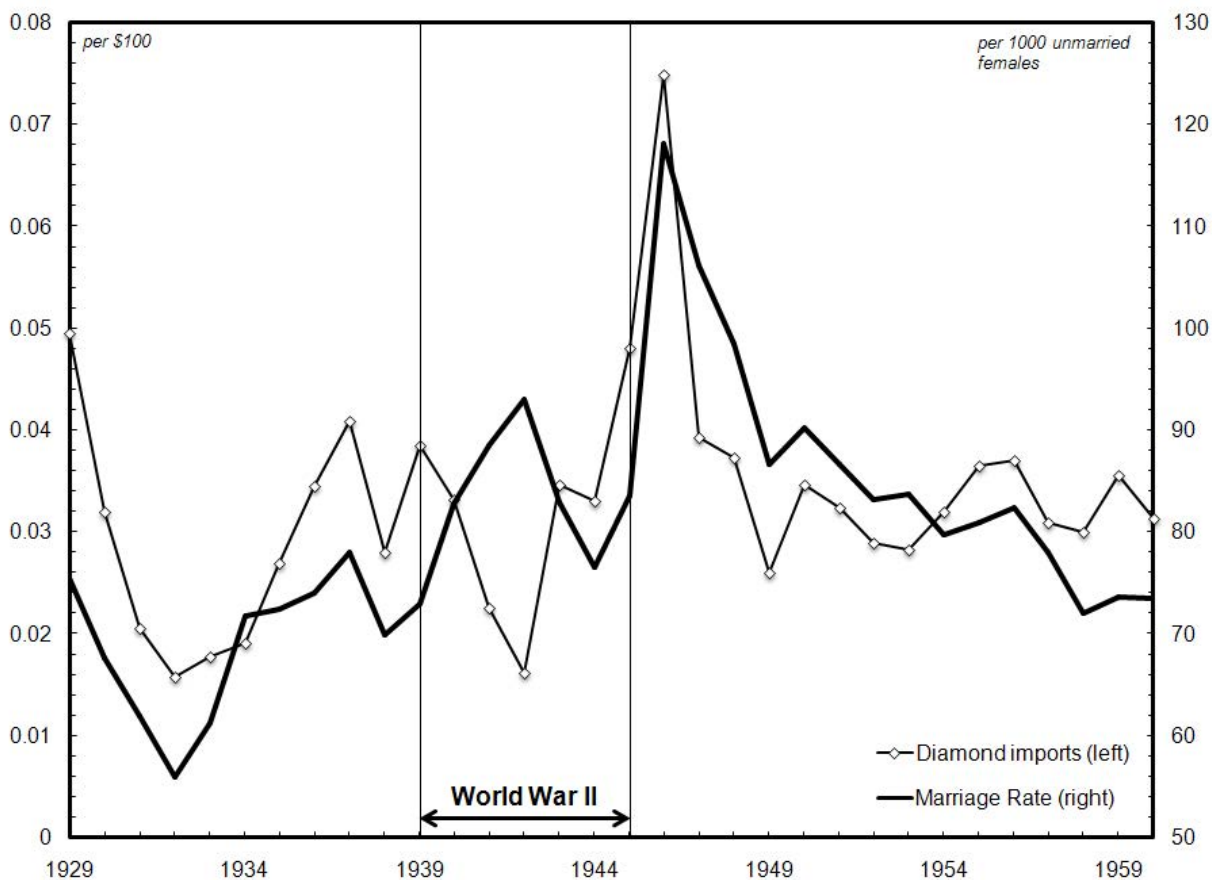


Figure 9: Catalyzing Tradition: Diamonds & Marriage, 1929-60

DATA: United States Geological Survey, Minerals Yearbook; Marriage Rate: United States Historical Statistics, series Ae508

NOTE: Diamond imports is the total of rough and cut stones relative to U.S. GDP. Marriage rate denotes the number of marriages per 1000 adult women.

Figure 9 compares the imports of diamonds with the marriage rate. Diamond imports are the total dollar value of both rough and cut diamonds per \$100 of GDP. The positive relationship between jewellery sales and marriage was long recognized by the jewellery business, as indicated by regular reports in the industry journal *Jewelers' Circular-Keystone* on marriage licence issuances in major urban areas. This would be confirmed in the survey of jewellers conducted by N.W. Ayer on behalf of De Beers. The correlation between yearly changes in the

total number of marriages and the changes in total diamond imports in 1929-60 was 0.61. The correlation was even higher for cut diamonds: 0.69 (not shown).

At first glance, Figure 8 suggests the advertising campaign failed during the early part of the war, since even when marriages were increasing the value of diamond imports was falling. It is almost as though the advertising campaign was having the opposite of its intended effect. However, the sales by U.S. jewellers, of which diamonds were a significant component, rose every year of the war, but for a slight drop in 1944, increasing 39 percent from 1939 to 1945, relative to GDP. The meaning of this seemingly incongruent gap between import values and jewellery sales is more fully explored in Chapter Five. For now, it suffices to suggest that the jewellers were likely able to capitalize on the advertising campaign by satisfying demand from existing inventories. Additionally, it is worth noting that between 1939-42 although the relative value of imports dropped 58 percent, between 1942 and 1945, imports grew by 197 percent, ending up 25 percent higher than in 1939. One implication of this is that the advertising campaign took time to be effective and that effectiveness worked in conjunction with the war.

The effectiveness of the advertising campaign decisively shows itself in 1946. This, I argue, is when the contemporary diamond engagement tradition was really born. For 1929-45, the correlation between the first differences of the U.S. marriage rate and U.S. diamond imports, relative to GDP, was 0.21. For 1946-1960, however, the correlation had soared to 0.81.¹

Measured per 1000 unmarried women, the marriage rate in 1946 and 1947 remain the all-time highs for the U.S. In absolute terms, the number of marriages in 1946 — 2.3 million — would not be surpassed until 1979, by which point the U.S. population had grown 60 percent.

The marriage rate remained relatively high for the next decade or so after the war when

¹ The shift in the relationship is even stronger stronger when the marriage rate is compared to the sales by U.S. jewellers. The correlation for 1929-45 was 0.14 while for 1946-60 it was 0.83.

compared to the pre-war marriage rate. During the 1940s, the number of married women in the U.S. increased 25 percent, and their share of the population peaked near 25 percent in 1950.¹ The movement of jewellery sales follows this peak in 1946. Moreover, the war and post-war years saw more people marrying younger. By far the highest percentage of U.S. women married by age 16-19 was among the cohort born in 1931-40, reaching these ages between 1947 and 1959. In 1947, the median age of women getting married for the first time was 20.5, a full year younger than the median age in 1940. The average continued to fall until 1956.

The increase in marriage among young people was occurring as part of post-war social enthusiasm. The balance between marriage as a practical matter and marriage as an act of romance was shifting ever more toward the latter (Coontz 2006). This shift was conjoined with the spread of inter-ethnic marriage. Robert Proctor (2001) argued that the diamond engagement ring served as a cross-ethnic tradition as ethnic-based marriage practices declined in popularity. It was also these years that engendered the contemporary traditional view of marriage, with the happy housewife, male breadwinner, white picket fence and 2.3 kids. The diamond engagement ring had a place within this mythology as a symbol of the happy, prudent couple's internal bond. When contemporary women cite their mothers' and grandmothers' diamond rings as a motivation for their diamond desires (Falls 2005), that tradition originates in these years. This will be discussed further in chapter seven.

De Beers' advertising can also be considered in relationship to American wartime advertising and buying habits (Figure 10). Advertising spending in the 1920s grew dramatically relative to the previous decade, although largely in tandem with the growth in GDP. With the Great Depression, it contracted more precipitously than GDP and then recovered more slowly.

¹ Figures are only available every 10 years.

Absolute spending on advertising increased during WWII. However, relative to GDP, that spending was 42 percent lower in 1945 than it had been in 1939. The spending of the masses followed a similar trajectory.¹

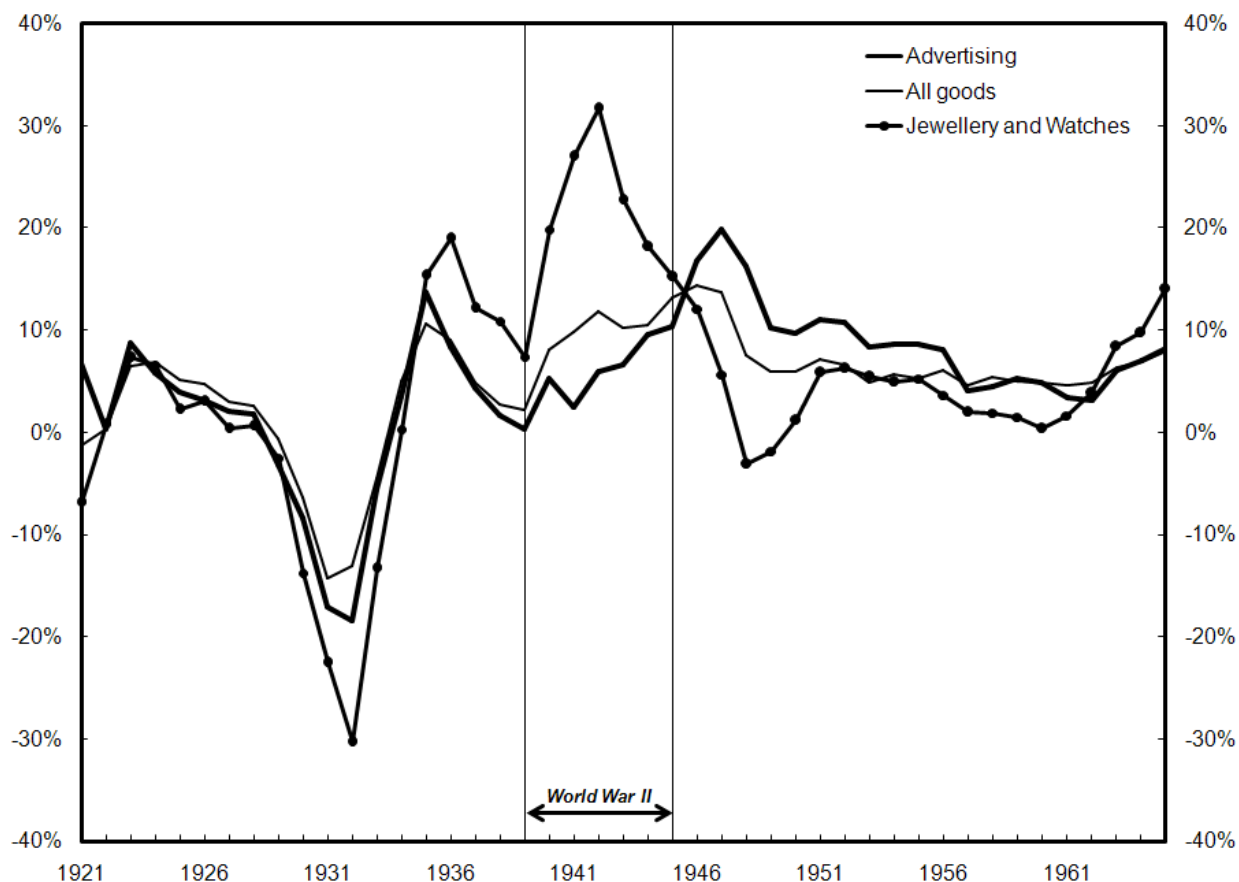


Figure 10: Wartime Departure: Advertising and Mass Purchases, 1921-65

DATA: United States Historical Statistics. Advertising spending: series De482; Spending on all goods: series Cd1, Cd153; Spending on Jewellery and Watches: series Cd420.

NOTE: Series are the annual percent changes in advertising, total mass spending and spending on jewellery and watches, as a centred three-year moving average.

As indicated in Table 1, the correlation between year-over-year changes in advertising and changes in total spending, spending on durable goods, and spending on jewellery is, generally, very high. The correlation with spending on all goods weakened during the war/post-

¹ Source: Historical Statistics of the United States. Advertising spending: series De482; Consumer expenditures: series Cd1, Cd153; Gross domestic product: series Ca10.

war era (1940-50), and strengthened again in subsequent decades. Table 1 shows the correlations for different periods. The correlation with spending by the masses on automobiles and furniture are included for comparison purposes.

Years	1920-39	1940-50	1951-65
Spending on All goods	0.91	0.63	0.80
Spending on Durable goods	0.77	0.75	0.63
Spending on Jewellery and Watches	0.70	-0.46	0.71
Spending on Automobiles	0.29	0.74	0.52
Spending on Furniture	0.94	0.50	0.54

Table 1: Jewellery Stands Out: Correlation of yearly change in spending by the masses with yearly change in advertising spending.

Source: Historical Statistics of the United States. Advertising spending: series De482; Spending on all goods: series Cd1, Cd153; Spending on durable goods: series Cd411; Spending on Jewellery and Watches: series Cd420; Spending on Automobiles: Cd412; Spending on Furniture: Cd415.

The 1940-50 correlation with spending on jewellery immediately jumps out as an anomaly. Excepting that value, all the correlations are positive, and most are strongly positive. The correlations for the different categories move in different directions over the time periods considered, with jewellery mimicking the movement of the all goods category, very positively correlated with advertising spending both before and after the 1940s. However, while in 1940-50 the correlation of advertising spending with all goods becomes slightly less strongly correlated, jewellery becomes negatively correlated. Figure 10 shows the relative movements that caused this shift.

The series expressed in Figure 10 are the annual growth of advertising spending, the spending on durable goods, and the spending on jewellery, all smoothed as a centred three year moving average. Until 1939, the series all generally move together. Then, during the war years,

growth in spending on jewellery increased considerably, greatly outpacing the growth in spending on advertising. However, in the immediate post-war years, the dynamic switched and advertising spending grew more per year than spending on jewellery. Then, around 1951, the two series began to move together again. Although it is notable that the advertising series is greater than the jewellery series, meaning spending on advertising was growing more, jewellery spending was still growing.

It is important to recall that this figure pertains to the total sales of all jewellery, as well as watches. Although diamonds make up a significant portion of that total, it is not clear how that proportion shifted over these years. The spending on jewellery and watches also does not necessarily express the trajectory of De Beers' sales, let alone profits. While increased sales of diamonds by retailers in general were obviously in De Beers' interests, being the precise reason they undertook the advertising campaign, their ultimate purpose was always *their own accumulation*.

The primary period of interest for this dissertation is the war years. That period is situated by comparing it with the years immediately prior to and following the war. It was within this time frame that De Beers' managed to reverse a long-term trajectory of differential decline. The purpose of the dissertation is to try and understand that reversal, its causes, and how it was achieved. The subsequent fortunes of the U.S. jewellery business and of De Beers itself is of interest only insofar as it provides a temporal context. What Figure 10 does show, particularly when taken in conjunction with Figure 9, is that the war and immediate post-war years were momentous, and transformative for the role of diamonds within the American social order, which is necessarily transformative for De Beers. I argue that their advertising effort was an important part of the transformation, an argument that will be made in Chapter Five.

c. Diamond Sales and Market Coordination

Over the course of the 20th century, De Beers' own diamond extraction became less important for its earnings. Increasingly, its role was coordinating production levels among outside cartel members and marketing the rough stones. It would use its own diamonds as a buffer to satisfy demand as needed. Figure 11 shows the values of De Beers' earnings coming from what it labelled the 'Diamond Account' and those coming from 'Interest & Dividends.' Both series are expressed as centred three-year moving averages. The former is the earnings coming from the sales of diamonds extracted from mines directly owned by De Beers. The latter includes the company's share of income from other diamond companies.

Until 1915, De Beers' diamond sales never accounted for less than 96 percent of its total income. In 1915, when global diamond sales collapsed, that share dropped to 80 percent. The averaging smooths a great deal of this volatility. However, the long-term trajectory was an increasing share of De Beers' income coming from 'investments and dividends.' This increase shows the growing importance for the profit of De Beers' role in coordinating and managing the cartel. The power of De Beers extended well beyond its own production of diamonds.

After the successful capture of De Beers by Ernest Oppenheimer in 1929, the cartel was reorganized. The marketing of all supply now passed through a subsidiary called The Diamond Corporation (DiaCorp). The new company began as a 50-50 venture of De Beers and some of the former members of The Syndicate. In 1939, De Beers took full ownership of DiaCorp, partially via its subsidiaries. Meanwhile, the South African production that De Beers' directly owned, but still marketed through DiaCorp, made up less of the total production.

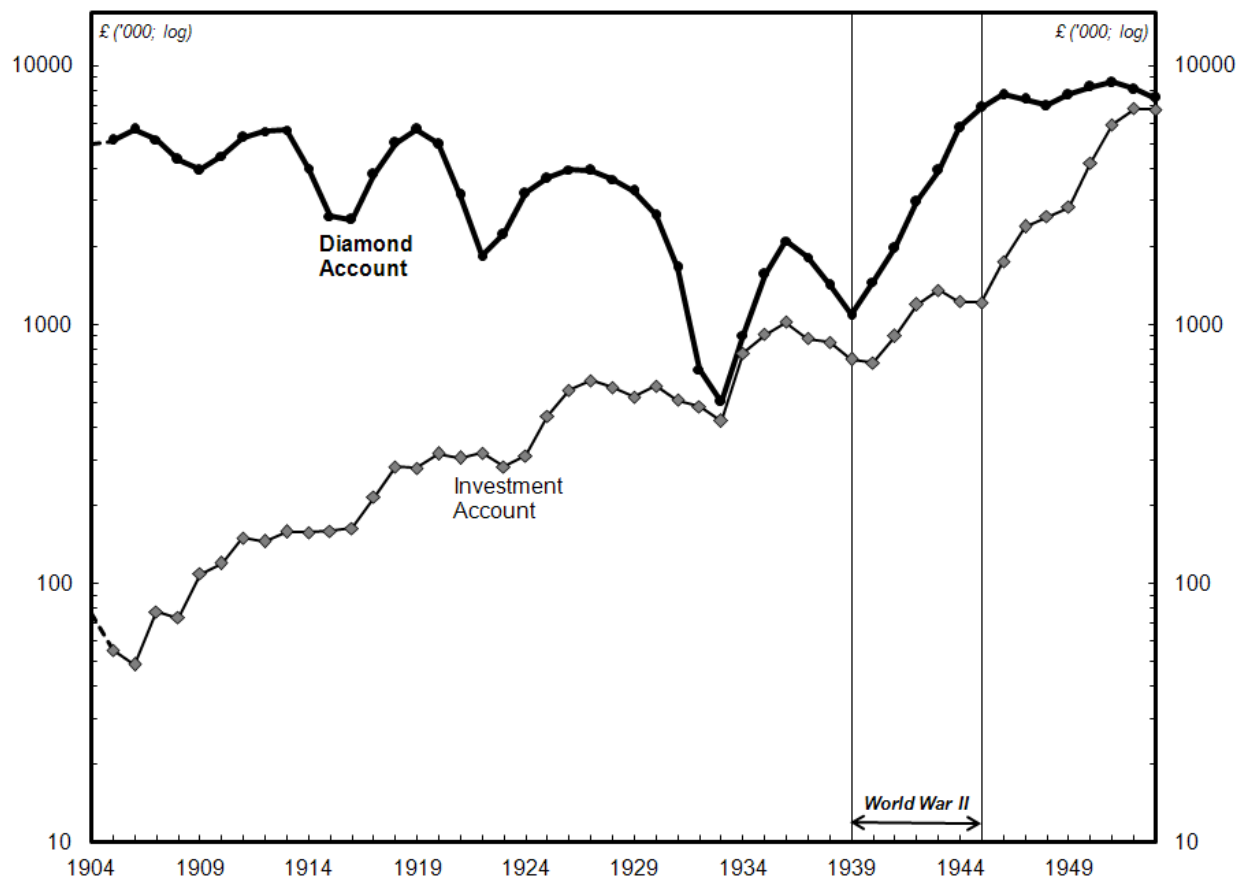


Figure 11: Producing & Controlling Diamonds: De Beers' Income Sources, 1904-52

DATA: The Times (London), various issues; De Beers Annual Reports.

NOTE: Series are calculated as centred three-year moving average. Series are potted on a logarithmic scale.

What De Beers offered to the cartel members was a more-or-less guaranteed level of sales. This promise meant that De Beers absorbed much of the volatility of the global diamond trade. Despite the smoothing effect of the moving average, this volatility is still visible in the 'Diamond Account' series of Figure 11. During years of low demand, De Beers' would sell fewer of the diamonds it produced, while still buying the quota quantity of stones of other cartel members, holding onto them if they could not be sold at managed prices. Then, when conditions improved, De Beers would sell from its stockpile.

During the war years, De Beers' income from diamond sales grew at a CAGR of 40 percent while its investment income grew at a more modest three percent p.a. The rapid increase in diamond earnings is particularly notable because De Beers shut down its South African mines for the duration of the war. That means its diamond sales earnings were made almost entirely from its stockpile. In a letter from Ernest Oppenheimer to his son Harry during the war, he explicitly proclaimed this strategy, declaring, "We must not open a mine during the war, but use up the Diamond Corporation stock" (quoted in Jessup 1979, p.215). It also meant that De Beers' was accounting for stockpile earnings as coming from its own production, rather than from sales by DiaCorp, which would be accounted for in the investment series.

After the war, the situation changed. Between 1945-54, De Beers' investment income grew at 25 percent per year, while the diamond account was more or less stagnant, shrinking at one and a half percent per year. This difference continued the long-term trend that saw the Diamond Account effectively staying level, while the Investment Account was growing. Despite the increase of De Beers' diamond sales earnings during WWII, the absolute value of those earnings failed to recover to the level they were at decades earlier. In 1944, De Beers' diamond sales earnings were £4.6 million; less than the £6.3 million the company made from diamond sales in 1913. In the pre-war era, De Beers' Investment Account kept its differential profits from being even worse than they were (see Figure 0.3). During the war, the company's reversal of fortune was driven primarily by its Diamond Account. After the war, it was the Investment Account that sustained the company's earnings. This evidence, combined with that of Figure 2, showing the decisive break in the relationship between De Beers' profits and the levels of South African diamond labour, suggests that *management* of global diamond extraction — during this

era predominantly on the African continent — became more important to De Beers’ accumulation than its own diamond extraction.

ii. Conclusion to the Quantitative Introduction

The differential accumulation of De Beers is a very simple metric. However, it exists at the end of many different lines that translate the qualitative into the quantitative — what Bruno Latour and Vincent Lépinay (2010) call ‘metrological chains.’ Such chains connect together measures of various sorts drawing ever more qualities into commensurable units, culminating, I argue, in capitalization. However, that end is not the end, but rather an obligatory passage point. Capitalists retranslate capital values into qualitative interventions in the social order. These interventions constitute what Nitzan and Bichler call ‘creordering’: creating order, which will be explained more fully in Chapter Two.

Within my account, I have eliminated the difference-making role of the market participants whose buying and selling of shares establishes capital values. This elimination is possible because along the timeline of my analysis the trajectory of De Beers’ differential accumulation effectively mimics that of its differential profits. Profits also mark an end point for metrological chains translating the qualitative into the quantitative. While profit emerges from a simple calculation of ‘sales’ less ‘costs,’ the constitutions of those two values are anything but simple (see the Appendix).

My analysis has largely set aside the issue of costs, which is partially a consequence of having focused away from production. A parallel analysis could have examined the complex determinants of cost, which includes tax regimes, labour conditions, mining innovations, transportation infrastructure, security, and much more. One of the cost matters of concern for De

Beers was that by the time it secured control of the South African pipes, extraction was moving underground, which is a higher cost process. Meanwhile, mines at newly discovered pipes were able to extract stones with surface mining at a lower cost. However, the cost of extraction over the time frame of my analysis was much more stable than diamond sales. I focused on both the worrisome variability of sales and De Beers' efforts to encourage greater sales, two factors whose impact on profit was probably far greater than the limited variability in cost.

In this section of the introduction, I constructed my own comparative metrics that expressed facets of the social order consequential to De Beers' accumulation. These metrics mapped some of the important realities of the diamond assemblage that impacted on the company's profits. They include U.S. marriage rates, U.S. diamond imports and jewellery sales, U.S. advertising spending, the scale of industrial diamond production and sales, as well as the decomposition of De Beers' income sources. All of these realities availed themselves to quantitative analysis. However, they do not — and cannot — express the entire reality of De Beers' accumulation. This quantitative analysis grounds the qualitative analysis that is necessary to make meaningful the V-shaped pattern of De Beers' differential accumulation. That qualitative account is unfolded in the chapters to come.

IV. Introduction's Conclusion

Diamonds are an object of popular fascination, and have been for centuries. The discovery of diamonds in southern Africa was immediately understood by Britain, and the British colonial government in Southern Africa, as a consequential event for the region. Diamonds were hugely transformative, but the transformative effects could not have been anticipated. No one could have foreseen the incredible increase in global diamond supply or the

emergence of De Beers. Despite the almost total control that De Beers achieved over diamonds in 1889, its power declined from early in the 20th century until 1940.

In 1940, De Beers' long-term power decline was reversed. The details of why the accumulatory inflection point occurred when it did is answered in the remainder of the dissertation. Beyond answering that immediate question, however, the dissertation's purpose is to explore practical methods for analyzing the qualities of accumulation. CasP makes the quantities of differential accumulation meaningful. They map redistributions of power. However, those redistributions are actualized qualitatively. There are no determinant, necessary qualities that are expressed by the quantities of accumulation. As such, there are no *a priori* pathways for political economic analysis. In fact, even that name, which merges two analytical domains, is inappropriate for the task at hand. A more appropriate term, perhaps, is *accumulation studies*. Unlike political economy, accumulation studies are not limited to politics and economics. They can – and must – go anywhere and everywhere to understand the qualities from which the quantities of accumulation emerge.

As we shall see, diamonds and De Beers have their own unique particularities. However, there are also commonalities that can be extended from the analysis that follows. For example, understanding accumulation requires consideration of the materials involved. De Beers had to grapple with the particularities of diamonds. The history of the stones determined their distribution around the Earth. De Beers has worked on understanding that history in order to assist in the search for new sources. The materiality of diamonds was vital to the increased demand for industrial diamonds during the war. This increased demand was important for De Beers' accumulation. Materiality intersected with the expressive components of De Beers'

strategy, most visibly in its marketing that leveraged the hardness of diamonds. Could the relevance of materiality for accumulation be any different for oil? Steel? iPhones?

Accumulation studies must consider the role of the masses in the redistributions of power. It appears to be a given that the masses will buy products-in-general. However, as CasP clarifies, the generative struggle is not only between capital-in-general and the masses of workers-consumers, but also – often more so – among capitals-in-particular. De Beers cared that people spend their money. But with that given, they cared much more that they spend their money on diamonds. While political economists have been ignoring the inclinations, tendencies, susceptibilities and vulnerabilities of the masses, market research on these issues has exploded. Capitalists do not have the luxury of ignoring their ultimate target.

When it comes to the intersection between capital and governments, the standard political economic approach aims to generalize, as much as possible, a set of state-capital relationships that prevails across all governments and all capitals. This generalized view, however, can be very misleading. De Beers' had to form, maintain and transform different relationships with different governments. The governments of South Africa, Belgium, Canada, the United States, the United Kingdom and more, despite all being undeniably capitalist, still took very different approaches to the diamond company. When a universal state-capital relationship is assumed, then the methods by which capitalists actively universalize the relationship, such as through trade agreements that render all governments beholden to a known set of shared rules, disappear in the conceptual homogeneity.

Further the universal state-capital perspective might cause us to overlook the consequences of the failure of capitalists to achieve their standardizing objectives. For example, Ernest Oppenheimer considered trying to replicate with the U.S. government the relationship De

Beers had with the U.K. government. However, a meeting with the U.S. Department of Justice made it clear that such a replication would not be possible. As such, De Beers was forced to operate at arms-length from the U.S. This effort also provoked a minor panic within the U.K. government. This may have contributed to the latter's strong support of De Beers' when the company refused to provide the U.S. with a stockpile of industrial diamonds during the war. There are important differential consequences to the differential relationships between states and capitals.

Finally, accumulation studies have to be willing to traverse across every scale, including the interpersonal. Although De Beers' accumulation definitely depended on the globe spanning British Empire, and a war that enveloped almost the entire world, it also depended on the lessons that Ernest Oppenheimer taught his son, Harry. It depended on the intra- and inter-family trust among Jewish diamond traders, as well as other ethnic and personal associations. Accumulation has no definitive scale. Potentially, it is affected by, and in turn transforms, almost every aspect of society as well as many facets of the non-human environment.

When it comes to the qualities that generate capital gain, it is not the case that 'anything goes.' Capitalists must consider prevailing desires, given material realities, and the existing distribution of power, among other facets of the world. They cannot simply impose their will as they wish, for the world lies waiting. However, we can perhaps say that *anything can go*. Manipulating materials, inventing new technologies, provoking new desires, successfully lobbying for new policies, implementing transparent succession mechanisms.... any and all of these can constitute the qualities of accumulation that are translated into capital. And it is for this reason that those who study accumulation must be open to following any, and all, accumulatory relationships.

Chapter 2: Power and Price Construction in CasP

I. Introduction

Perhaps the most contentious concept in Nitzan and Bichler's power theory of value, is that of power itself. The contention is rightly placed. The concept has a long, complicated history and its widespread use within the social sciences is a problematic one, in part because power's meaning is often taken for granted. We are able to point to those we generally consider to be powerful – the wealthy, business and political leaders, taste-makers – and few will disagree. However, trying to identify what that power is proves much more contentious. In the introduction to a 1986 anthology titled *Power*, Steven Lukes (1986) documented some of the different theories of power coming from thinkers like Bertrand Russell, Hannah Arendt and Michel Foucault. Within these differing conceptions are conflicting positions about the role of intent, capacity vs. actualization, systemic origins and individual rule. Effective use of the capital as power approach will be made easier if the meaning of power, as I interpret it, is more clearly delineated. I begin with Nitzan and Bichler's claim that power is 'confidence in obedience,' and argue that the power represented in capital values is the existing control of parts of the social order for the purpose of profit, as assessed by market participants. More importantly, however, I argue that the role of the concept of power in social scientific analysis is not to explain social events. Rather, the efficacy of CasP is its ability to identify power distributions that then must be explained. In other words, power is the *explanandum*, not the *explanans*.

Although political economy has a lengthy tradition of concern with power – going back at least to Adam Smith – Nitzan and Bichler argued that political economic thinkers have typically theorized capital *and* power. Capital, in this dichotomy, is a productive entity,

associated with the economy, while power is treated as non-productive, and gets analytically sorted into politics. While political economy considers the relationship between the political and the economic, this retains the prior distinction (Nitzan & Bichler 2000). Against this dichotomous formulation, Nitzan and Bichler conceptualized capital *as* power. In their approach, neither capital nor power are productive. Instead, capital, understood as solely financial, is a means for market participants to quantify the control of capitalists over diverse entities. Therefore, capital is a mechanism by which capitalists can: 1) express their power to themselves; 2) leverage that power via financial instruments, such as debt, equity and derivatives. In this chapter, I focus on the first function.

The value of capital is a kind of price, although a particularly important kind of price. While Nitzan and Bichler's own work has emphasized expanding our analysis of *what* gets priced in the valuations of capital, the theory also raises questions of *how* capital gets priced, including *who* prices it. Thereby, the process of price-formation in general gets opened up by the power theory of value. Despite the prevalence of prices within capitalist societies, price-formation has been neglected by the social sciences. This is largely due to mainstream economic theory's dominance over questions of price. Although the theory has generated much critical attention, including its unrealistic abstraction of price as the rational outcome of supply and demand equilibration, this has not resulted in much empirical analysis of actual price-formation processes. Cutting edge research and analysis in the early 20th century on price formation by Gardiner Means (1935), as well as R.L. Hall and C.J. Hitch (1939), failed to have an impact on market theory. I argue that prices are a temporary simplifying translation that enables the ongoing reconstitution of the social order. This relatively abstract claim is explained more fully below, with the focus on the construction of the prices of capital in particular.

Capital values emerge from the assessments of market participants, most visibly through the buying and selling of stocks and bonds. However, they are also more explicitly constructed in various kinds of financial reports that will inform buying and selling decisions. Before a bank extends a loan, it wants to ensure the loan is commensurable to the value of the borrower. Before ownership of a small, non-publicly traded business changes hands, both sides will offer assessments of how much the business is worth. All of these values express the confidence of market participants that the assemblage of entities relevant to the capitalized entity's future earnings will perform as expected. Power, in this process, is analytical shorthand for the quantitative translations by market participants of an otherwise incomprehensible assortment of qualitatively incommensurable entities. While social scientists have grappled with the measurement of power, I argue that CasP postulates that the capitalists have solved the problem for themselves via capital. In other words, when capitalists speak of earnings, profits and returns, they are really talking about power. I argue that the task of social scientists concerned with capitalist power and/or accumulation becomes retranslating the quantities of capital and mapping them onto the qualities evaluated in their construction.

II. Constructing Prices

The CasP perspective on markets, and the questions it raises about price construction, are important ones for understanding its conception of power. The CasP perspective begins with the concept of capital, which Nitzan and Bichler have attempted to revive from the conceptual detente that followed the Cambridge Capital Controversies (Harcourt 1969; Hodgson 1997; Cohen & Harcourt 2003) and the 'I know it when I see it' use of the concept in contemporary social sciences (Cochrane 2011). Quantitative approaches to capital have relied on a bifurcation

between 'real' and 'nominal' quantities that postulates an underlying real quantity determining observable nominal quantities (Nitzan & Bichler 2000). Nitzan and Bichler reject the quantity-quantity ontology implicit in this conception. They insist that the nominal values of capital are their only quantities and rather than offering a distorted vision of underlying values, capital values are instead constructed through an inter-subjective process. However, this view does not mean capital values are illusory. Market participants, whose activities set the prices of capital, do not simply pull numbers out of thin air; far from it. They are heavily equipped, making use of tickers (Preda 2009), trading screens (Knorr Cetina & Bruegger 2000; Knorr Cetina & Bruegger 2002), computers and computing programs, networks of electricity, telecommunications and informants along with formulas, algorithms (MacKenzie 2006) and finance industry standard practices. All of this works to perform and reproduce the capitalist cosmology. At the centre of that cosmos is capitalization, which dictates how qualities are to be translated into a single quantity. In other words, the capital valuation expresses to the powerful the distribution of power among themselves.

Collectively, market participants filter through swaths of heterogeneous information coming from multiple sources: media coverage, phone calls, research reports, site visits and late night conversations. These sources bring them information about Russian wheat yields, teen buying habits, new copper smelting technologies, war planning in the Pentagon, and policy failures in the New South Wales Ministry of Health. Importantly, within the informational flux is information on the assessments of fellow market participants. This distribution of each market participant into an enfolded material and expressive assemblage makes the inter-subjective process a quasi-objective one (Serres 2007, pp.224-34); the subjectivity of each market participant is only possible because of the objects through which it passes to circulate within the

assemblage. The panic and sense of helplessness in a trading room if the screens went blank would be instantaneous. This process is not about *discovering* value, but about interactively *creating* value (Ayache 2010). The creation of that value requires the agglomeration of prices within calculative hubs that then disseminate values as the informational pinnacle of capitalist expression. On dissemination, prices inform subsequent courses of action, including the recalculation of prices.

This process of pricing assets is an attempt to take account of everything that bear on the ‘elementary particles’ of capitalization: expected earnings, risk, hype and the normal rate of return (Nitzan & Bichler 2009, pp.183-212). The prices of capital are as complex in their construction as are all other sorts of prices. However, capital, and its pricing, are privileged. This privileging is not because capital values reveal an underlying, essential value. Instead, it is privileged because capitalists actively privilege it.¹ While other metrics are introduced, may enjoy widespread adoption, and are given a place in the capitalist analytical toolbox, they remain subordinated to capitalization both in material and expressive terms. Capitalization is used by banks when they issue loans. Capitalization is the basis for takeover valuations. Capitalization is on display when CNBC runs a ticker along the bottom of the screen during daytime programming. Capitalization is inherited in the major indexes whose milestones are reported as news. The New York Stock Exchange, the preeminent hub for the pricing of capital, itself earned \$365 million (U.S.) in 2012 and sold that year for \$8 billion (U.S.). Regardless of the valuation model an investor chooses it must be actualized through capitalization.

¹ Increasingly, this privileging is moving beyond the realm of capitalists and into other institutions. As Nitzan and Bichler note, governments and militaries are actively using capitalization as a means to quantitatively assess policies and strategies (2009, pp.162-5).

The prices of capital are the literal bottom line of all of capitalism's calculative processes and, according to Nitzan and Bichler, constitute the 'generative order' through which capitalist power is "created and re-created, negotiated and imposed" (2009, p.153).¹ While previous modes of power lacked any clear single metric for comparison of powerful entities, the capitalist mode of power is marked by capital. Capital enables market participants to translate the qualitative diversity of power into universal financial quantities. Stewart Clegg (1989) argued that theorists of power have tended to impoverish the concept by conceiving it in "unitary terms" (p. 37). However, the unification emphasized by CasP is an empirically distinct one that is actively performed via capitalization. What actually gets unified are qualitatively diverse and complex relationships. In accordance with Clegg, theorists need not replicate the unification of the capitalization process and should deal with the relationships being quantified in their greater complexity.

Nitzan and Bichler acknowledge that there are power relationships outside the funnelling translation of capitalization. On the one hand, only those relationships that bear on accumulation are of concern to capitalists. On the other hand, the 20th century has been marked by the encompassing of ever more relationships into the quantifications of capital. The demarcation between those relationships that are and are not quantified can guide the study of accumulation: the line passes between the activities of actual capitalists that do and do not bear on the elementary particles. For example, market participants famously watch every action of Warren Buffet. Deciding that his frequent card games with Bill Gates are of consequence for accumulation is to similarly decide that they have power consequences. Of course, getting from

¹ The idea of a generative order comes from the physicist-philosopher David Bohm .

the quantities to the qualities of accumulation, and back again, is a difficult task, which is precisely why social scientific research is needed.

Historically, the formalization of capitalization emerged from an implicit process that operated in early stock markets (Swetz 1987; P. L. Bernstein 1996). Capital is not needed for an asset to be vendible. Such buying and selling well predates capitalism. Rather, capital makes ownership itself vendible, a distinction that comes to the fore when we consider the divisibility of ownership that capital enables. If we capitalize a fleet of ships, portions of the ownership can be sold, while the fleet remains a united whole. If each ship were assigned to a particular owner as their asset, then when a ship sinks, that owner suffers the entire loss. However, if a group capitalizes the entire fleet and shares jointly in the ownership, then the losses and gains of the fleet are distributed among them according to their shares. Capitalization makes it possible to delink buying and selling from the underlying assets. An owner can sell part of a stake in a vineyard to buy shares in a corporation. She can sell some of those shares to buy government bonds, and sell others to take a stake in a start-up. She can endlessly buy and sell pieces of the capitalist ownership structure, all in pursuit of gain. At no point does she need to take responsibility for the underlying assets. Importantly, her participation in the process is a participation in the pricing of the entities she is buying and selling. Capitalization enables all that, making all ownership commensurable.

The narrow purpose of capitalization is to price assets by discounting expected future earnings into the present. For the individual owner, the point of owning is to increase the value of their assets. However, one of the central insights of Nitzan and Bichler is that such value changes, in and of themselves, are not the primary concern of owners. Rather, the owners of assets have to assess their gains and losses against some benchmark; accumulation is differential.

On the surface, this position appears to be shared with mainstream economists, who similarly insist that a nominal change in value cannot be taken as is. However, the interpretation and the application of benchmarking in CasP is are completely different. Economists adjust nominal values against a price index. This is intended to remove the ‘illusory’ aspect of value changes due to changes in price, revealing changes in the underlying ‘real’ value. This adjustment keeps with mainstream economists’ conception of individuals as strictly hedonic. And, for those economists, capitalists are considered no different. Capitalists’ ultimate goal, within neoclassical theory, is to maximize utility and an asset is merely one more means to this end. Nitzan and Bichler, on the other hand, draw from the widespread practice found in the capitalist literature — *The Financial Times*, *Fortune*, *BusinessWeek*, the finance sections of the major dailies — of comparing the capitalization of a given corporation to a slate of indexes the represent various groupings of other corporations, such as the FTSE 100, the S&P 500, the S&P/TSX Composite, or an industry specific index. To take one example, a *Fortune* article from 2006 looked at the prospects for 10 CEOs where were ‘on the spot’ (Birger & Stires). A graphic illustrating each company’s recent stock performance juxtaposed its valuation against the S&P 500. That these companies had failed to ‘beat the average’ was taken as evidence of their recent failings and the troubled spot in which the CEOs found themselves. The differential relationship means that growth is a failure if the benchmark grows faster, while decline can be success if it is less than that of the benchmark. The differential perspective on accumulation provides insights on the changing distributional landscape of capitalized entities. The analytical insight of CasP is that this process of continual redistribution constitutes shifts in capitalist power.

III. Theorizing Power: Hobbes and Machiavelli

In order to explicate my understanding of power as used within the CasP framework, I will first consider the two primary conceptions of power we have inherited from Hobbes and Machiavelli.¹ The inheritance from these two thinkers has shaped not only the way we think of power, but the social order itself. My primary claim is that the neoclassical conception of markets is as a Hobbesian Leviathan. This contrasts with what I argue is CasP's Machiavellian perspective of markets as battlefields in the power struggle among the vested interests. According to Clegg (1989), Hobbes has been the more influential theorist of power, informing both subsequent thinkers and policy makers. Clegg described Hobbes as conceptualizing a world of "harmoniously ordered and proportioned power," while Machiavelli conceived of a world "far more dissonant and difficult" (p. 22). It is these divergent conceptions that allow it to be written of the two: "One sought peace above all, the other war" (Sullivan 2006, p.259). If we render this into terms familiar to economics, Hobbes conceives of power as a mechanism that brings the world toward equilibrium, while Machiavelli's power is one that functions in and propagates a state of disequilibrium.

Hobbes' conception of power was the basis for a mechanistic approach to understanding the social order, conceived as necessitated by the same deterministic logic. For Hobbes, power is intimately conjoined to sovereignty and he interpreted power in a governmental and legislative manner. In a just, orderly society, properly functioning government is, Hobbes argued, the locus of power. Vested so, the government has the responsibility to make decisions according to the dictates of a moral order, the rules of which are beyond questioning, and based on properly assembled objective knowledge. This sort of legislative structure provides the certainty needed

¹ The comparison made between Machiavelli and Hobbes primarily draws on Clegg (1989).

for industry, the absence of which, Hobbes famously wrote, left “the life of man, solitary, poor, nasty, brutish, and short” (1958, p.107).

Power, vested in the legislative body of the sovereign entity, is the mechanism that makes civilization itself possible, by providing means to ensuring the society’s members achieve the greatest good. For Hobbes, sovereign entities functioning in a determined way on the basis of a given moral order and a state of given knowledge were mechanical in their functioning and interrelation. Within each sovereign entity, the locus of power — the Leviathan — was conceived by Hobbes as the expression of the populace’s will. However, the very existence of will brings the likelihood of deviance and defiance. Authorized by the populace to maintain an order that the populace itself desires, the Leviathan must subjugate the unruly that threaten that order, ruthlessly if necessary.

Machiavelli, in contrast, saw no such expression of order from within the populace. Those who gained power did not do so via the agglomeration of the populace’s collective will, but through constant self-serving strategizing. *The Prince* (1950) is filled with examples of the diverse strategic moves of rulers, both effective and ineffective, in their struggles to gain and maintain power. Clegg (1989) suggested Machiavelli conceived of power as “pure expediency and strategy,” while for Hobbes power was “pure instrumentality” (p. 31). Rather than the mechanistic operations of legislative bodies, Machiavelli viewed the powerful entities engaged in constant strategic and indeterminate struggle. While Hobbes’ power is synonymous with the totalized and totalizing Leviathan operating within its sovereign boundaries, Machiavelli’s “is embedded in many diverse forms of practice” that cut across any tentatively established sovereignty (p. 33). The diverse sets of practices provide the means for multiple entities to vie for power, as they muster whatever forces they can to achieve domination.

Despite the different conceptions of how power is attained and where it is located, it is informative for my purposes that both Hobbes and Machiavelli understand power as latent, rather than active. Whether an authorized sovereign or a conniving prince, power is not in the efforts at its maintenance or expansion, but in its potential for action. Although, as Sheldon Wolin (2004) wrote, “the hard core of power is violence,” he elaborated that those holding power had to dispense violence in “the precise dosage appropriate to specific situations” or risk destabilizing effects (pp. 197-8). The dispensation of violence is made possible by power. While on the one hand it is a means to expand or shore-up power, on the other it can undermine power. Power is in *the threat of violence* rather than the exercise of violence. The Leviathan is not powerful when quelling unruly desires but when the absence of uprisings and rebellions allow it to operate in a smooth and predictable manner, with the threat of violence stored as pure possibility. Similarly, the Prince’s power is not contained in his warring, sieges, political assignations or assassinations, but first in the obedient forces that enable such activities and, then in the stabilization that follow such acts. The threat of violence that backstops this power is enabled by belief of both the ruler and the ruled that should a command for violence be given, the resources necessary to carry it out will be mobilized. In other words, power is “confidence in obedience” (Nitzan & Bichler 2009, p.17), with the capacity for violence at its core, backstopping both the confidence and the obedience.

In understanding power as certainty gained from the stabilization of relationships rather than in the acts needed to maintain or extend relationships we need to reconceptualize what is often described as the ‘exercise’ of power. Power is what makes action possible. It is not in the act itself, although the act may: 1) reveal the power that exists; 2) serve to expand or stabilize the relations that constitute an entity’s power. The betrayal of a sitting Prince by a minister, on

behalf of a rival for the Crown, shows the rival's power as it pertains to the minister, and conversely the relative powerlessness of the Prince. When one acts to maintain or expand power, this is an expenditure that risks the stability of the relationships that actually constitute power. You might say that one has to spend power to make power.

I will return to this point, but first I want to consider how the Hobbesian conception of power and social equilibrium has informed mainstream economic theory, while the CasP focus on the intra-capitalist struggle has more in relation with Machiavelli's emphasis on the disequilibrating effects of constant strategizing among multiple claimants. Hobbes' ideal of the Leviathan imposing the populace's will back on the populace itself was displaced by later liberal thought of the Enlightenment. While Enlightenment liberalism is connected to the development of neoclassical economic theory, the abstract market as conceptualized within neoclassicism is effectively a Hobbesian Leviathan, economics' dismissal of power as a concept notwithstanding.

Steven Lukes (2005) argued that perhaps the "supreme and most insidious exercise of power" is to limit people's choices "by shaping their perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things" (p. 28). Individuals are 'free to choose,' but only among the available options. For Hobbes, the citizenry's only mechanism of recourse to this delimiting of options is the logic bound government that imposed those limits in the first place. To seek another means is to violate the social contract, which, for Hobbes, is contrary to the public's general interest as it is vested in the hierarchy. Neoclassical theorists replaced the government with the market as the ideal mechanism for delivering just, efficient outcomes. Like the Hobbesian individual, the neoclassical individual is restricted to choices from the options offered by the market, although even more so as their budget imposes a hard boundary. Theoretically, all Hobbesian individuals have equal recourse to the sovereign as

Leviathan. Neoclassical individuals, however, have recourse only in proportion to their spending power.

Neoclassical individuals express their wills among the bounded choices of the market that then enforces their will through the imposition of a price determined by the 'Invisible Hand' equilibrating supply and demand. Any who dissent, refusing to accept the 'freely determined' price, are excluded from participation. While there may be shocks to the existing state of equilibrium, such as technological innovations, neoclassical theory requires their legitimization through the market, i.e. The Leviathan. Except for a limited set of needs that necessitate coordinated government action, neoclassicists treat the market as the only mechanism for ordering society. Just as Hobbes conceived of the power vested with the legislative Leviathan as the expression of the populace, effectively subjected to their own collective will, so too the neoclassicists' market is conceived as the imposition of the populace's collective buying power. If people want it, the market — and only the market — shall provide it.

CasP refutes neoclassicism's mechanistic notion of a universal, totalizing, equilibrating market that efficiently and justly channels the collective will of the buying public to maximize utility. In its place, CasP conceives of markets as particular culminations of messy, intertwined processes that translate qualitatively diverse relations into universally commensurable prices, the unit of the capitalist order (Nitzan & Bichler 2009, pp.150-3). Far from the rational realization of a collective will, prices emerge as a temporary, and partial, solution to the complex interplay of entities whose activities transcend the categories of 'supply' and 'demand.' For example, the price of toothbrushes incorporates: current ideals of dental hygiene, the marketing efforts of the advertising agency WPP on behalf of Colgate-Palmolive, the state of U.S.-China trade relations, Wal-Mart's disproportionate access to toothbrush buyers, the price of plastic, which itself

depends on the price of oil, current manufacturing technologies, the lobbying efforts of the American Chemistry Council, on and on and on. While the abstract market of neoclassical theory is intended to explain the price of toothbrushes as a logical, mechanical, equilibrating outcome, no different than that of any other price, CasP's Machiavellian conception of myriad entities scrambling for an advantage requires empirical study of the diverse entities whose actions constitute real world markets and generate real world prices.

If there is a stable, ordering entity in capitalist society, it is the capitalization mechanism itself. This actual 'Leviathan' is neither the Hobbesian sovereign nor the neoclassicist market, but a conjugation of the two. It provides a firmament for the Machiavellian power struggle among capitalists. Karl Polanyi (2001) described how, contrary to standard conceptions of markets in opposition to governments, governing bodies were essential for markets to function. Along with their policies that make possible 'the market,' capitalist governments idealize the market as ultimate arbiter of 'the good.' Such idealization is pervasive in the policies of Western governments, such as those aimed at pricing carbon as a response to climate change, or refusals to address calls to increase the minimum wage. With their support of pricing mechanisms, government policies and bureaucratic practices operate in accordance with, and in support of, the logic of capital and accumulation. Nitzan and Bichler have deemed the suffusion of the capitalist logic through the social order the 'state of capital,' which will be described in more detail below and then further in Chapter Seven.

IV. Theorizing Power: Political Economy

CasP is hardly the first social scientific framework concerned with matters typically deemed 'economic' to include 'power' in its analysis. Power is very important for all streams of

Marxist thought. In an early piece, Marx (1964) describes how money gives any individual the power to command capacities she does not herself possess. However, for this power to accumulate, Marx believed it necessarily had to flow through production. Money had to be harnessed to labour-power, which he considered to be the sole means of generating value (Marx 1967b, pp.23-62). Money, for Marx, existed on the nominal side of a quantitative real-nominal divide, while value was on the real side. Because of this productivist focus, for most of its intellectual history, Marxist thought emphasized labour and production both ontologically and analytically.

CasP eschews the real-nominal divide in favour of 1) a single, observable quantity of accumulation — finance — and, 2) a process of capitalization that translates qualities into those quantities, discussed below. Although different lines of Marxist thought have advanced away from a strictly productivist perspective, none have clarified a role for power beyond that identified by Marx. While production remains important for CasP's conception of accumulation, it is not singular. Rather, it is one among many domains that comprise capitalist power.

Radical institutionalism is the school of thought that has dealt most explicitly with power, making it a central concept in its somewhat scattered framework. Although Thorstein Veblen, one of the founders of institutionalist thought, had a great deal of influence on CasP through his emphasis on capitalization and theorization of sabotage, he nonetheless had a comparatively narrow conception of how capitalist power functioned. Veblen rooted power in ownership and exclusion (Veblen 1908b; Veblen 1908a). By virtue of their control over the productive capacity of a society, capitalists are able to demand tribute in return for allowing the society access. This sabotage of a society's productivity is conceived in strictly quantitative terms. Capitalists, he argued, seek to produce as little as possible and charge as much as possible for the greatest

possible profits. As will be discussed below, Nitzan and Bichler have both a qualitative and a quantitative conception of sabotage.

Although Veblen famously said that “invention is the mother of necessity” (1914, p. 314), there was little development of this insight into the qualities of production and desire in later works. A society’s productivity, according to Veblen, was the virtuous outcome of humanity’s instinct to workmanship. That industry might purposefully develop both desires and the qualities of output to non-serviceable ends was not extensively considered and was not connected to his concept of sabotage (Veblen 1923).

John R. Commons, another of the institutionalist founders, actually linked power and capital. However, the link is through exchange-value. Commons argued that within capitalism, property and capital have become the same thing, and both have value in exchange. Adopting an hedonic perspective, Commons claimed that the interest of the businessman is exchange-value and suggested that we “measure the degree of power by a ratio of exchange” (2006, pp.28-30). Therefore, power can only be realized in the narrow act of exchange. Partially drawing on Veblen, Nitzan and Bichler rejected the hedonic perspective of prices, wealth and accumulation, arguing that power is sought in its own right (2009, pp.136-8 p. 307-8). As well, the qualitative forms of that power are diverse and complex. Further, capitalist power is exercised in a wide range of institutions beyond exchange.

Radical institutionalist Philip Klein (1987) defined power as “one's ability to influence the way the economy operates to carry out the tasks assigned to it” (p. 1343). Not only does Klein’s definition remain rooted in the categorical distinction of ‘the economy,’ the power of any given entity is bounded by tasks defined from the outside. Conversely, CasP does not locate any source that defines, guides or binds capitalist possibility beyond the capacity of the capitalists

themselves for intervention. The government, the stock market, ‘collective will,’ technology, or any other institutional force that may restrict or provoke capitalist action may all be similarly restricted or provoked by capitalist undertaking.

William Dugger’s (1980) definition of power is very close to ‘confidence in obedience’: “the ability to tell other people what to do with some degree of certainty that they will do it” (p. 897). However, there is also a key difference between the CasP conception of power and that of Dugger: CasP’s emphasis on the differential struggle among already powerful and power-seeking entities. The corporations that comprise the primary organizing mechanism of the contemporary capitalist system exist along the continuum of the power hierarchy. Their power waxes and wanes in relation to each other as the necessary outcome of the on-going process of intra-capitalist struggle. This bears directly on how power and its effects are actualized, conceptualized and analyzed. This differential aspect adds an additional source of dynamism to that emerging out of the resistance from below.

Dugger (1980) identified six “clusters of institutions,” with the five ‘non-economic’ institutions — educational, military, kinship, political, religious — linked to ‘economic’ institutions “in a kind of means-end continuum” (p. 898). Particular instances of any given institution are merely intermediaries for an abstract process that supersedes them. All corporations, all capitalists, all participants in systems of finance and production get enlisted as mechanisms for the universal ‘economic’ institution, with no differentiated or differentiating agency among them. CasP, on the other hand, emphasizes the differential relations among these entities as they form divergent, overlapping, intertwined relations, including with the abstract institutions identified by Dugger.

It is not simply that economic institutions have a universal or determined interest in the non-economic institutions, although there may be universally shared interests among them, such as a school system that perpetuates the ideology of private property. Rather, individual entities, whether capitalists, corporations or corporate coalitions, will have particular and consequential relationships with these other institutions that may conflict to greater and lesser degrees. This means these other institutions can become battlegrounds for accumulatory struggles, with the outcomes of those struggles generating change with both accumulatory and non-accumulatory consequences.

Although Dugger's insights about the expanding and entrenching control of capitalist enterprises over and within these other institutions are useful, they not only fail to recognize the differential capitalist interests at work, they preclude asking the question, as all are subsumed under the 'economic.' For example, while a textbook company has an interest in regulations pertaining to textbook use, preferring frequent turn-over, local businesses, battling to lower tax rates, will have contrary interests, perhaps advocating longer use. Meanwhile, businesses that rely on the education system to produce a particular skill set in its graduates are focused not simply on the quantity of textbooks, but also their contents. While the emphasis here is on the differential struggle among those entities encapsulated into Dugger's 'economic institutions,' we can also see how opening up one realm opens up the others as well, in this case the 'educational.' Individual school boards, or board members, school administrators, teachers, or parent councils, could become the targets of businesses seeking to creorder in pursuit of accumulation. CasP offers no *a priori* restriction on which relations, institutions or entities will be enrolled in the accumulatory struggle. Any such restrictions can only emerge analytically. At best, any set of relations, such as those defined by production, will be contingently obligatory for a particular

domain rather than logically necessary for capitalism.¹ Therefore, researchers cannot take any set of relations for granted.

Before returning to the question of how power is accumulated in the conception of CasP, I will first examine Nitzan and Bichler's theoretical contribution to debates on state-capital relations. Among the various concepts that have emerged from the CasP framework, I make greater use – and offer more critical examination – of the 'state of capital' than any other (see Chapter Seven). As such, in this chapter, I will consider some of the theoretical predecessors of the state-capital relationship as well as how Nitzan and Bichler have radically redefined 'the state.'

V. The Theoretical Foundations of the State-Capital Distinction

The state-capital relationship has been one of political economy's most fruitful and confounding concerns. Since Adam Smith's repudiation of mercantilism and advocacy of *laissez faire*, political economists have grappled with the actuality of the relationship between governments and businesses, as well as the proper normative prescriptions for that relationship. Although Smith famously advocated for markets free of government interference he also argued that business should be kept apart from government. For Smith, any virtue of the market is lost when businesses are able to gain control of government as the businessmen will use it to their own benefit at the expense of the masses (Smith 2000). Through his analytical, and normative,

¹ It bears noting that for the purposes of CasP, capitalization can be considered logically necessary (see Delanda 2006 for the distinction between 'logical necessity' and 'contingent obligation'). This logical necessity is specific to the capitalist mode of power. Capitalization is still a contingently emergent historical entity. Further, the current spate of practices that perform capitalization are themselves contingent. Unlike social scientists who hold onto their concepts as matters of intellectual life and death, accountants revisit even their best practices as a matter of routine.

distinction between business and government Smith was initiating what Nitzan and Bichler considered one of the fundamental bifurcations of political economy: between ‘economics’ and ‘politics.’

Nitzan and Bichler argued that the political economic approach seeking to understand the relationship between economics and politics presupposes a division between the two (Nitzan & Bichler 2009; Nitzan & Bichler 2000). Within this analytical structure, businesses got sorted into ‘economics’ and governments into ‘politics.’ Yet, empirically and historically, the complexities of the interpenetrations of business and government defy any *a priori* division that can then be examined in terms of contravention. Government policies that affect business operations, revolving doors between corporations and government agencies, public spending on business services and corporate lobbying of politicians are just a few of the mechanisms that continually draw government and business together. According to Nitzan and Bichler this interpenetration is built into the qualities and quantities of accumulation. The dense web of relationships are important mechanisms of power and, therefore, matters of concern for capitalists.

The divide between the state and capital is firmly established in terms of the politics and economics bifurcation, with the state considered an explicitly political entity while capital is treated as an economic entity. Nitzan and Bichler argued that this division serves to maintain the theoretical distance between power and capital. Typically, power has been conceived as a political relationship, while capital is treated as a productive entity. Marxists have definitely considered the effects of power on capital, and given power a vital role in ownership and distribution of the social product. Yet, the *a priori* division, rendering capital as a productive entity, was conceived as an ontological reality rather than merely an analytical convenience. This grounding had numerous theoretical consequences, including a productivist bias that regarded

accumulation as ultimately dependent on systems of production. It also resulted in nominal financial quantities being treated as fictitious, with real capital equated to the heterogeneous forces of production.

With CasP's emphasis on capitalization as an empirical process, the question that is front and centre is: what is being capitalized? With such an approach, the division between 'politics' and 'economics' sows more confusion than insight, since anything that bears on earnings will be capitalized, becoming a matter of concern to capitalists. Anticipated environmental policies or rumoured new product lines, both can be quantitatively consequential for accumulation as they get translated through the elementary particles of capitalization. CasP's theoretical starting point is the nominal capital values that have otherwise been dismissed as fictitious. However, having made 'capital' an empirical entity, and not just a theoretical abstraction, what becomes of its partner in the state-capital dichotomy?

The actuality of 'the state' is difficult to locate as its boundaries are uncertain. In vernacular usage it often becomes a synonym for government. However, theorists typically attempt to outline a domain of political control that is distinct from the remainder of civil society. According to liberal theorists, this domain actually functions to represent the desires of the population. For classical Marxists, the state is beholden to the demands of the dominant class, who are themselves beholden to the material conditions of the society. According to this conception, the entire social order, including the format of the state, is determined, ultimately, if not immediately, by the mode of production. Both perspectives, however, share in treating the state as an "instrument of forces" that leaves it "in a derivative position" (Caporaso & Levine 1992, p.192). Conversely, when the state is given its own agency and is not fully determined by those other forces, when it is treated as having its own logic and its own motivations, it is

considered more-or-less ‘autonomous.’ At this point, the debate becomes whether the state dominates capital or vice versa and how that domination impacts both as well as the rest of civil society.

VI. State of Capital / Capitalist Mode of Power

Nitzan and Bichler sidestepped the state-capital debate by redefining ‘state.’ As noted above, classical Marxist thinkers conceptualized the state as beholden to the material realities of society, which Marx called the ‘mode of production.’ Keeping with their reorientation of value from production to power, Nitzan and Bichler suggested that societies are instead defined by their ‘mode of power.’ The mode of power constitutes a “particular configuration” of the social order, with production as one part of that configuration. Further, they argued, it is the mode of power that comprises the ‘state’ of a society (Nitzan & Bichler 2009, p.280). In other words, for Nitzan and Bichler, state and mode of power are synonyms. Within contemporary capitalist society, where capital *is* power, the pair assert that “capital and state do not stand against or function together with each other. They do not complement or undermine one another. They neither interact nor interplay. ... Capital itself has become an emergent form of state: the state of capital” (Nitzan & Bichler 2009, p.278). Power has been a central concept in state theorization, so Nitzan and Bichler’s conception is not without some precedence. However, they significantly depart from both state theorists and political economists when they identify capital as the state and subsume production within it. In the process, they remove not only capital from the political-economic bifurcation, but production as well.

There have been other challenges to the ‘mode of production’ concept, with the World-Systems theorists offering the most comprehensive reformulation (Graeber 2006). The World-

Systems approach identified shifts in distribution that mark fundamental changes in the social order (see Wallerstein 1979). Capitalism, World-Systems theorists reasoned, emerged when markets became the dominant means of distribution. Immanuel Wallerstein, the originator of World-Systems theory, retained the 'mode of production' label, while reconceptualizing it. However, others sought to distance the theory from its emphasis on production. Chase-Dunn & Hall (1997) referred to "modes of accumulation," which they argue are comprised of logics that include production as well as "distribution, exchange, and accumulation" (p. 29). This conception, David Graeber stated, demonstrates "how far the term 'mode of production' has drifted from its supposed original focus on people making things" (Graeber 2006, p.65). This is not intended as a criticism, since Graeber also wanted to transform the concept.

Graeber (2006) argued that the concept of 'modes of production' has been too narrowly conceived as a "naive materialism." Unlike Chase-Dunn & Hall, however, Graeber tried to remain within the sphere of 'production' and instead advocated expansion of the conception to include the "production of people and social relations" (p. 69). Such a reconception offers valuable insights. Unfortunately, given the 'mode of production' concept's extensive history in political economy, attempting to retain the name, but not the content, is needlessly confusing. Like Chase-Dunn & Hall, as well as Nitzan & Bichler, I contend we are better off transcending the overly narrow conception, rightly identified by Graeber, and adopting a different term, in this case Nitzan & Bichler's 'mode of power.'

The transformation of a 'mode of power' is a transformation across a wide range of social institutions. Some institutions will retain characteristics from earlier social orders, while others will be radically transformed. Some institutions will move from the centre of the mode of power to the periphery, while others will move in the opposite direction. Some institutions will

disappear, while others will emerge. Social upheavals have included changes in systems of production. However, the latter cannot be considered the determinant of the former. Rather, alongside and intersecting with changing production have been transformations of: household organization, occupational demands and possibilities, religious practices, transportation infrastructure, regulatory scope, social mores and accepted vices, financial mechanisms, to name just a few. Fernand Braudel's voluminous *Civilization and Capitalism* series documented the uneven speed with which institutions changed as society was transformed over the centuries coinciding with the emergence of capitalism (Braudel 1981; Braudel 1982; Braudel 1985).

Changes in the productive apparatus in one place provokes changes in distribution practices elsewhere that subsequently fed back into production. To locate a decisive 'epistemic break' associated with a material transformation as anything other than an analytical convenience requires we ignore this uneven pace, and the on-going importance of institutions that were slower to change. The causal relationship among all of this change was not a linear — or dialectical — movement centred on production. Instead, the changes were altered, exploited, cajoled, tolerated or triggered by those in power. This is not to suggest that those who navigate the halls of power definitively determine the changes. Far from it. Rather, they had to continually manage the upheaval in order to retain their position of privilege and domination.

The indeterminacy of change meant the objective of those in power could always fail. Failure could occur for any number of reasons, but it always existed as a possibility. From the CasP perspective, because power is distributed among capitalists, the pursuit for differential gain means there are important qualitative differences in the outcomes they pursue. Many of these objectives will be mutually exclusive.

Management by the powerful included changing the tools of power themselves. The mechanisms of capital and capitalization can be considered among those tools of power that emerged in conjunction with social and material upheavals. Measurement has long been employed by the powerful as a means to understanding and transforming the world, as well as controlling the masses.¹ Capitalization has emerged as the most malleable measure and perhaps the most mystifying, with even a clear-eyed observer like Marx dismissing its measurements as mere ‘fiction.’ Yet, as Nitzan and Bichler have declared, its emergence facilitated an entirely new mode of power.

VII. Accumulating Power

Power is the concept Nitzan and Bichler used to make sense of the values of capital. Drawing on their claim that power is “confidence in obedience,” I’ve argued that power is located in stabilized relationships. At face value, by conceptualizing power as derived from stabilized relations, CasP would appear to be firmly aligned with Lukes (2005), who asserted that “power is a capacity not the exercise of that capacity” (p. 12). His view conceptualized power as ‘power over,’ which is contrasted with the concept of ‘power to,’ generally associated with Foucault (1995). The objection to the ‘power over’ perspective is that it treats the forms taken by powerful institutions as “given at the outset,” when in fact, Foucault contended, “these are only the terminal forms power takes” and “power is exercised rather than possessed” (quoted in Law 1991, p.169).

¹ The monumental public works of ancient civilizations from Sumer to Egypt to Mesoamerica relied on consistent measurement that not only allowed the monuments to be constructed but arranged them in a cosmologically significant manner. For example, at the centre of the spiritual capital of the Inka Empire was a plaza from which radiated four highways that divided the Empire in alignment with the changing angle of the Milky Way in the Peruvian sky through the year (Mann 2005, pp.60-1).

John Law (1991) attempted to sidestep the debate over power as ‘power over’ or ‘power to,’ claiming that “there is no reason why we should not treat power as a condition, a capacity, something that may be stored, as well as an effect or a product” (p. 170). The relationship among: 1) stabilized entities; 2) their activities and; 3) the effects of those activities, including on the stabilized entities themselves, is precisely that conveyed by Nitzan and Bichler with their concept of *creorder*: creating order. They describe creordering as a “paradoxical duality — a dynamic creation of a static order” (2009, p.305). Although they noted that non-hierarchical societies are also creorders, power has an important role to play in the creordering process.

Power, they wrote,

means the ability to impose order, and imposition presupposes resistance – resistance from those on whom order is imposed and from others who wish to impose their own. ... And since to overcome resistance is to create a new order, the very presence of power spells a built-in pressure for change (p. 305).

In this definition we can locate both ‘power over,’ which is the existence a hierarchical order, and ‘power to,’ which is the ability to impose, and has both stabilizing and destabilizing effects in the generation of a new order. Importantly for the theoretical equivalence between capital and power, as I see it, the power that gets quantified into capital values is both ‘power over’ and ‘power to,’ owing to the temporal element of capitalization.

According to Marxist value theory, the value of capital is “dead labour” (Marx 1967a, pp.181-92). This means the source of that value is decidedly in the past. Nitzan and Bichler, however, emphasized that capitalization is forward-looking (Nitzan & Bichler 2009). It is a means of pricing in the present earnings that lay in the future. The key to this operation is discounting, which accounts for the expected – rather than known – future earnings. However, those expectations will necessarily be informed by the past and the present. An important part of

the present is the existing hierarchy — power over — enabling the action — power to — that will have consequences in the future. It is these actions that get translated by market participants into the quantities of capital, based on their anticipated effects on entities bearing on capitalist earnings: how will the hierarchy change?

According to CasP, relative changes in capital values constitute changes in power. However, power is not used to explain accumulatory fortunes; the trajectories of relative gain and loss. Rather, the topology of differential accumulation gives us a quantitative picture of power that can then be explored qualitatively. Further, that exploration must be done empirically. To explore power, I argue, is to examine the relationships enacted and stabilized by those deemed as powerful.

Financial quantities are observable. But, the determinants of those quantities and their movements are often hidden, opaque and diffuse. It is tautological to seek explanatory recourse for changes in financial quantities in ‘power.’ Rather, financial quantities express the distribution of power as understood by the power-holders themselves. The rest of the social order is both subject and object of that distribution, since it is represented in the quantitative translations of market participants – power over – and the targets of capitalist actions taken in pursuit of gain – power to. Explaining the quantitative distribution is the task of the researcher. Power, therefore, is the *explanandum* (to be explained) not the *explanans* (what explains).

The question of the explanatory role of power was raised by Jessop (2011) and misunderstood by Samuel Knafo, Matthieu Hughes and Steffan Wyn-Jones (2013) in their respective responses to CasP. While Jessop’s specific question pertained to differential accumulation as *explanans* or *explanandum*, the structure of the CasP framework means the question also pertains to power. This understanding is reinforced by Jessop’s closing suggestion

that a fruitful line of inquiry would be to address the question of what the framework means by “power, its mechanisms and how they work out in a contingently necessary way to produce differential accumulation.” Knafo, Hughes and Wyn-Jones’ reading of power in CasP will be given more exploration below. For now, it suffices to say that their critique of CasP rests heavily on a misplaced claim that Nitzan and Bichler reify power into a quantitative determinant of financial quantities that serves as an *explanans*. To maintain the focus on power as the *explanandum* I argue that power is an analytical concept and not an actual entity or force in the world. Power is conceptual short-hand used to encompass myriad, diverse, complex underlying *relationships* that emerge as the effects of on-going, intersecting and conflictual efforts to expand and stabilize relations. In other words, we must not reify power.

In my understanding of the CasP framework, capital values express the assessment by market participants of capitalists’ power, primarily operationalized through the corporation, over those parts of the social order that bear on earnings expectations. However, those values are meaningful in relation to other capitalists. Therefore, power and its assessment flows between four nodes identified in the following diagram.

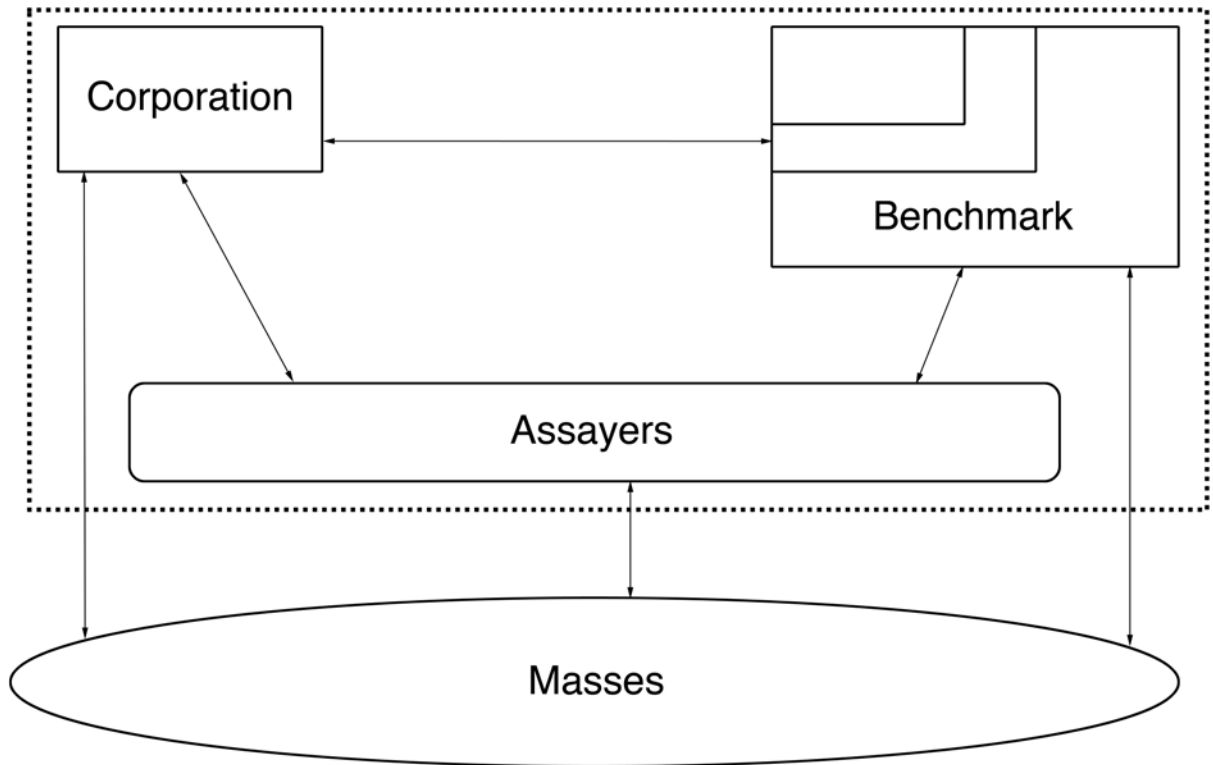


Figure 12: The Nodes of Power Over & Power To
The four nodes of the capitalist mode of power are:

- 1) corporation
- 2) benchmark
- 3) assayers
- 4) the masses

The ‘corporation’ node actually corresponds to every ownership vehicle. However, because the corporation has become the predominant form that ownership now takes it serves as suitable shorthand. For the purposes of simplifying the terminology, what I previously called ‘market participants’ I am now calling ‘assayers.’ These are the entities responsible for the pricing process. To assay means to “test the quality of.” In the realm of mining, assayers test the qualities of a soil sample for indicators of valued minerals. From these indicators of soil quality,

they will generate quantitative estimates of prospective mineral deposits. Those estimates will then be used to decide whether to undertake a mining project or not. Similarly, market participants test the world for indicators of value change.

The assaying process is a constructive, creative one. Assayers do not just passively sit back and objectively relay externally valid information about the world into rational financial representations. In the process of gathering data from far and wide in an effort to discern future gains and losses by the capitalized entity, they also probe and cajole, select and ignore. They pass their gathered samples through computers installed with programs running algorithms that make quantitative sense out of the disparate scraps the assayer has gathered. Or, they may sit down and discuss the meaning of the data with trusted confidants. Or, they may act on a hunch. Or, they may wait and see how other assayers are responding to data, visible in the ever changing prices of capital. Assaying turns data into information.

The information that assayers constructed to generate a price and owners will buy and sell on that basis. The other side of the process is the role of capital values in the decisions of powerful entities as they act upon the world in ways that affect the masses. Whether they initiate or abandon an advertising campaign, seek a takeover, build a new plant, lobby a government, or engage in any other qualitatively distinct act will inform and be informed by the assessments of the assayers. That assessment involves the mobilization of financial instruments that are themselves a part of the qualitative world tested by assayers. This means assaying includes itself in its assessments.

First, when we speak of ‘capitalists,’ we are speaking of members of the top three nodes (inside the dashed line). Corporations, benchmarks and assayers are all nodes traversed by owners, executives and other figures, such as bankers and brokers, whose decisions motivate and

are motivated by the prices of capital. The benchmark node shows three different sizes to represent the fact that a corporation may be smaller than, the same size as, or larger than the benchmark against which it is compared (i.e. less, equally or more powerful). More important is the *dynamics* of that relationship as corporations seek to grow in relation to the benchmark, which is, itself, constantly fluctuating. While these analytical nodes have empirical counterparts, there is considerable overlap between them; the divisions are not as decisive as here indicated. A powerful owner like Warren Buffett, via his firm Berkshire Hathaway, is located in the corporation node and the assayer node. Corporations are part of the make-up of a benchmark. Corporations also participate in the market, making their own assays and trades. Members of the masses are corporate employees, including highly placed ones with a great deal of discretionary capacity delegated by the corporation. A minority, especially in the advanced capitalist countries, are also shareholders, primarily through their pension funds, which are important assayers. These overlaps notwithstanding, this diagram clarifies the operative arenas of power, the organization hierarchy of power, and the pathways by which power's effects are actualized.

Knafo, Hughes and Wyn-Jones (2013) agreed with Nitzan and Bichler's critiques of mainstream and Marxist conceptions of accumulation and concur that political economy needs to deal more explicitly with power. However, they claim that Nitzan and Bichler "fall short of a proper engagement with the phenomenon of power" (p. 135). Unfortunately, their critique is based entirely on inverting power into the *explanans*. It is from this perspective that they claimed Nitzan and Bichler adopt a reductionist conception of reified power. Knafo, et al. misunderstood how power is conceptualized in CasP based on a misapprehension of the concept of sabotage and the place of production in the framework. Further, they completely overlook the vital role of assayers in the process of price construction.

Sabotage is a Veblenian concept given a central role in the development of CasP. Against the productive role that mainstream economic theory gives to the owners of capital, Veblen argued that owners actually undermine, or sabotage, productivity. I argue that as productivity is understood by both Veblen and Nitzan and Bichler as an emergent property of the industriousness of society, of which the masses constitute the dominant share, sabotage can be thought of as the analytical short-hand for the corporation-masses relationship. Knafo, et al. (2013) argued that Nitzan and Bichler treated “ownership as a passive, or at best restrictive, force in relation to production” (p. 138). The trio went on to argue that CasP neglected the qualities of production altogether. Instead, they write, power as conceived within the CasP framework is understood solely as “control over the output of production” rather than “control over the form of production or more precisely *how* commodities are produced” (p. 139; emphasis in original). They argued that capitalist power in CasP is located on the side of production, while finance serves as the mechanism to measure differential accumulation. This means financial markets are not subject to the same sort of power analysis. In fact, they argued, financial markets are treated by Nitzan and Bichler as efficient mechanisms for pricing power (p. 142).

According to Knafo, et al., the pair reintroduced the bifurcation between economics and politics, with politics relegated to the side of production, where power operates, and economics to the side of finance, which efficiently prices power. In this theoretical structure, power becomes synonymous with capital because the former is reduced to the latter, becoming vendible quanta. Nitzan and Bichler have, Knafo, et al. claimed, imposed the same dual quantity structure that they criticize in the neoclassical and Marxist value theories, only now between observable financial quantities on the one hand and quanta of power on the other. Therefore, the trio argued,

power has become, for Nitzan and Bichler, the quantitative *explanans* for financial quantities, allowing them to “excise a complex social reality” (2013, p.145).

The criticism of Knafo, et al. falls apart once we open up the concept of ‘sabotage,’ in particular its qualitative and quantitative dimensions, and highlight the vital, though perhaps under-examined, role of assayers in the construction of capital values. The trio are correct that, in places, Nitzan and Bichler have placed significant emphasis on an argument that business serves as a dulling force quantitatively tamping down productivity (see Nitzan & Bichler 2009, pp.235-44). However, Nitzan and Bichler’s treatment of ownership in a quantitative manner takes place at the most aggregate level: analysis of business-in-general and its relationship with industry-in-general. As a matter of methods, analysis at this scale lends itself to the quantitative. To make such general claims across the broad, differentiated domain of ownership requires a mode of abstraction that the quantitative provides.

Nitzan and Bichler did not, however, argue that such quantitatively analyzed sabotage is the “only way that owners can *make a difference*,” as Knafo, et al. claimed (2013, pp.138; emphasis in original). In fact, Nitzan and Bichler (2009) explicitly distinguished themselves from Veblen, asserting, “business can and does ‘propel’ industry” (p. 226). While this propulsion cannot, they argued, make industry any more productive, it will affect the *direction of industry*. Acknowledging the qualitative nature of this impact, they state that this effect is “harder to delineate” than the quantitative one (p. 233). Nonetheless, throughout their work, and the work of others employing the CasP framework, the complex social reality of qualitatively differentiated power, including systems of production is examined in great detail (Bichler & Nitzan 2004; Cochrane & Monaghan 2013; McMahon 2013), including systems of production. In fact, one of the key insights of CasP is the intertwining of the qualitative and the quantitative:

“Differential accumulation is a process of change This change has two dimensions. In form, it is a *quantitative* redistribution of ownership. In content, it is a *qualitative* transformation of social relations” (Nitzan & Bichler 2002, pp.47; emphasis added).

Emphasis on the qualitative aspects of differentiated capital gets misunderstood in the critique of Knafo, et al. partly because its authors have interpreted sabotage in CasP as solely quantitative, but also because they have excluded the assayers who actually perform the reduction¹ of the qualitative into the quantitative. With assayers missing from the picture, the trio misplaced this performance onto Nitzan and Bichler and the CasP framework. Nitzan and Bichler wrote that their approach postulates an identity between capital accumulation and the changing power of capitalists. However, they added, “this ‘identity’ is only figurative. It consists of converting quality into quantity, of translating and reducing heterogeneous processes of capitalist power into the universal units of differential capitalization” (2009, p.312). This translation and reduction occurs “speculatively and inter-subjectively” (p. 313). This stands in stark contrast to Knafo et al.’s claim that the pair postulate finance as a realm “*most efficient in pricing*” (2013, pp.142; emphasis in original).²

The process of measurement is thoroughly intertwined with the entities being measured as a central feature of capitalization. When we study accumulation we are studying the fluctuations of reality as well as the fluctuating assessments of that reality by the assayers, who

¹ This reduction is to be understood as practical rather than ontological. Assayers take all the information available to them reducing it to a single number: price. While that price constitutes an actual reduction, it is, ontologically, an addition to the world.

² Knafo et al. made much of the fact that Nitzan and Bichler refer to the ‘commodification of power.’ They interpret this to mean Nitzan and Bichler have reified power into a thing that can then be commodified. However, the trio have fallen into what Marx described as the “Fetishism of Commodities” (1967a, pp.76-87). Commodities as things simply masks the fact that they embody relations, which Marx considered their essential core. When Knafo, et al. criticized Nitzan and Bichler for treating power as a thing by describing it as being ‘commodified,’ they are ignoring the fact that commodification pertains to social relations. It is this focus on things that constitutes, for Marx, fetishism.

are performing a constitutive role within the capitalist system. According to my interpretation, CasP's analytical contribution is to conceive of this assessment as a measure of the power of capitalists. The changing prices generated by the assayers express to capitalists how their qualitatively diverse forms of control over myriad social processes are expected to affect future earnings. By studying capital and accumulation we are studying the capitalists' understanding of the world and their on-going transformations of it.

VIII. Conclusion

CasP theorizes that the prices of capital are representations of power as understood by capitalists whose performance of the logic of capital and accumulation shape the social order. The claim is controversial not least because the concept of power is controversial within the social sciences, subject to a great deal of debate (Clegg 1989; Lukes 2005). On the surface, power in CasP seems to fit the standard social scientific conception rooted in Weber (1978), who defined power as the ability of a given actor to "carry out his own will despite resistance" (p. 53). However, once the idea of capitalist creordering is accounted for, the CasP conception moves away from the unipolar hierarchy of Hobbesian power to a multipolar Machiavellian struggle, where those holding and seeking power face not only resistance from below, but a horizontal resistance as others seek to impose their own order; seek their own *creorder*.

Above, I described a hypothetical scrap among capitalists over a local school board's use of a textbook. Some may consider this a relatively low stakes Machiavellian struggle among small time capitalists compared to undertakings with global consequences. However, all capitalist struggles, regardless of the extent of their effects, are local to somewhere. Assayers do not zero in on a subset of capitalist activities as uniquely or decisively relevant to accumulation.

Rather, they survey the global panoply as sources of insight and sites for intervention. From the perspective of accumulation, any event that may bear on the elementary particles of capitalization will be accounted for. Those who can, and must, choose among various courses of action will direct their interventions to those sites perceived as of greatest concern to the elementary particles of accumulation.

Like Machiavelli, CasP requires that we follow the means and mechanisms of power wherever they extend themselves, unrestricted by analytical conceits that attempt to reduce accumulation to an *a priori* determining entity. The concerns and interventions of capitalists extends from the pages of women's magazines to the ideal combinations of sugar and fat in processed food, from government policies on security in the Middle East to pipeline routes across Northern Canada. Our analysis ought to aspire to the globe and psyche-spanning movement of the capitalists themselves.

The power of capital flows through four nodes, with assayers serving an important role of assessment and price generation. Further, the power meaning of capital values emerges in relation with benchmarks. On the one hand, the power relationship among corporations is an abstract, quantitative one, but it is an abstraction *of their own devising*. The power relationship between corporations and the masses, on the other hand, is an empirical, qualitative one. It can take many forms with consequences both subtle and pervasive, as well as sudden and dramatic; some desirable when judged from the perspective of the masses well-being, but many negative. For social scientists, capital values provide insight into the capitalists' understanding of themselves and their control over the world.

Chapter 3: The Role of Diamonds in Accumulation I: What Diamond Is

I. Introduction

The roles of diamond in society are fascinating in both their material and its expressive dimensions. The brilliant stone is best known as a symbol of wealth and romance, but it has been found in very divergent settings. Diamond is the singular symbol of marital engagement, while also a vital input into high speed, precise manufacturing processes. It is an unparalleled symbol of pure luxury, while also an indispensable input to mining. The desire for ‘natural’ stones for adornment purposes continues to drive exploration into ever more inhospitable environment, even as ever larger quantities of artificial stones are manufactured. Diamond serves a frequent, and predictable, role in movies and music, as an object of desire, while it frequently gets “exposed” as a fraudulent object not worth the money spent on it.

The material and expressive aspects of diamond are not wholly distinct. The brilliance of diamond, which is the basis of its elevated symbolic status, comes from the crystalline structure of the carbon atoms. A pile of graphite, another form of carbon, does not elicit the same response as sparkling diamonds. When De Beers’ tells us that ‘A Diamond Is Forever,’ it is enrolling the stones hardness in its marketing. This same hardness is what makes diamonds so important for production. This is not to suggest that the expressions of diamond are reducible to their materiality. The phrase ‘A Diamond Is Forever’ gets its potency via the diamond’s role in romance, engagement and marriage and our celebration of eternal commitment. Neither the material nor the expressive ‘leans on’ the other. Rather, they are folded together, making the materiality of diamonds an irreducible component of the stone’s role in society. This link means

the materiality of diamond is also an irreducible component of De Beers' accumulation, entering into numerous relations that get quantified into its valuation.

The political economic treatment of things has overwhelmingly been as commodities. Marx began *Capital* by identifying the commodity as the definitional unit of capitalist societies. Following his classical predecessors, Marx distinguished between the use-value and the exchange-value of commodities, quickly setting aside their use-value because, he argued, exchange constitutes a "total abstraction" (Marx 1967a, p.45). This exchange-value passes right through the qualities of use-value to the domain of value, which Marx locates exclusively in production and the expenditure of labour power. Despite an avowed materialism, the actual materiality of things is lost. Mainstream value theory similarly passes through the qualities of things, abstracting use-value, or utility, itself into the quantum of isolated human desire. Both Marxist and mainstream theories can be considered dual-quantity theories of value. Observable financial quantities are considered representations of an underlying, determinate quanta: labour value for Marx and his successors; utility value for the neoclassicists. Things *as things* play no role. In fact, Marx is lauded for precisely this dismissal of materiality, since by doing so he has supposedly exposed the fetish of our obsession with things.

With valuation understood as a dynamic, inter-subjective, quasi-objective process, pricing control over a complex mix of assemblages, my analysis attempts to transcend the standard divisions of the social sciences. I will regard the processes typically considered 'economic' to well exceed 'the economy,' while remaining consequential to valuation. One of the consequences of this perspective is the lack of a theoretical basis for separating use-value from exchange-value. Use-value, from both the side of the object of use and the individual who uses it, is a matter of concern to those constructing capital values. This is of particular concern

for diamonds, since their exchange-value is part of their use-value. As such, the materiality of things becomes a matter of analytical relevance for understanding accumulation.

In this chapter, and the next, I examine the material history of diamonds and diamond's relationship with humans — as adornment, as symbol, as industrial input. The materiality of diamonds is a necessary base for the accumulation of De Beers. However, that materiality is not given or immutable. Rather, we can distinguish between *the properties* and *the capacities* of diamonds both as a material and expressive entity.

Manuel De Landa (2006) made a useful distinction between 'properties' and 'capacities' that helps to clarify the difference-making role of things in society. Although the properties of diamond are fixed and transcend their relations with humans, capacities emerge from such relations. Capacities are the emergent properties of the assemblage of the thing with other entities that make it greater than itself. Diamond has the capacity to cut steel or symbolize romance if it is put into an assemblage appropriate to the actualization of those capacities. Actions taken by De Beers were not determined by the diamonds, but rather were within the domain of possibilities afforded by the diamond's capacities. Similar to Spinoza's observation of the human body (Deleuze 1988, p.17), nobody knows what a diamond can do.¹ These indeterminate possibilities of diamond sow uncertainty in the calculations of assayers evaluating the global diamond assemblage.

The properties of diamond *the abstract material* are distinct from, but related to, the properties of diamonds *the individual objects*. However, it is the shared properties across all individual diamonds that enables the abstraction of diamond as a category. The properties of

¹ When De Beers formed its cartel, it could not have imagined that diamond would be used for a spacecraft sent to Venus. The 1978 Pioneer probe had a 2.8mm thick window, 18.2mm in diameter. Mined gem-quality diamond was used for that window (Collins 1998). Today, the company creates synthetic diamond wafers that are used in a wide range of optical applications.

particular diamonds include both those that transcend human relations and those left as a trace of past human relations. For example, a poorly cut diamond may be deemed a ‘fish eye’ owing to the way it refracts and reflects light.¹ Here, my emphasis is on the abstracted properties of diamond in general.

In this chapter, I do two things. First, and most substantially, I consider the standard social scientific dismissal of things, as well as newer perspectives that have given things a more dynamic social role. Then, I examine the properties of diamond and the meaning of those properties for De Beers. The argument I am making is that diamond cannot be rendered an inert entity in the qualities of De Beers’ accumulation. Instead, it is a difference-making participant that must be accounted for in my analysis, just as it must be accounted for by De Beers and market assayers. The theoretical set-up is extensive. This is intended as an antidote to the standard dismissal of things within the social sciences. Additionally, the theory considered is relevant for the next chapter.

Much of our knowledge of the constitution of diamonds – and their pre-human histories – is the result of research backed by De Beers. This knowledge was constructed via scientific undertakings supported by the corporation as a means to help locate sources and extract stones. They also support research into diamond uses as a way to encourage sales of industrial stones.² That the research from which our diamond knowledge was constructed was girded by the logic of accumulation exemplifies a concordance between logics, rather than one logic trumping another. Science has its own logic that is not infinitely mouldable to the logic of capital, but neither is it entirely subordinated or contrary to it. The knowledge of diamonds was necessary for the

¹ Fish eye diamonds have a dark circle in the table when viewed from above.

² The company’s support of diamond research continues to this day. The laboratory of the University of Alberta’s Diamond Research Group is named the De Beers Laboratory for Diamond Research.

development of artificial diamonds, which pose a threat to the value of gem diamonds, since they potentially offer a new source of cheap supply. I will treat diamond knowledge as both true and emerging in accordance with the accumulatory interests of De Beers.

Political economy's treatment of things via the conception of the commodity leaves it unable to understand how things participate in the construction of subsequent things, as well as the construction of desires. As Walter Benjamin (1999) noted, iron and concrete made possible new sorts of building that in their turn made possible new sorts of production as well as new sorts of spectacles that resulted in new sorts of desires. New things – and new sorts of things – have entered our lives and they have played a bigger and bigger difference-making role, so need to be given more and more consideration. As we attempt to transcend the categories of 'politics' and 'economy,' we need to reconceptualize society in a way that includes things.

II. Commodities: Use, Exchange, Desire and Knowledge

Although it seems obvious that the diamond itself had to be taken into account by De Beers, political economists have failed to give materials their due as indeterminate, difference-making entities. Both mainstream and Marxist theory have assiduously separated the qualities of things from their values, passing through qualities to connect observable financial quantities to postulated underlying quantities. These underlying quantities are identified as 'utility' by neoclassical theorists, yet the particular, diverse uses of things — their actual utilities — get replaced by a metric of human desire. Marx, meanwhile, dismissed use-value explicitly, claiming that a commodity, "so far as it is a value in use, there is nothing mysterious about it" (Marx 1967a, p.76). The mystery, for Marx, is to be discerned in the creation of value by labour and its role in determining exchange-value. In both mainstream and Marxist theories of capital and

accumulation, the unique qualities of things are rendered meaningless, dissolved into the claimed source of financial quantities, either labour value or utility; the actual materiality of things has no place in the analysis. Once we revisit the calculation of quantities, understanding it as an immanent event within the world rather than a transcendent relay of ordinary value, then we need to take the particular qualities of things more seriously. Diamonds will illustrate the role that things play in actual political economic events, including the calculations of value.

Marx is correct that value is a social relation. It emerges out of an aggregate of individuals. Yet, when he conceptualized the labour responsible for value creation, it was purified of its social qualities. At points, he turned to workers' bodies to justify the reduction of financial quantities to quantities of labour (Marx 1967a, pp.51-3). Marx primarily treated labour as an aggregate, which is directly opposite that of the neoclassicists who locate value entirely within an isolated individual. Yet, both postulated an abstracted individual removed from their actual sociality, since that sociality includes things.

Veblen famously mocked the neoclassical conception of *homo oeconomicus* as "isolated, definite human datum" (1898, p.389). The neoclassical individual was isolated from his or her neighbours. However, similar to Veblen's critique of the isolated neoclassical individual, Baudrillard (1981) criticized Marx's conception of use-value as outside of social relations. Both the neoclassical and Marxist conceptions of the individual naturalized desire. Baudrillard argued that this means Marx has a 'Robinson Crusoe myth' similar to that of other economists. Like Baudrillard, Douglas & Isherwood observed that commodities "are needed for making visible and stable the categories of culture" (Douglas & Isherwood 2002, p.38). The emphasis by these thinkers has been on the discursive role of objects in meaning-making. However, things are meaningful in both the expressive and material differences they render. This has consequences

for individual desire as well as the culture that desire constructs as things play irreducible, but not deterministic, roles in the constructing of desire. That desire will then play a role in the use of those things. Things are not a neutral passage point between desire and society, but part of the constructive mix that generates things, desire and society.

Standard political economic abstraction, with its elimination of the different qualities among commodities, constrains an analysis of accumulation understood to be a redistributionary process among owners, continually evaluated by assayers. De Beers controlled different objects than Standard Oil. These differences did more than just provide the material basis for their accumulation. They had to be constantly grappled with as accumulation was dependent on successfully taming the materials and their potential roles in society. Both the owners and the assayers who price capital take these qualities seriously as they affect the elementary particles of capitalization. These effects operate through numerous channels that owners must create, monitor, maintain and disrupt. Whether on a woman's finger or mounted in an industrial tool, the qualities of diamonds were of concern to De Beers.

The diamond assemblage is about more than just the diamond. In isolation, the diamond has no property of engagement symbolization, or wealth, or luxury, or beauty. But, within an assemblage, an individual diamond becomes capable of being all those things. The expression of engagement or beauty is not simply imposed on the diamond, but instead emerges from the relation between people and diamonds. These assemblages are not reducible to either their diamond or non-diamond components. The enrolment of diamonds into these roles actualized capacities, resulting in a creation that Cornelius Castoriadis (2005) would tell us is *ex nihilo* (from nowhere), although not *in nihilo* (without inputs) or *cum nihilo* (without constraint) (p. 388).

From the extraction of raw materials through manufacturing, shipping, storage, display sale and possession, the materiality of commodities *as things* plays an indispensable role in the ordering of society, including the series of prices that will be attached throughout the process. Use-value, and our desire for particular use-values, is a matter of concern for capitalists and, therefore, it becomes an important component in the accumulatory struggle. While exchange-value was considered by Marx to be the most mysterious aspect of the commodity, another equally great mystery is its intersection with use-value. Commodities remain things and their qualitative use-value is intrinsically wrapped up with their exchange-values. This is all the truer of diamond, as its exchange-value is itself an important use-value. Neither use-value nor exchange-value can be separated from materiality. Iron could not have served the purposes of diamond, or vice versa and the disparate prices attached to each bespeak these material differences.

Much of the physical make-up of our contemporary lives can be linked to the redistributionary struggle for differential accumulation. Capitalist engagement with the materiality of things is always mediated by the accumulatory drive. However, the accumulatory drive does not determine the outcomes of that engagement. R&D attempts to identify new capacities that can then be exploited for profit. The sales effort attracts our attention to certain capacities in order to entice our purchase. Market research identifies habits and possibilities of desire. Consideration of the qualities and capacities of things being commodified is a way of bridging among accumulation, the sales effort — including market research — and R&D. For De Beers, the use-value of diamond was altered when it became *the* symbol of marital intention and devotion. De Beers also altered the use-value through contributions to research on the use of

industrial diamonds. The accomplishment of these alterations was indispensable for the reversal of De Beers' accumulatory decline.

Excessive emphasis on the materiality of things, according to Marx, constituted fetishism, which occults relations between people (Marx 1967a, pp.76-87). The labour theory of value was Marx's solution to see through the obfuscation of things. Things, for Marx, were what Latour described as *intermediaries*: mere relays for human-to-human relations (Latour 2005, pp.37-42). Intermediaries are to be distinguished from *mediators*, which make a difference. By identifying things, in particular diamonds, as difference-making participants in society, I am directly contradicting Marx. Things do not merely occult human-to-human relations, they transform them. It is precisely that role as mediator that makes things an entry point for capitalist control. Things can be manipulated to manipulate human-to-human relations. Our engagement relation is other than it might be because of the diamond itself, and the relationship diamonds have with De Beers.

Arjan Appadurai (1988) wrote that "commodities represent very complex social forms and distributions of knowledge" (p. 41). Materiality mixes with our knowledge of uses, and desire, for things. In the case of diamonds, the buyers and final owners of diamonds — the non-capitalized, non-accumulatory owners — have a particular knowledge of diamonds, while the accumulation-seeking buyers and sellers have other knowledge. Along the way, the actualized capacities of the diamonds will change depending on the relationships they are entered into and the knowledge applied to them. From the prospectors identifying the qualities of diamondiferous ground, to the sorters evaluating the stones, through the cutters who locate a gem stone within the rough, to the man who is learning what kind of stone he can afford, knowledge enables the material relationship. This knowledge informs, and is informed by, each participant's place in the

diamond assemblage. Appadurai noted that knowledge on both the side of production and the side of consumption “has technical, mythological, and evaluative components” and that they interact (p. 41). As will be discussed more fully in Chapter Five, De Beers had to work hard to distribute among the buyers a specific form of diamond knowledge that would eventually become the 4Cs: carat, cut, clarity and colour.

The popularized diamond knowledge was related to, but distinct from, the far more detailed qualitative assessments used by De Beers in its valuation. This knowledge cannot be considered immaterial or ephemeral. It was rooted in the things that are known. As Appadurai (1988) wrote,

The technical knowledge required for the production of primary commodities is much more likely to be standardized than the knowledge required for secondary or luxury commodities, where taste, judgment, and individual experience are likely to create sharp variations in production knowledge” (p. 42).

Such a distinction was relevant to diamonds, exemplified by the complaints of industrial diamond buyers and users that the categories of De Beers, devised for the luxury market, were meaningless and being manipulated to effectively increase prices. The standardization of diamond knowledge among the masses was, nonetheless, one of the roles given to De Beers’ marketing. This standardization was necessary to make and maintain diamonds as a status symbol and object of desire, whether as a symbol of engagement, power or wealth. Without this status symbol role, the desire and demand for diamonds would have waned. These standards, although incorporating “taste” and “judgement,” were not a strictly human invention; they also had to account for the actual qualities of the stones themselves.

III. Materiality

Marx asserted that “the existence of things *qua* commodities ... have absolutely no connexion with their physical properties and with the material relations arising therefrom” (Marx 1967a, p.77). This has informed much of the subsequent social scientific treatment of things. According to Daniel Miller, “Most critics of mass culture tend to assume that the relation of persons to objects is in some way vicarious, fetishistic or wrong; that the primary concern should lie with direct social relations and ‘real’ people” (Daniel Miller 1997, p.11). Miller claimed that the fetishism critique requires a reification of ‘society,’ which is merely the flip side to a treatment of objects as solely contained within themselves. Latour argued that this perspective treats society as a domain in which activity takes place, and that activity can then be characterized as ‘social’ (Latour 2005). Such social activity is frequently mixed and matched with activity occurring in other domains, like the economy or technology, giving us a plethora of socio- designated sub-domains that define activity, i.e. socio-economic, socio-technological. Latour, however, emphasizing relations, conceptualized society as performed through association. These associations include the construction and maintenance of entities typically characterized as economic or technological. Patenting a new machine, shopping at the grocery store, organizing picket lines, sharing insider information, smuggling drugs, revamping a website, mapping power lines.... all constitute performances by which the social is assembled. Things are indissociable participants in these process and, Latour stated, “we cannot make a place for objects ... without accepting a certain dose of fetishism” (Latour 1996, p.236).

While political economy’s bypass of materiality is due – in part – to the standard dual quantity value theories, business studies have also diminished the role of things owing to the emphasis on ‘strategy & structure’ (Chandler 1990). The material realities faced by businesses

were treated as incidental to managerial coordination. The make-up of actual firms, as well as the material practices in which they engage — whether they require large warehouses or must process volatile chemicals, whether their inputs are available locally or must be transported long distances, whether they deal directly with the public or have large contracts with just a few customers — are eliminated by this broad conceptualization. The differing realities of various industries are treated as requiring a determined technical response that falls under the purview of science and engineering. However, engagement with the materials of concern to the firm have important impacts on the organization and operation of the firm and its engagement with other social institutions. Mining gold had different realities than mining diamonds, which created barriers to amalgamations within the mining industry, even if there were certain shared features. Diamonds and gold made a difference.¹ When business amalgamations do occur, they have to negotiate these differences.

The hybrids that businesses devise to deal with the particularities of materials are not dictated by dispassionate science nor do they remain strictly within the realm of industry. They are not entirely ‘natural’ undertakings, but neither do they wholly emerges from within society. For example, the value density of diamonds (i.e., \$/weight) made it possible for De Beers to cheaply transport the stones from the mines in Africa to its headquarters in London, where they could store an incredible amount of potential value in a relatively small space. However, this value density also creates a significant security risk; a theft could result in the loss of tens of millions of dollars’ worth of stones with just a single briefcase. The company’s London

¹ The global mining firm Anglo American had an important role in the history of De Beers, which will be described in Chapter Eight. Ernest Oppenheimer founded Anglo American and used it in his eventual slow takeover of the diamond trade. However, while Anglo American organized the mining of various metals, most notably gold and copper, diamond mining remained under the aegis of De Beers. Even today, with Anglo American owning 80 percent of De Beers, it has maintained the diamond company as a separate entity.

headquarters reputedly had cutting edge security measures, from sensitive alarm systems to nearly impenetrable vaults. The security required to secure the stones was built into the mythology around stones as evidenced by reportage of the popular 1939 World's Fair exhibit, the House of Gems. Expressing the public's awe at the display of value, coverage noted the sensitivity of the building's alarm system and the presence of a guard armed with a machine gun.

Specific materials enable certain courses of action, but these are neither given nor determined. Materials offer fairly strict bounds on product development. But, they do not necessitate a single path. The evolution of diamonds was not inevitable. They could easily have been unseated as a valuable gem and rendered an industrial input. Who is to say what might have happened to diamonds if the South African sources were not located when and where they were. It took the particular historical conjunction of British governance, European finances, colonial spirit and diamond's material capacities to create the diamond mining assemblage capable of producing the quantities it did. There is evidence of extreme price fluctuations, which, had they continued, could have permanently taken the lustre off of diamonds. If the South African quantity had come later than the later-19th century, flooding into a more affluent American market, giving an aspirational middle class access to relatively cheap, high quality stones, it could have undermined what diamond expressed. This could have transformed its capacities, making it a cheap trinket unsuitable as a symbol of luxury or romance. According to Eric Bruton, the high value of gem diamonds subsidized the production of industrial stones, keeping their costs relatively low (Bruton 1971, pp.17-8). If gems had not attained their large price tags, the production of industrial stones may have been limited, reducing their availability to high-speed, precision manufacturing processes, which would have greatly impacted wartime production.

Human society is stabilized in and by things. A human can awaken in Toronto, get onto the Internet and book tickets for London, due to arrive later that evening. She can rely on a predictable public transit to get her to the airport. Susceptible airplanes are secured by screening technologies that will deem her and her baggage safe for travel. On arrival, she can expect that her credit card will facilitate access to transportation, shelter and food. Her cell phone allows her to call work, family and friends.

Every day hundreds of people take exactly this journey and, inevitable grumbling aside, the process occurs remarkably smoothly. The confidence in the process depends on a stabilized infrastructure of complex relationships enrolling both people and things. The electricity and telecommunications technologies necessary to access the Internet has to be established and maintained, allowing it to be treated as an intermediary. The global airline industry, with its tens of thousands of daily flights, maintained by hundreds of thousands of mechanics, flight attendants, baggage handlers, pilots and more, is such a reliable assemblage that the exceedingly rare crash garners intense media attention. All those humans have training and equipment that is essential to their work, much of which is invisible to the travellers. The use of credit cards depends on a globally connected finance industry that will honour debts incurred, even across borders and currencies. Hotels and restaurants sign agreements with the credit card companies, negotiating terms and rates expressed in extensive contracts. Transatlantic cell phone calls rely on satellites launched into orbit around the Earth. Those launches rely on centuries of scientific research embodied in a rocket capable of escaping the Earth's gravity.

The extensive, and wide-ranging description of the previous paragraph is an impoverished summary of all that is actually required for the journey described. Yet, around the world, people undertake such trips trusting that everything will unfold more or less as expected.

The remarkable stability of all the assemblages involved enables this trust. This trust is partially evidenced in people's frustrations when some event contradicts their expectations and disrupts the process.

Shirley Strum and Bruno Latour (1987) noted that societies without things, such as those of baboons, are limited in their growth because the maintenance of relations is such a consuming undertaking, requiring time, strength, patience, guile and all sorts of social skills. The norms of the society are not inscribed into stable materials, as they are in human societies, but must be continually re-negotiated. For example, alpha males have to constantly put on physical demonstrations of their dominance to ward off potential challengers. The powerful members of capitalist societies need no such display. Owners can be confident that, on waking up each day, the records expressing their wealth will be in place, enabling them to pursue even greater wealth.

If an animal society grows too large then the task of stabilizing its relations becomes too great as it requires their bodies. However, if the animals had things that could stabilize those relations, it would allow their societies to get bigger. If they had weapons and contracts and tributary objects, then the on-going bodily re-establishment of relations would not be as necessary. Instead of having to physically threaten usurpers, the powerful members of the society could enlist soldiers, guns, laws and jails. This stabilization makes accumulation possible, as it serves as the necessary basis from which expansion can occur. It was only pre-existing networks of diamond distribution, as well as the ideas and ideals of diamonds that enabled De Beers to singularize diamonds as the symbol of engagement and marriage. Its symbolic role was connected to the entire diamond assemblage, in which diamonds themselves are irreducible participants.

This role for things has typically been overlooked or specifically denied by social theorists. Alex Preda (1999) exemplified Niklas Luhmann and Jürgen Habermas as two social theorists who place things into the ‘social environment’ and, therefore, outside the social itself, which Habermas described as “legitimately regulated interpersonal relations” (quoted in Preda 1999, pp.348-9). This conception can be traced back to Marx’s treatment of nature, which, as Miller described, is simply the means by which “man reproduces himself.”¹ In Marx’s nature, the inputs to production are fixed, with no difference-making capacity in their own right. By this conception, it is humans who breath life into matter. Castoriadis (1987) maintained this perspective, using the metaphor of “leaning on” to describe society’s relationship with nature (p. 229-37). However, this makes either human ingenuity or ‘social structures’ the sole determinants of both the social order and its valuations, leaving materiality as the ‘dumb stuff’ upon which that ingenuity is actualized. Trevor Pinch argued that “the Marxist analysis neglects the enabling aspects of materiality and technology” (Pinch 2008, p.463). The ejection of things as participants in the construction of the social order leaves us unable to properly explain or understand human institutions, including those of accumulation, which are moulded, in part, by the qualities of the things they leverage.

Drawing on Foucault’s model of power/knowledge, Preda suggested that “knowledge processes are ... a bridging element that allows us to follow the social role of things” (349). He states that there are two essential features in the power/knowledge model: “(1) continuous expansion and accumulation and (2) the tying together of human actors and things in stable,

¹ Marx used this phrase in “Private Property and Communism” (found at <https://www.marxists.org/archive/marx/works/1844/epm/3rd.htm>), where he is dialectically exploring the relationship between ‘man’ and ‘nature.’ In the course of this exploration he rejected the very idea of making a distinction between the two. However, this rejection is contradicted by the labour theory of value, which depends on the ability to isolate human labour - the sole creator of value - from the objects on which it acts.

hard-to-break cognitive relationships.” This has much in common with Nitzan and Bichler’s definition of power as ‘confidence in obedience.’ Such confidence requires knowledge — or at least a belief in one’s knowledge — of the entities over which power is exercised. Things offer far greater stability than capricious humans, who are capable of organized rebellion¹, which is why things have an important role to the play in the accumulation of power that is capital accumulation.

Nitzan and Bichler have emphasized capital accumulation as a symbolic regime (Nitzan & Bichler 2009). My emphasis on the particulars of materiality is not intended to privilege the physical over the symbolic. Rather, I seek to set aside the separation itself, which has been another foundational theoretical bifurcation of the social sciences. The physical is more than just the medium on which the symbolic is inscribed. The symbolism of human society emerges from our engagement with materiality and our manipulations of the material is informed by the symbolic, with consequences for the capacities actualized.

Lewis Mumford (1966) similarly eschewed the separation between the symbolic and the material in his analysis of human technologies and power structures. He considered the body itself an important material in the emergence of human society. Mumford suggested that analysis of prehistorical societies has been overly focused on the hard materials that remain over the millennia. In response, he sought to draw attention to the dream element, where imagination is unbound from the restrictions of actuality. What is significant is that the dreams lead to interventions with materials. Mumford noted that the origins of functional pottery are in artistic endeavours, with human figurines predating ‘useful’ jars. Our knowledge of the clay came from

¹ An example of the preference for things is described in David Noble’s (1984) *Forces of Production*. He explained how ownership interests chose the numerical control form of automation over the superior record-playback, since the former centralized the skills of the workers in the machines and engineers.

the manipulations informed by symbolic representations. Knowledge facilitated command of the material necessarily to actualize storage containers. The actualization of storage had radical consequences for the stability of communities since it allowed them to preserve goods and endure through seasons of want.

Pottery did not invent itself. However, the invention did not emerge because human imagination and intention seized on an infinitely plastic world. It would have required fits and starts in multiple parts of the world as the dream led to engagements producing many failed progenitors to functional pottery. Once functional pottery — pottery that could actually hold and store and preserve — was created and then reiterated and reiterated and reiterated, others would have taken up, on the one hand, altering and improving its functionality, and, on the other hand, ascribing symbolic meaning to it. The two hands would not have functioned in a completely distinct way, as the symbolism would have informed the alterations to functionality and vice versa.

It was not that function or form were deterministic, with symbols trailing behind. Far from it. As Mumford noted, clay is just one among many materials first found in art-making, rather than tool-making. Diamonds can be included in this collective, as it was their sparkle that first attracted human attention. The diamond that triggered the Southern African diamond rush was picked up by a child whose eye was caught by a pretty rock.

The diamond's multi-faceted role in society, and the accumulation of De Beers, is best understood, I suggest, if we eschew a prior divide between symbolic and physical attributes. The mines to extract the stones, the cutting centres to shape them, the security systems to protect them, all exist to satisfy the desire for romance, luxury and power that diamonds symbolize. They are also structured in a way that accounts for the material properties and capacities of

diamonds. The materiality of the diamond assemblage has been reordered to send more diamond volume flowing through cutting centres in India as the businesses in the assemblage seek to capitalize on people's fascination with diamonds; a fascination they feed through marketing, but which is also seemingly self-perpetuating in popular culture.

Of course, the 'self' component of self-perpetuation is an illusion. The perpetuation of diamond fascination requires the existence of networks through which forms of diamond knowledge flows: teenagers listening to Rihanna's hit song *Diamonds*; members of the middle-class watching Oscar coverage with its references to the starlets' diamonds; watchers of television reruns seeing, once again, the engagement between Monica and Chandler on *Friends*, which includes a diamond engagement ring as an unspoken, but requisite participant; or, the popularity of the Smithsonian's Hope Diamond display, which drives, and is driven by, the museum's marketing.

IV. Properties: What a Diamond Is

Diamonds are more than just the focus of everyone involved in the diamond assemblage. They shape the on-going ordering of the infrastructure that allows diamonds to flow from within the Earth to adornment or industrial use. The properties and capacities of the diamond inform the design of every part of the assemblage. Diamond's property of hardness, and its capacity to express luxury, are real and have played a transformative role in many parts of the social order, some of which have then received the attention of De Beers. For example, as noted above, the compact value of the stones makes their transportation a risky affair as they would be easily diverted. Yet, because of their size, they are often sent by mail. That value density, combined with their sparkle, is also why they are so often the object of desire in heist movies, which plays

a part in the general value perception of diamonds. Diamond is also important within the cutting industry besides being its object. Owing to diamond's hardness, the equipment for cutting diamond must itself make use of diamond. This becomes part of the marketing mythology, which connects romance to diamond's hardness and sparkle. Diamonds have been an irreducible part of the trade as it has evolved over the 20th century.

The shape of the contemporary diamond market — where the mines are located, the centralized control of De Beers, the distribution of cutting centres, the diamond significance for engagement and marriage — is rooted in the discovery of diamonds in southern Africa in the middle of the 19th century. Firstly, the discovery drastically increased the supply of diamonds. Prior to the discovery the sources of stones were a couple of locations in India and a few mines in Brazil. These handful of mines produced a meagre quantity of stones. It was for this reason that diamonds were almost mythical objects in the popular psyche. As well, it ensured that they were priced well beyond the means of the vast majority. It was also the reason news of the diamond discovery attracted thousands of people to a landscape previously only of interest to farmers.

Debates about what is and is not a diamond are now largely moot. However, the discoveries in South Africa provoked such a debate, just as the earlier discoveries of diamonds in Brazil had. The first stone found in South Africa travelled thousands of kilometers through the hands of many experts who variously proclaimed the stone was and was not a diamond (Bruton 1971, pp.30-3; Kanfer 1993, pp.23-7). Rumours of the stone provoked some to proclaim on the matter, definitively declaring that it was not a diamond, stone unseen. Once it was firmly established that the stone was in fact a diamond, the narrative shifted, and the stones of southern Africa were declared inferior to those of Indian or Brazil. One reason behind this claimed

hierarchy was to protect the rarefied status of already existing diamonds. Jewellers feared that an increase in the supply of stones would push down prices. Although reliable sources listing prices at the time are hard to locate, those that do exist indicate prices were already stagnating (A. A. Levinson 1998).

The immediate consequences for the diamond market of the southern Africa discovery was profound. However, it was equally profound for the science of diamonds. Through both formal and informal activities, prospectors developed techniques for locating diamondiferous ground. Exploration began with existing and past riverbeds where alluvial stones could be located. The diggings in these locations eventually led the prospectors to the “blue ground” that was recognized to be distinct from the top and surrounding layers of soil. These were the tops of the not-yet-named kimberlite pipes. The identification of such pipes as a sub-surface source of stones led to analysis of the topology of the land to locate other pipes. Scientists also began to develop ideas about where and how diamonds are created and when they came to the Earth’s surface. With increased supply, jewellers began to drop prices to move stones. The market and the geography/geology converged to cause the exact price fluctuations that worried diamond merchants.

The emergence of the De Beers cartel was in response to these price fluctuations. A group of diamond dealers, mine owners and financiers recognized the threat to the meaning of diamonds if prices fluctuated too dramatically or dropped too low. The idea that the stones have inherent value would be damaged and, once damaged, would be difficult or impossible to rehabilitate. Supply restriction was considered the only solution and so the dealers, mine owners and financiers conjoined to gain control of the African diamond sources, and thereby about 90 percent of the global diamond trade. The company immediately reduced production, drastically

cutting the quantity of stones flowing out of the mines. This allowed it to exercise supply control, which would be the company's key strategy for the next 100 years.

The discovery of the diamondiferous pipes did not just change the quantity of stones available. It also changed the qualitative distribution of the stones. Previous sources of stones lay at the end of a process whereby geological and metrological forces left intact only relatively high quality stones. These stones were well suited to cutting for gems. The mining of stones, however, resulted in many more stones of poorer quality. This latter process drastically increased the quantity of stones available for industrial uses. Over the next 50 years, diamonds slowly found their way into more and more industrial processes before use increased sharply with the ramp up of wartime production (see Figure 7). The increased quantity of the hardest natural substance on Earth, which proved extremely useful for high speed, precision manufacturing, provided an important sales outlet and source of earnings for De Beers.

The individual and collective attributes of diamonds were key features in the process. The collective properties of diamond are those that we can abstract from all individual diamonds, such as crystalline atomic structure. Diamonds in general constitute a collective on the basis of a shared history that give them shared features. The individual properties are those possessed by particular stones. In between the individual and the collective are classes of properties that are important in the classification of stones, which will be discussed in the next chapter.

The first collective property of diamonds is their global distribution. That distribution is the result of their shared history and the geological history of the Earth. Information gleaned from the discovery of stones, as well as the stones themselves, enabled the construction of knowledge about where diamonds come from. The appearance of diamonds, their shapes,

textures, inclusions, deformations and colourations are used to construct possible histories of the stones (O'Donoghue 2006).

The reconstitution of the history of diamonds has also played an important role in the construction of a narrative of the Earth's geological history. Diamonds are used to learn about the deep Earth in which they were created (R. Tappert & M. C. Tappert 2011, p.93). Particularly important are tiny bits of foreign material around which diamond forms, known as inclusions. An inclusion often carries deep Earth materials that are otherwise inaccessible to geologists. This material can be studied to construct knowledge about the deep Earth and its processes. The distribution of diamond pipes across the Earth's surface has been used to create knowledge about volcanic, meteorological and hydraulic events and processes, which were required to bring diamonds from the locations where they can be created to where they can be found by humans.

The history of diamonds occurs on a geological time scale completely alien to the pace of capital accumulation. Yet, it is relevant to that accumulation as reconstructing the history of diamonds is useful for identifying possible sources for extraction. This knowledge was useful in the search for new diamondiferous ground. As the geographic and geological knowledge about diamonds has progressed, it has led prospectors to new search areas, taking them out of Africa and into Australia, Russia and northern Canada.

Diamond is one of the common stable crystalline forms of pure carbon, the other common form being graphite.¹ The difference between the two is in the internal structure of the carbon atoms. The graphite structure consists of sheets of six-member rings of carbon atoms, which makes it one of the softest minerals. The atomic structure of diamond is a more robust tetrahedral array. Diamond forms at a combination of high pressure and relatively low

¹ Lonsdaleite, or hexagonal diamond, is a third, extremely rare, crystalline form.

temperature (Kirkley et al. 1991; R. Tappert & M. C. Tappert 2011). At higher temperatures, or lower pressure, carbon will instead crystallize into graphite (C. S. Kennedy & G. C. Kennedy 1976). The birth of diamonds begins with the upward percolation of carbon containing fluids into the right temperature-pressure setting. Then, in the presence of other chemicals, such as oxygen, a redox reaction will produce diamond (Stachel & Harris 2008; Stachel & Harris 2009). The birth of diamonds is believed to be a very localized event, requiring the chance combination of the appropriate conditions and the necessary chemicals. Only when these come together are diamonds born. These conditions were found at least 140 km below the Earth's surface. Once born, the diamonds remain out-of-reach until an eruption brings them near enough to the surface to be mined by humans.

It is within the remains of these eruptions that diamonds are found. The mineral make-up of these remains were named kimberlite after Kimberley, South Africa, the city that emerged to support the nearby diamond mining. Kimberlite pipes are found within the oldest parts of the continental plates, known as cratons. Prior to the discovery of the pipes, all diamonds came from alluvial sources, which are distributed over the Earth's surface. All of these diamonds, however, had to originate, at some point, from a kimberlite pipe. This fact made locating the tops of such pipes the goal for locating diamonds. Locating the pipes was not an easy task, as the eruptions that created them had occurred millennia in the past and had since been eroded and buried. De Beers developed methods of identifying locations based on the topology of the land. The possible locations then attract assayers who sample the soil to ascertain whether or not there are kimberlitic minerals below.

Cratons are typically found in relatively inhospitable locations. The difficulties associated with mining in these locations are only overcome because the value density of diamonds makes

their transportation and subsequent distribution quite cheap. The small size of diamonds can be considered another property of the stones. Even the largest stone ever found weighed in at less than one kilogram. The size of the stones is primarily limited during their formation, although the violent transportation of the stones within the kimberlite also breaks them into smaller pieces. Their small size made it feasible for the U.K. government and De Beers to relocate and re-establish the diamond cutting industry after the Nazi occupation of Belgium. However, it also made the stones an object of Axis smuggling. The stones were desirable both as an important industrial input and as a mechanism of foreign exchange. U.S. and British intelligence imagined smuggling scenarios that were only possible because of the value density of the small stones, which made the stones a unique focus of Allied intelligence and anti-smuggling efforts.

The hardness of the diamond is both a blessing and a curse for the accumulation of De Beers. It has been an obvious blessing for its role in industrial use. It has also allowed for certain extraction techniques that something less sturdy might not endure. Perhaps most visibly, it has been a central part of De Beers' advertising slogan 'A Diamond Is Forever.' However, as a curse, the hardness means that every diamond ever mined could potentially be available for resale. This creates the possibility of a massive secondary market capable of cratering the price of diamonds, since there is nothing to distinguish a newly mined and marketed stone versus a stone mined last year, last decade or last millennium. While the cut of older stones may distinguish them, they are also easily recut.

The unique hardness of diamonds is due to the crystal structure of carbon. Each atom has a strong covalent link to four neighbouring atoms. These form an array known as a 'diamond cubic.' The outward shape of a diamond emerges from this internal crystalline structure. The structure gives stones an orientation that is vital to cutting and polishing, as well as their

industrial use. O'Donoghue (2006) wrote, "In diamond manufacture and the use of diamond abrasive, the existence of the directional effect of differential hardness across each diamond crystal is one of the most important phenomena in the whole of modern industry" (p. 64).

Diamonds that have grown without any external deformations will form an octahedron. This is a referential ideal for all rough stones and it informs the crystallographic axes assigned to diamonds. An octahedron has three axes of equal length that cross at right angles to each other. The underlying crystal structure of the diamond is the same regardless of the appearance of the faces and edges of the rough stone, which is why identifying the crystallographic axes is relevant and important to the task of cutting.

The axes are used to identify the directional properties of the diamond. Diamonds are hard, but brittle. Although a diamond has planes that are almost indestructible, along other planes a stone can be easily cleaved. Perhaps apocryphally, diamond buyers in South Africa would 'test' the stones brought to them by prospectors by chipping them with a hammer. The uninformed prospectors, believing this was proof the stones were not diamonds, since it was common knowledge that diamonds are hard, would later agree to sell their diggings at a steep discount to one of the buyer's colleagues. Evidence that this actually happened is scant, but it does express the lack of general knowledge about the hardness of diamonds and what that actually means.¹

These differential axial properties are exploited in the cutting decisions required before turning a rough diamond into a gem. Similarly, diamonds that get mounted into drilling and cutting devices have to be properly oriented to maximize their usefulness. However, an actual

¹ A modern example of this ignorance was seen in the show *The Mentalist*, where to test whether or not a stone is a diamond, the main character smashes a ring with a fire extinguisher. Due to its brittleness, a diamond could be easily shattered by such an act.

diamond's shape is not strictly determined by the unaltered repetition of the diamond cubic. Few rough stones come close to the octahedral ideal. There are impurities at the atomic level, with elements other than carbon intruding in the crystalline structure. This affects the colour of the stone. Inclusions will lurk within the stone, having been surrounded by the growing crystal. External forces will have cracked and deformed the stone, with certain deformations also resulting in colour change. All of these interveners in the growth and transportation of diamonds individualize the stones. The placement and direction of inclusions and cracks must be taken into account when deciding how many stones to cut from one rough stone. This is important in the classifications of De Beers. A large rough stone with many internal inclusions will yield fewer or smaller cut stones of less value. Evaluators need to take the directionality into account when classifying, and thereby, valuing the stone.

Between the shared properties of all diamonds and the particularities of each diamond, there are qualities that are used to classify the stones. Tappert and Tappert noted, "The classification and interpretation of the morphologies and shapes of diamonds has been a matter of debate for more than a century" (R. Tappert & M. C. Tappert 2011, p.15). The original classifications were primarily descriptive and/or based on the origins of the stones. From there, systems based on morphological differences were developed. These were further altered to emphasize the growth mechanisms behind the varying morphologies. There are three general classes of diamonds: monocrystalline, fibrous and polycrystalline. These morphological classifications run across chemical classifications based on the type and quantity of impurities.¹ The classifications are not synonymous with the grading of stones used in De Beers' valuations, although they are related. For example, one grouping that crosses between the morphological

¹ Ia: contain up to 0.3% nitrogen; Ib: contain up to 500ppm of nitrogen; IIa: so little nitrogen it cannot be detected using standard methods; IIb: even less nitrogen, with significant amounts of boron.

classifications and that used by De Beers in its grading, is 'macle,' which are twinned stones with a triangular appearance. Originating with De Beers' classification, since it affects the cutting of the stone, the qualities the term describes are relevant to the morphological development of the stone.

The chemical classification is related to the colour of diamonds, which is an important component of De Beers' classification. Although the ideal diamond, of pure carbon, would be absolutely transparent, stones generally have a yellowish tinge. The more yellow the stone, the less desirable and, therefore, the less valuable, until a strong yellow is visible, which gets the stone classified as a 'fancy.' This yellow colour is due to the presence of nitrogen atoms displacing carbon atoms in the crystal matrix. The more nitrogen, the yellower the stone.

Ninety-eight percent of diamonds are classified as Ia, meaning they have nitrogen present and therefore some yellowish tinge. Some stones, classified as IIb, have boron present, rather than nitrogen. These stones are blue in colour, the most famous example being the Hope Diamond. All other colours result from effects other than atom replacement. Green diamonds are generally the result of stones having been irradiated. There are a few examples of naturally occurring green stones. Other colours, such as yellow and orange, are less well understood, although it is believed they result from irreversible plastic deformation of the stone. Artificial colouring of stones is a concern within the diamond trade. Fancies command a significant premium on non-coloured stones.

Although Marx may be correct that "no chemist has ever discovered exchange-value either in a pearl or a diamond" (Marx 1967a, p.87), those with an accumulatory interest in diamonds have certainly employed chemists in their pursuit of gain. One of the roles they have been given within the diamond assemblage, specifically in the employ of De Beers, is developing

instruments for screening diamonds to detect artificially coloured stones. This development allows the distinction between 'natural' fancies and those created through artificial means. Similarly, De Beers' chemists have also developed machines to identify artificial diamonds (O'Donoghue 2006, p.114). Yet, the possibility of undetectable artificial gem diamonds remains a concern within the trade, and diamond marketing connects the expressive meaning of the stones with the histories of those mined, implying that artificial stones lack the same significance.

V. Proto-Conclusion

The above qualities of diamonds have been described as properties, and can be distinguished from the capacities of diamond. The properties of diamond, however, express the capacities of carbon. Although the properties of diamond are well known and firmly established, the capacities of carbon remain open-ended, with the properties of diamond just one trajectory carbon can take. Graphite represents another well-established trajectory of carbon. In other assemblages, such as with hydrogen, carbon can express other capacities. Recently, new carbon capacities have been actualized in the form of graphene, a layer of graphite just one atom thick that exhibits unique properties, including highly efficient transmission of heat and electricity, as well as great strength for its weight.

The capacities of carbon have also been a matter of concern for De Beers, as the possibility of artificial diamond posed a threat to its accumulation. For as long as it has been known that diamond is a form of carbon people have been dreaming of synthesizing the precious stone. Of course, the dream posed a nightmare for De Beers since the manufacture of diamond, if it were cheap, and the output of high quality, would destroy the company's ability to control

diamond supplies. The company's response was to actively intervene in the invention and innovation of diamond synthesis. This constituted one facet of its core principle of supply control.

Graphene, and its exhibition of unique properties is only actualized through the intervention of human artifice. However, the substance itself is a homogeneous assemblage of carbon. While diamonds also have their own capacities to actualize via human artifice, these depend on heterogeneous assemblages, of which diamond is an irreducible component. In the next chapter, I will consider some of the capacities of diamond and the way those capacities affect De Beers' accumulation. As with its interventions on diamond synthesis — an actualization of carbon capacities — the company has actively intervened in the actualization of diamond capacities.

Both the properties and capacities of diamond are consequential for De Beers accumulation. Therefore, from the perspective of CasP, they are consequential for its power. Revisiting the way political economy treats things is a necessary corollary to the CasP reconceptualization of accumulation as power processes. The pricing of capital is an accounting for the qualitatively diverse entities and process over which capitalists exercise their control and which affect earnings. I understand things to have their own potential for 'disobedience,' that must be accounted for in the calculations of assayers. Although diamond cannot disobey in the same manner as an uprising by factory workers, it could prove to be more poorly understood than De Beers, or market participants, believed. For example, should new geological knowledge lead to vast new sources of diamonds, or should the stones betray a radical new method of cheaply manufacturing high quality stones, the confidence in De Beers' control over diamonds could be greatly damaged.

Strum and Latour (1987) emphasized the role of things in stabilizing and extending social relations. I suggested that this makes things an irreducible component of accumulation. However, I have also argued that the accumulatory struggle is one of disequilibrium. Part of disequilibrium is destabilization, which provokes things *to do new things*, like creating thin diamond wafers that have properties valuable to certain kinds of industrial and scientific applications.¹ Things have an important role to play there as well. The on-going research into the properties of diamond is one means to tame and leverage the destabilization of newly discovered properties and capacities.

The next chapter will examine the capacities of diamond and the role those capacities have played in the accumulation of De Beers. Particular consideration will be given to the classification and sorting of diamonds, which is an obligatory passage point in the global diamond assemblage. Further, it is a passage point largely controlled by De Beers and an important component of the qualities of the company's accumulation. Additionally, the classification became a point of contention during WWII. The users of industrial diamonds complained about De Beers' sorting, which they claimed was effectively used to raise prices, against a promise by the company not to do so. The sorting of diamonds is not simply a means of identifying some unassailable attribute that can guide a stone's movements into the right class. Neither is the sort a pure fiction entirely invented and imposed by De Beers. These issues will be explored. The conclusion to the next chapter will summarize the issues raised in that one as well as this.

¹ Diamond is transparent across a wider range of lightwaves than regular glass making it useful for many scientific applications involving light transmission.

Chapter 4: The Role of Diamonds in Accumulation II: What Diamond Can Do

I. Introduction

By treating diamonds as a social constituent, I am eschewing the standard intellectual bifurcation between nature and society. Rather, I will consider the assemblages in which diamonds participate as hybrids (Latour 1993; Latour 2005) that cannot be sorted or torn asunder to factions of the nature/society bifurcation. Particular emphasis will be placed on the classification of diamonds, which constitutes what Michel Callon calls an ‘obligatory passage point’ (Callon 1986). The stones that come out of the mines are of varying qualities and can serve varying purposes. To satisfy the different demands for diamonds at the greatest possible prices, the stones must be evaluated and sorted. These classifications are neither wholly determined by the stones themselves nor arbitrarily imposed on them. Rather, the system of classification used by De Beers and the process of grading the stones were constructed in dialogue with the stones. The classifications are a vital component of the valuation of the stones and played a role in the subsequent trade in diamonds from cutters to jewellers to the buying masses. The importance of classification for the construction of social order makes it an acute window into the irreducible role of things in that order, including the reordering efforts of capitalists.

Although more theorists are calling attention to the irreducible role of things in society (Swedberg & Pinch 2008; Daniel Miller 1997; Latour & Weibel 2005; Slater & Barry 2005), this has generally focused on either the importance of things for household use or the specific role of machines, including in the construction of financial prices (Preda 2008; Muniesa 2008). Less considered is how these process are related to accumulation and the power of capital (T. Mitchell

2009 is a notable exception). While the oil businesses' aims are financial gain, they cannot ignore the material realities of oil and gas, as BP was reminded in the most tragic fashion with the Deepwater Horizon disaster.

In this chapter the focus will be on De Beers' relationship with diamond and diamonds as difference-making subjects. By entering diamonds into new assemblages, new capacities are actualized. De Beers interest in the research and development of diamond capacities is always accumulation. However, they cannot just impose on diamonds any end they wish, but neither are the courses of action determined by the givenness of what diamond is.

De Beers' accumulatory drive affects the way knowledge gets transformed in its application, which for the company would always be toward the end of gain. Accumulation's effects on the gathering and use of knowledge constitutes a facet of 'sabotage.' Sabotage is not just a quantitative dampening of production. It is also a qualitative alteration of production that serves the bottom line. Contrary to vernacular defences of capitalism, profit-seeking invention and innovation need not be in the social interest. In the case of artificial diamonds, De Beers has managed the threat – in part – by taking charge of the development and production of artificial stones. They have also admitted to antitrust behaviours in controlling the artificial diamond market.¹ So far, artificial diamonds have been almost entirely restricted to industrial uses. While it is possible to buy gem quality artificial stones the market is very limited.

In this chapter, I consider both the expressive and the material capacities of diamonds. One of the first expressive capacities that will be actualized by newly mined diamonds is fluorescence under X-rays. This is used to spot the stones among the surrounding rock. Better known, of course, is diamond's capacity to express romance. To do so, it must be cut and

¹ In 2004, De Beers pleaded guilty to criminal price fixing. The U.S. government accused De Beers and GE of colluding to fix the price of industrial stones, the majority of which are now manufactured rather than mined.

mounted and worn. The romantic expressiveness of a diamond is heightened if it is mounted on a ring worn on a woman's left ring finger. In addition to romance, diamonds express luxury. A Hollywood starlet walking the red carpet dripping with sparking stones is perhaps the height of luxurious imagery. That image, combined with the control of diamond supplies, helps to keep diamonds desirable, which is why jewellers lend diamond jewellery to stars. De Beers' advertising is an on-going intervention in the expressiveness of diamonds. As will be considered in Chapter Six, they initiated advertising to reinvigorate the romantic expressive capacity of diamond as the symbol of engagement.

The expressiveness is not distinct from the material properties of the stone, since, as mentioned in the last chapter, the famous De Beers slogan depends on diamond's hardness. The material capacities of diamond are important both for the cutting of diamonds and for their use in industrial processes. Just as expressive capacities depend on material properties, so too material capacities depend on expressive properties. As noted in the previous chapter, diamonds have a crystallographic orientation. The use of a diamond by industry takes advantage of this by examining a stone and ensuring that it is mounted so as to exploit its hardness. If a stone is misread then it will wear down much more quickly and could fracture. During WWII, De Beers engaged in research into industrial uses for diamonds, particularly for boart, the lowest grade of stone. With large quantities of boart in stock, new industrial uses increased demand and the value of the stones.

One of the most important human-diamond relationships occurs in the grading process, which gets consideration in this chapter. All diamonds can be inputs to high-speed precision industrial processes, but not all diamonds have the capacity to serve as a symbol of romance or luxury. The sort locates the stones capable of these latter functions. This instantly increases their

potential value many-fold. There are further qualities on both sides of the sort that will be discerned by the diamond graders to achieve a much finer value gradient. The diamond grading process has been a foundational component of the trade since before the cartel's formation. However, it became a central and widespread matter of concern with De Beers and the Syndicate's monopolization of control. First, the outside producers who participated in the cartel continually complained that their diamonds were given poorer grades than warranted, which reduced their values. Conversely, the diamond buyers complained that stones were given overly generous grades and were not profitable. Additionally, industrial diamond users complained that the qualities used for grading and valuing industrial stones were meaningless to their uses. This was consequential for De Beers' accumulation. Control over the sort was an important source of the company's power and, therefore from the perspective of CasP, its valuation.

II. Capacities: What a Diamond Can Do

Manuel De Landa (2006) stated that although an entity's "properties are given and may be denumerable as a closed list, its capacities are not given ... and form a potentially open list" (p. 10). The properties described in the previous chapter prescribe and constrain the possibilities of the capacities of diamonds. But, those possibilities are opened up by the other entities that form an assemblage with a diamond. The capacities of diamond that have been actualized are contingent. Yet, they now form obligations that must be contended with (De Landa 2006). Couples who get engaged without a diamond are still assessed in relation to the diamond engagement norm. They must contend with the diamond as a symbolic obligation, the absence of which marks them as the sort of people who eschew traditions. The diamonds that are part of the British monarchy's Crown Jewels express the bygone wealth and global power of the British

Empire and are an important tourist attraction. Starlets at the Oscars can be certain of attention if they are adorned with eye-catching quantities of diamond jewellery. The capacities that have been actualized are not all within diamond-human relations. We have also actualized important capacities in relations with other material entities. For example, the extraction of diamonds makes use of grease, because diamond is hydrophobic and lipophilic, which means the stones shed water and stick to fats. Diamond's unparalleled capacity to cut and shape metal is used by anyone undertaking high speed, precision manufacturing. This actualization of a relationship between diamond and metal requires human interventions, but it cannot be understood as a strictly human relation. All of these various capacities have an important part to play in the accumulation of De Beers and they continue to be points of intervention in its creordering of the diamond assemblage.

Alex Preda argued that there is a "practical codependency" between people and things in the functioning of knowledge. Objects "contribute to generating temporality structures that ensure the coherence and stability of social order" (Preda 1999, p.355). He cited the work of science and technology sociologists whose theorization of things is focused on scientific instruments and their role in making knowledge. The interdependency of humans and things is much more obvious here than in end-user domains where the objects are decorative, such as engagement rings. What does it mean to speak of making knowledge when we are talking about the diamond engagement ring? I argue that the knowledge flows through the entire human-object assemblage, without being reducible to any single part. It exists not solely in the mind, but in the conjunction of people and things. Engagements are touted as significant life events and, when they occur, a requisite post-engagement ritual includes the display of the newly received diamond ring, extended on the appropriate finger for all to see. The diamond's presence is an

irreplaceable locus in a couple's declaration of marital intent, but for its meaning to be shared, such meaning must already be known. At the same time, in the sharing, such knowledge is reproduced.

Gabriel Tarde suggested that philosophy would be changed if the conceptual focus was shifted from being to having (Tarde 2012). This would change our perspective from one of identity — which is limited to the properties of a thing — to that of relationships. Relations do not just attach together two wholly defined entities, but create an emergent entity without fully subsuming the parts (De Landa 2006). These assemblages can also be thought of as “quasi-objects”, a concept used by Michel Serres (2007) to transcend the subject-object dichotomy. Serres argued that a quasi-object “marks or designates a subject who, without it, would not be a subject” (Serres 2007, p.225). It is, he suggested, a “constructor of intersubjectivity” (p. 227). The diamond that may or may not be in the soil is a necessary partner in the prospector's identity. The diamond on a woman's left ring finger signifies that she is ‘taken,’ and is a wife or fiancé. Diamonds in a drill bit designate appropriate mining functions, as non-diamond bits will be useful for other tasks. These roles are only sensible because of an entire complex of other relations. A prospector marking a plot to dig for worthless stones becomes a crazy person. Within a culture without the engagement status, the diamond ring is meaningless. Without the rest of the drilling apparatus, a drill bit is useless. None of these entities, the prospector, the ring-wearing woman or the drill bit have a stand alone identity. Rather, their subjectivities are continually shifting as they form relations.

Trevor Pinch used a similar concept of “liminal entities,” which he took from the anthropologist Victor Turner. Turner described such entities as “neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention and

ceremony” (quoted in Pinch 2008, pp.478-9). These concepts can help us keep in mind that commodities have both use-value and exchange-value without having to set aside the former, as Marx did. Importantly, once we think of things as variable by virtue of their changing relations, this can change the way we consider the changing prices of commodification.

Diamonds have shifting relations and changing prices as they move through diamond assemblage from ground through many hands to final sale. The diamond is one thing when it's in the ground before its surrounding soils has been identified as diamondiferous. It is another when a claim exists on the ground in which the diamond is believe to be. It is yet another when mining is targetting the stone for extraction; another when it's extracted; another when sorted and graded; another when being cut; another when being put into a piece of jewellery; another when displayed to potential customers; another after its purchase; another when it's worn. The diamonds remain pieces of crystallized carbon the entire time, whether in the ground, mounted on a drill bit or worn on a finger. They also have an attached price the entire time. Although Marx is correct that this price is not dependent on the chemical identity of diamond, it is not wholly distinct from use-value, which is a product of the changing relations as the stones moves through the diamond assemblage. In other words, use-value is just as social as exchange-value.

In the case of gem diamonds, the sale may never actually be final. A diamond's enduring prospective exchange-value can be considered an important use-value of the diamond as well. As an emulative good, the price of a diamond is a source of its appeal. A larger diamond is desirable because it is a display of one's wealth. The idea that a diamond is not just an aesthetic object, but also a store of value has long been a selling point. This use has been an irreducible part of the history of Jews in Europe, who could rely on diamonds as a compact store of value at times when they had to flee persecution. This has been part of the long historical relationship that some

Jewish populations have had with diamonds, which continues to this day. Diamonds were similarly popular among the wealthy who fled Continental Europe during WWII as a highly portable means to transport their wealth. However, as will be discussed more in Chapters Five and Six, De Beers has always been wary of over-selling this attribute of diamonds. They sell newly mined diamonds. A sizeable second-hand diamond market would undermine the company's long established policy of supply control and could destabilize the price of cut diamonds. The capacity for diamonds in the control of the masses to again attain exchange-value is a problematic use-value that De Beers must work to contain.

i. Expressive Capacities

Diamonds have proven themselves potent expressive entities. The best known expressive capacity of diamonds is as a symbol of romance, commitment and engagement. The diamond serves this function through its public display (Latour & Weibel 2005). In this role, diamond engagement rings do not just conjoin the couple, they also provide a mechanism for stabilizing the social order by reaffirming marital intention and status through the stone's display.

The knowledge associated with the diamond as symbol of engagement is not inherent in the stone, or simply in the stone-wearer hybrid. It requires the entire diamond assemblage. That assemblage includes De Beers' advertising and various mechanisms that maintain the diamond engagement ring tradition, such as portrayals of engagements in popular media. One of the most important contemporary mechanisms is the idea of the engagement tradition itself. Women cite their mother's and grandmother's rings as a motivation in their own desire for a diamond (Falls 2005). The diamond enrolls the public who see the diamond ring and can understand its meaning. Knowledge is neither located in the individual human nor in the social whole, but, at a scale in-

between them. The possessors of knowledge of the diamond's meaning form a collective that is greater than the individual, but less than the whole of society. This is important because it makes the process by which knowledge is spread one that takes time and effort and one that reaches – and must surmount – boundaries. This process can be overlooked if we focus on either the individual or 'society as a whole.' The accumulatory effort of De Beers required it to put in the time and effort to surmount these barriers and spread diamond and engagement knowledge.

The diamond's materiality has to be put on display to express engagement. It must also be put on display in a very particular way: on the ring finger of the woman's left hand. If that spot should be occupied by some other sort of stone, it will raise questions as a diamond is now expected. When one looks at a woman and she has on an engagement ring, it conveys knowledge of her commitment. If the ring is in the right place, but not a diamond, it may undermine that knowledge, creating uncertainty. This knowledge can be transferred without any discourse between us. If the ring does not have a diamond I may surmise other pieces of information that require clarification. Is she opposed to 'blood diamonds'? Does she have an 'alternative' or 'contrarian' aesthetic? Does she belong to a culture that uses a gem other than diamonds? Does the choice of jewel signify something I'm not aware of? There is a knowledge conveyed in the conjugation of woman, ring and placement.

Within the collective of people among whom the diamond engagement ring knowledge circulates there will be sub-collectives based on other qualities that align with, and enable, more detailed diamond knowledge. Certain classes of people may take particular notice of the size of the ring. Others may insist on a close-up inspection, knowing how size interacts with the other qualities in determining the expense of the ring. Some people may recognize the setting, such as

the famous — to some — Tiffany setting.¹ This knowledge has an important class dimension that De Beers worked to exploit, as will be described in Chapters Five and Six. Learning the meanings of diamonds in varying social settings cannot occur without the expressiveness of the stones themselves. The differential qualities of the stones will be important in this regard. If a woman's friends can recognize the difference between a \$5,000 stone and a \$15,000 stone, which could be the same size, with the price difference entirely due to the other Cs — colour, clarity and cut — then she cannot risk being duped by the fiancé who might be expected to buy the more expensive ring. While a poorer quality stone has the capacity to impress some, it has the capacity to disappoint others. In order to sell the entire range of stone qualities mined, De Beers needs this differential knowledge. There is a wide range of knowledge-making that is interdependent with diamonds, and De Beers has taken an interest — and intervened — in the knowledge-making that affect its accumulation. Recently, they tried to create new knowledge of a diamond ring worn on the ring finger of the right-hand as a woman's expression of independence, with a slogan that the “left hand rocks the cradle” while the “right hand rules the world.”

Before they were associated with romance and engagement, diamonds were a symbol of power. Their exceeding rarity made them solely available to those with the means to buy them or take them. They were worn as a display of those means. Mary Douglas and Baron Isherwood (2002) noted that objects “are the visible part of culture” (p. 44). Diamonds have had a particularly important role in the non-violent visualization of power. As noted in the Chapter Two, power is latent rather than active. The ability to convey a sense of one's power means that less need be done actually shoring it up and stabilizing control. Diamonds have historically

¹ The Tiffany setting actually pre-dates De Beers' advertising. Tiffany & Co. is currently fighting to protect their brand-name on the setting, which other jewellers insist has become a generic term (Tulett 2014).

played a role in this, at times restricted even among the most powerful to the absolute pinnacle of the hierarchy.

Diamond's social history begins in India. The mythological origin of diamond found in Hindu writings is a powerful king whose body is burnt in sacrifice and whose bones begat the gems (Harlow 1998). Further writings are used to link possession of diamond with virtue. The materiality of diamond — its clarity — is connected to a possessor's 'purity,' evidencing their right to occupy their powerful position. The role of diamond as a symbol of power led to an export prohibition of the largest, highest quality stones. Lesser quality stones, however, were export to Europe and the rest of Asia. The powerful and wealthy in India preserved for themselves the ability to express their purity by possessing the highest quality stones.

Diamonds figure into the mythology of one of history's best known power-mongers, Alexander the Great. Aristotle has been credited, incorrectly, with a story describing Alexander's ability to locate the mythical Valley of Diamonds, and then surmount its security, which included serpents whose gaze causes death. George Harlow (1998) wrote that there is no evidence Alexander ever held a diamond, and it is unclear that ancient Greek references to *adamas*, which has been translated to diamond, actually pertain to diamond. However, such apocryphal tales indicate the intertwining of power and diamonds in the popular historical psyche. Diamond itself was described as the king of stones, in part due to its superior hardness (al-Beruni 1989). Adornment of the powerful by diamonds may have been a means to emulate this material reality and the hierarchy imputed to it.

When India was conquered by the British, part of the spoils was the Koh-i-Noor, which was at the time, the most famous diamond in the world. The British had long been fascinated with the diamond and its connection with power. Reporting on the arrival of the stone in Britain,

The Times noted historical movements of the stone among rulers in India. The coverage stated that the Koh-i-Noor “seemed to carry with it the sovereignty of Hindostan” and is an “emblem of dominion” (Anon 1850). If the Monarch of Britain was to hold dominion over India, then it made sense that s/he possess this symbol of power. On its arrival in Britain, the Koh-i-Noor was shown to the public at the Great Exhibition of 1851, where it was reported to be one of the most popular attractions, with visitors waiting hours for a chance to see the stone. Yet, it was lamented that the Koh-i-Noor did not live up to its reputation, with few of the viewers able to “catch any of the brilliant rays” (Anon 1852). The sparkle of the stone did not match expectations for such a weighty symbol of power. In response to public disappointment with the great stone, it was recut, taking advantage of advancements in the art of diamond cutting so as to improve its brilliance. The stone is currently part of the British Crown Jewels, although there are efforts in India to have the stone returned.

While the contemporary expression of diamond is much more romantic, power is not strictly a bygone expressive capacity. After diamonds were discovered in Ontario, De Beers presented two stones, one rough and one cut, to the Ontario Legislative Assembly. The stones are now part of the legislature’s ceremonial mace, which dates back to 1867 and was refurbished in 2007 specifically to include the diamonds. Maces are a symbolic part of the British parliamentary system. Their origins as weapons signify the authority wielded by the government, granted by the Crown. Diamond’s long association with power makes it an appropriate addition to such a symbol.

The connection between diamonds and rulers has contributed to their capacity to express luxury. Monarchs once marked the height of extravagance. Spending large fortunes on objects whose sole function is seemingly aesthetic marked the extremes of their standard of living. This

set them apart as objects of emulative aspiration, although ideals of divine right and God-given rules of succession limited the possibility of such aspiration, just as the access to diamonds was limited. With the discovery of the South African sources, however, the general public could now participate in the luxury of owning a purely aesthetic object, although its widest distribution is as a symbol of engagement, rather than just as a luxury. Nonetheless, De Beers has worked to maintain the connection between diamonds and glamour. In 1947, when then heir apparent Princess Elizabeth toured South Africa, she was gifted by De Beers diamonds set into several pieces of jewellery. This was a calculated act by the company to maintain the association of the stones with the glamour of the British monarchy.

De Beers also lent stones to Hollywood stars, connecting diamonds with their lavish lifestyles. Media outlets continue to report on the gems worn by those attending award shows, with breathless attention given to the claimed seven figure values attached to their necklaces, bracelets and earrings. Hollywood stars were not the only elite figures associated with diamonds. An early De Beers advertising campaign included recently engaged members of powerful American families. Making the connection between diamonds and the elite was an important part of the marketing strategy devised by N.W. Ayer, De Beers' advertising agency. As will be discussed in later chapters, the agency worked to get media outlets reporting on elite events, such as opera openings, to describe the diamonds being worn by attendees. A section of the Metropolitan Opera House, where the wealthiest patrons sat, became known as the 'Diamond Horseshoe', in part because of the stones worn by attendees. N.W. Ayer invoked Veblen's concept of pecuniary emulation as their motivation in associating diamonds with the elite. The relative homogeneity of stones, together with the continuum of stones along the four axes of carat, cut, clarity and colour meant there were stones for every income (Proctor 2001). Those at

the bottom of the income scale could access the same luxurious item as those at the top, if in a smaller, lower quality form.

One of the consequences of diamond's long association with the elite is a similar association between diamond and high quality. Many companies with no connection with diamonds or jewels with have 'diamond' in their name because of the connotation of excellence. The diamond level is the highest level, surpassing silver and gold, ruby and emerald. N.W. Ayer encouraged this connection, offering a discount to its other clients if they made use of the diamond metaphor for superiority.

ii. Material Capacities

It is an analytical artifice to separate the expressive from the material capacities of diamond. The expressive capacities are dependent on the materiality of diamond. Diamonds sparkle best under certain lighting conditions. Cutting is informed by a desire to maximize a diamond's sparkle, which is instrumental in the expressive role of diamonds. The elites in the Metropolitan Opera House wore the stones to proclaim their wealth and power because they sparkle, although it also required people who have learned the association of that sparkle with wealth and power. The first part of this section will consider the emergent material realities of diamond assemblages. This will bring me to the cutting process, which brings me back to consideration of how the materiality of diamond participated in its expressions of romance, power and luxury.

In the apocryphal story of Alexander, he is reportedly able to extract stones from the Valley of Diamonds by tossing down carrion. The stones stick to the carcasses, which are then picked up by flesh-eating birds. Alexander and his army then followed the birds and retrieved the

stones. This story imparts an important material capacity of diamond: the fact that it is lipophilic, meaning it has an affinity for grease. Although this knowledge was contained in the story of Alexander, the fact that diamond stuck to grease would have to be rediscovered in the late 19th century. It became, and remains, as noted above, an important part of extraction methods. As part of the recovery of diamonds, diamondiferous soils are washed over a fat-coated surface. While the soils are swept away, the water-hating, fat-loving diamonds are left behind.

Another capacity of diamond exploited in the extraction of diamonds is their fluorescence under X-rays, which can be considered both a material and an expressive capacity. Diamond-bearing concentrate is fed into a machine where it is exposed to an X-ray beam. Diamonds in the concentrate light up. The glow is the release of photons, which is a material response to the X-rays. However, those photons express the diamond's presence to a photodetector that in turn causes a jet of air to deflect the diamond to a collection box. The X-ray fluorescence of diamonds has also been used as a security measure. Mine and extraction workers have been X-rayed as a deterrent against swallowing the stones.

Arguably, the most important material capacities of diamonds are those exploited in manufacturing processes making use of its hardness. The hardness of diamond makes it very durable as an industrial input. Diamond holds its shape allowing it to be used for a long time without replacement. For example, wire-drawing machines use diamond as a die. Over time, the dies wear down and the diameter increases, meaning they need to be replaced. Diamond lasts far longer than any substitute, holding its diameter allowing production to last longer.

As the hardest naturally occurring substance, diamond has become an indispensable part of cutting and shaping tools used on other hard materials. Diamonds show up in these tools in multiple forms, such as the diamond grit embedded in saw blades or multiple whole stones

incorporated into drill bits. The placement of the stones in the drill bit makes use of the crystallographic orientation of the diamond as described above. A misplaced stone can wear down quickly or crack, undermining its capacity for high-speed work.

One of diamond's first industrial roles was in the shaping of diamonds themselves, since only diamond can cut diamond. The cutting of the stone is essential to achieve the sparkle that is diamond's aesthetic *raison d'être*. Richard Swedberg suggested that the five senses provide a means to bridge the standard subject-object divide of the social sciences (Swedberg 2011). We can see this bridging in the relationship that humans have formed with diamonds. Diamonds are objects whose meaning is utterly dependent on our visual perception. Without the sparkle, diamond would not have become the social entity that it is. Its ability to express romance, power or luxury requires its eye-catching flash. However, this meaning cannot be reduced to its sparkle, as plenty of other stones are beautiful in the same way. While our "senses mediate between the outer material world and the inner mental world" (Swedberg 2011, p.424), they do not do so in a pure manner. The way we see a diamond is mediated by our past and on-going experiences of diamonds and diamond meaning. It is the total diamond assemblage, including the materiality of diamonds, that determine the enormous value placed on the sparkly stones. A portion of that value is in the hardness that was learned through the handling of the stones. That hardness is, as noted above, also important for the current expressive meaning of the diamonds, emphasized in De Beers' famous slogan.

A diamond's sparkle, which requires the participation of light and a perceiving eye, is the material capacity of greatest importance to diamond's expressive capacities. There is a 'science' to the lighting of the diamond factored into the design of the stone, as well as ring settings and window displays. During the 1939 New York World's Fair, a pile of diamonds was displayed in

a black lined case, fronted by glass, with a single light source shining on it. Visitors to the House of Jewels would enter the room and the light would turn on, dazzling them with the scintillation of the stones. The visitors were simultaneously told that the stones were worth \$4 million. The value expression of the stones required the assemblage of the carefully designed lighting, arranged to ideally project the diamond's sparkle.

Cutting a diamond takes into account how a diamond sparkles. By far, the most popular cut is the brilliant, which results in a round stone when viewed from the top, and the classic diamond shape when viewed from the side. Alternative cuts include princess, cushion and emerald. The modern brilliant cut consists of 58 facets, with 33 around the top half, known as the crown, and 25 around the bottom half, called the pavilion. The ideal faceting for the brilliant was formulated in 1919 by Marcel Tolkowsky, who sought to optimize the beauty of the cut gem. He specified the number of facets and the optimal angles for the crown and pavilion. These optimums were intended to balance the brilliance of the stone with its 'fire,' meaning the dispersion of white light into the colour spectrum. Actually applying these optimums, however, had to contend with the diverse qualities of rough stones. Cutters made cuts informed by 1) the qualities of the rough stone; 2) an optimal range of angles for the facets, including the Tolkowsky ideal; and, 3) the artistry of the cutter. Although the cutting process has been heavily rationalized, with the bulk of stones by volume now cut in India, the industry still treats diamond cutting as both science and art.

'Cut' is one of the 4Cs and decidedly the most 'human' of the Cs, being the result of human action taken with the stone. An improperly cut stone will be much less valuable, as it will lack the brilliance and fire that jewellers seek, and which they sell prospective buyers on. However, the cutting of the stone is not simply a human imposition on the stone. It involves a

compromise as the cutter brings expertise and skill to a given stone, seeking to optimize various aspects which can be mutually exclusive. They wish to preserve weight — making ‘carat’ and ‘cut’ interdependent — while also seeking to achieve the optimal Tolkowsky dimensions for a brilliant cut. They also have to respond to features of the individual stone, such as internal flaws, which may be minor and possible to hide, or need to be cut out. Alternatively, the flaw may be left in, which degrades the ‘clarity,’ but could allow for a larger carat weight. The cut stone doesn’t simply exist within the rough, needing to be cut out — as in the cliché of the sculptor freeing the sculpture. Rather, the stone and the cutter work together, the stone communicating a certain reality that the cutter must translate into cutting decisions.

De Beers does not cut diamonds and it does not sell cut diamonds. It only sells rough stones. But, it has taken a clear interest in the cutting of diamonds. It wishes for cutters and jewellers to get the greatest possible price out of the stone, and that price increases the more well cut the stone is. The cutting also contributes to the quasi-mythological status of the diamond: How does one shape the hardest substance in the world? Only diamond can cut diamond. How are the dimensions of the stone determined? It’s mathematical. Who can cut such perfect facets on such a small, yet valuable object? People with both technical and artistic talent. De Beers’ interest in the cutting of the stones led them to participate in developing cutting technologies, seeking to improve the efficiency of the process. The cutting level could prove to be a bottleneck if demand cranks up and De Beers wished to send stones through the pipeline faster to meet the rising demand. Their sales are dependent on the many capacities of diamond, both the expressive and the material.

III. Classification: Putting Diamonds in their Place

One of the most important human-diamond relationships is classification. The classifications of diamonds take account of the properties and the capacities of diamonds. Classification is important for both the scientific study of diamonds, including their role in constructing our knowledge of Earth's geological history, and the accumulatory needs of De Beers. Different needs have resulted in multiple classificatory systems for the stones. These classifications have been developed in conjunction with each other with overlapping histories, while remaining distinct. The most important classification has been that of De Beers, which is an obligatory passage point in the diamond trade. Between De Beers' sales of rough stones and the final sale, the company's classifications will establish the succession of prices the stones will bear.

Although De Beers no longer dominates the diamond trade to the degree it once did, its categories have informed the universalized standards adopted by the voluntary trade oversight body, the Gemmological Institute of America (GIA). The now ubiquitous 4Cs are based, in part, on the classifications that De Beers' used in its assessments, and were developed together with the cartel. The diamonds on display in any jeweller's window have, in their rough form, passed through the hands of an expert sorter who decided the worth of that stone. Further, it bears noting that De Beers' current market share of about 60 percent continues to give the company a great deal of price-making ability. De Beers' sort still affects all downstream participants in the trade. That said, with the classification structure having been formalized in the GIA, De Beers' ability to tinker with the system is limited.

Sorting evaluates the qualities of the rough stones and assigns a price. Accumulation is the universal informant of the sort. As diamond expert Eric Bruton observed: "The purpose of all

grading is commercial” (Bruton 1971, p.290).¹ Yet, the evaluation takes place in dialogue with the stones themselves, as well as the downstream users of diamonds. The standardized classification was developed from existing categories used by jewellers, the expertise of the sorters, as well as evolving knowledge of diamonds. Sorting according to a standard classification serves as an ordering process across the gem diamond trade.

Part of what De Beers did with its advertising was to take control of the ways diamonds were described by the public. The pre-De Beers diamond advertising used a wide array of terms for describing and categorizing diamonds — finest blue, Jagers, pure white — that De Beers did not retain. In their place the company would bring poetry to the text of the ad, while classifying the qualities according to the formalizing 4Cs. In a smaller text, the advertisements encouraged buyers to make use of the technical expertise of the jewelers. The advertisements also sought to teach the masses some aspects of grading, as will be discussed in Chapters Five and Six. N.W. Ayer’s market research found people significantly underpriced stones of a given size. To address this widespread problem, De Beers needed potential buyers to understand that there was a range of qualities affecting the price. Standardizing the categories of the 4Cs meant eliminating the previous floridly named categories.

This education by De Beers was not just about forcing buyers to accept a higher price for the stones than they expected to pay. In fact, some jewellers complained that the advertised prices of De Beers were too low. The grades assigned by De Beers generated a mix that dictated what they sold to the sight holders and they needed the sight holders to be able to sell the entire selection of stones. De Beers wanted the masses to accept all of the stones at their prices, which meant the public required enough knowledge to understand why a half carat stone might cost

¹ Bruton (1971) noted that the term ‘sorting’ is applied to rough stones, while ‘grading’ refers to cut stones (p. 184). There is continuity in the evaluations, but the rough sort does not strictly dictate the grades of cut stones.

more than a one carat stone. Without that understanding, the possibility of selling the stones at desired prices was greatly diminished.

The contents of the grades were not strictly determined by the stones themselves. There was a role for the existing and projected demand for stones as well as a degree of artistry and expertise on the part of graders. The most obvious place where demand intervened was at the boundary between gem and industrial stones. When demand was higher for lower quality stones, the company could divert stones otherwise destined for industrial use. As well, sight holders expressed preferences that could not be entirely ignored, while De Beers also responded to the mix of stones coming out of the mines and from the other members of the cartel.

The messiness of classification, as well as the shifts and adjustments in classifying are evidence of the complexity of classified entities. The developers of classification systems want neatly delineated categories that accurately correspond to the categorized entities (Bowker & Star 2000). In the case of diamonds, it was neither the case that the categories were defined by diamonds themselves, nor that the categories were a purely social invention, imposed on the stones. Instead, the categories were developed through a dialogue with the stones. As people worked with the stones, certain regularities were observed. These regularities, and the classifications that emerged, led to the development of new analytical procedures, including new technologies, that furthered knowledge, provoked new categories, and even new systems of classification.

Most of society's myriad and diverse classifications exist within specific institutional practices, outside the attention of either the masses or social scientific analysis. By the time classified entities cross over from their institutional settings, their classification, and the process by which they are classified, is taken for granted. Except for rare occasions, internal institutional

debates that continually tinker with, and sometimes completely rewrite, systems of classification are ignored. Perhaps the most spectacular recent exception was the debate by the International Astronomical Union about what constitutes a planet. The outcome of that debate was the widely reported, and hotly contested, demotion of Pluto from being the Solar System's outermost planet to a mere dwarf planet.¹

In *Sorting Things Out*, Geoffrey Bowker and Susan Star (2000) described classification as a “coconstruction of nature and society” rather than merely a “projection of the social onto the natural” (p. 61). They distinguish this idea of coconstruction from either: 1) a strictly social construction perspective that considers classifications to be imposed by humans on the non-human, or 2) the enduring treatment of classifications as a ‘natural kind.’ Although, as argued by those holding the first position, classifications are human inventions, maintained by human institutions, they must do so in relation with what is “out there” (p. 61). But, that relationship does not – and cannot – access and then represent in some pure manner a given delineation that pre-exists the classification itself. Classifications are hybrids, irreducible to either the human or the non-human, with unique, emergent characteristics all their own.

The classification of diamonds involved a hybrid between the physical stones and the human desires involved — which were further relayed through numerous other hybrids. Of the 4Cs, only three pertain to rough stones: carat, clarity and colour. As a unit of measure, the carat of the stone is objectively determined. Clarity and colour, however, require human inspection to be determined. Colour is the more easily determined, with a very fine gradient from the purest white stones through non-fancy yellow, which make-up the majority of diamonds. Fancy

¹ Less known, although relevant to my purposes, Pluto actually ended up with two classifications. In addition to be classified as a dwarf planet, it is also identified as a trans-Neptunian object. These classifications serve different purposes in the work of astronomers.

colours, such as pink, blue and deep yellow form a very small, and valuable, minority of stones. Clarity is more difficult to assess, as inclusions need to be assessed for size, brightness and position, all of which will determine how the stone may be cut and the ensuing value of the cut gems, as noted above. Rough stones also get classified according to their shapes and surface textures, which are also consequential for the cutting of the stones, including the amount of work required to realize a gem as well as the number and size of cut stones that could be realized. The categories also interact with one another, with the size of the stone, as well as its surface features, playing a role in a grader's ability to assess colour and clarity (Bruton 1971, p.290).

De Beers' sort was based on a taxonomy of diamonds that it had developed. As with all of De Beers' activities, accumulation formed the bedrock on which the taxonomy rested. De Beers needed stones to be sorted into the highest possible category, but it also needed them to be categorized accurately. The ability to devise and enforce systems of classification constitutes an important mechanism of power (Foucault 1970). Although De Beers' had almost complete dominance of the global trade in diamonds, and they dictated the prices of rough stones by not only performing the sort, but by constructing the system of classification itself. However, the numerous diamond buyers were not completely powerless.

Buyers' goodwill was important to the company to ensure continuity in the flow of diamonds and De Beers' monopoly position. Due to De Beers' power, the profit margins for cutters and jewellers were narrow. Therefore, if buyers found stones were being given overly generous assessments, and inflated prices, they could revolt against De Beers' control. If a significant number of the buyers defected from De Beers, it could compel one or more of the participating production companies to also defect.

Expert knowledge of diamonds was distributed among the buyers, many of whom represented multiple generations in the trade, and who required such expertise to make sure the diamonds they were buying could later be sold at a profit. The knowledge shared within the network of traders had a lineage that predated the discovery of the South African mines and De Beers' monopoly. The expertise of diamond traders was exercised and renewed through the handling of the stones themselves. Although De Beers' was devising their own taxonomy, it could not be unilaterally imposed as the stones would not remain silent after leaving the company's hands. As such, the taxonomy included the informal knowledge that existed within the diamond trade.

The maintenance of De Beers taxonomy had important material aspects. First, the maintenance was embodied in the sorters themselves. Evaluating stones is demanding work, requiring nimble fingers and keen eyesight, since even a two carat stone will be less than one centimetre in diameter. It is highly skilled work, as the gradations of the De Beers' taxonomy are very fine. In 1945, there were 190 categories, with prices ranging from £48 per carat for the highest grade to £2 per carat for the lowest. The price difference between two neighbouring categories could be more than £11. Therefore, it was extremely important to De Beers that stones be graded accurately and consistently. Sorters were routinely tested to make sure their gradings matched a sample that exemplified the categories (Epstein 1982b). Sir Ernest Oppenheimer began his work in the diamond industry as a sorter, and, reportedly, this work caused him to fall in love with the stones and the trade.

The sort required more than just the human sorters and the diamonds. The sorters were equipped. The eyesight of the sorters was augmented by a 6X lens that magnifies the stone. Their fingers were made more nimble by tweezers. In order to accurately assess colour, the stones sit

on a table covered by a white piece of paper. In pursuit of consistent light, the Sun has been enrolled to play an unexpected, though important, role in the sorting process. Sorter examine stones in indirect sunlight. This means that in Johannesburg, sorting takes place in front of South-facing windows, while in London, the sort occurs before North-facing windows. The hours available to sorting are dictated by the seasons, as it can only take place during the day.

The classification of diamonds has been an important site of contention within the diamond trade. The practical outcome of sorting attracts criticism from those downstream who may believe they have overpaid for poor quality stones put into an incorrect category. As will be discussed in Chapter Seven, during World War II, the grading of industrial stones attracted much criticism from users, who argued, first, that the grading of De Beers was worthless for their purposes, and second, that the company used their sort to effectively raise prices, by lowering quality, in contravention of a promise not to do so. These complaints were the primary motivation behind an antitrust investigation by the U.S. Department of Justice.

Upstream from De Beers, the mines that participated in the cartel would perform their own classifications and arrive at a rough valuation of the stones mined. There existed a tension between the mines and De Beers, with the former seeking the highest valuation possible, while the latter had to mediate the sale of the stones to cutters, who will complain if they deem valuations to be too high. Belief by participating companies that De Beers valuations were too low proved a frequent source of problems within the cartel and a threat to De Beers' control of the trade (Newbury 1989).

The ability to not just classify diamonds, but to devise the system of classification, was a cornerstone mechanism of De Beers' power. It was the foundation of the company's ability to dictate prices to its sight holders. Those prices then established the subsequent prices those

stones would acquire as they moved through the trade, until they were bought by the masses as adornments and symbols of luxury and power. The classification system was not the whole cloth invention of De Beers and it was not strictly imposed on the sort. Yet, De Beers had some ability to tinker with the system of classification. However, it likely refrained from excessive adjustment since the order imposed on the trade by predictable grades was likely more valuable for the stability it offered to price-making.

IV. Conclusion

In these last two chapters I have tried to demonstrate how diamonds themselves play an irreducible role in the global diamond assemblage. From their historical role as symbols of power to their current roles as symbols of engagement and inputs to high speed precision production, diamonds transform both human and nonhuman relations in a particular manner. Although diamonds have their own properties that transcend these relationships, of greater importance to the global diamond assemblage are diamonds' capacities. Diamond's hardness is a property, while its ability to symbolize luxury or shape a piece of steel both constitute capacities.

At some level, this insistence on the importance of diamond to the global trade and social meaning of diamonds may seem obvious. However, my insistence on diamond's irreducible role is necessary in the context of social theory in general, and political economy more specifically, as materiality is typically dismissed. Such dismissal is exemplified by Castoriadis' conception of the social "leaning on" the material. Value theory in particular has set aside qualities in favour of a dual-quantity conception where financial quantities represent underlying so-called real quanta (Nitzan & Bichler 2000). Despite the role of standardized shipping containers in amplifying global trade (M. Levinson 2006), the importance of asphalt concrete in the proliferation of

private automobiles in the U.S. (McNichol 2005), the use of the telephone in financial intermediation (Muniesa 2008), or the fragility of crude palm oil driving the scale of monoculture crops in Malaysia and Indonesia (Colchester 2011), the properties and capacities of things are treated by the standard value theories as outside the realm of political economic analysis.

De Beers understood the importance of diamond as a participant in the global assemblage that could not be taken for granted. It made efforts to understand diamond, contributing to scientific research that not only served the company's accumulatory interests but also advanced our knowledge of the Earth's geological history. Nonetheless, that knowledge enabled the company to concentrate its efforts to locate new sources of diamonds. The company also contributed to research on the possible uses of diamond by industry. These new applications were exploited in the war effort, which drastically increased the use, and therefore the sale, of industrial diamonds. As well, De Beers intervened in the expressive capacities of diamond, increasing the association between the stone and engagement, making it the material symbol of romance. However, in doing so, it also worked to maintain diamond's capacity to express luxury.

Diamond's irreducible role in De Beers' accumulation makes it a constant matter of concern for the company, as opposed to a matter of fact that can be taken for granted. The stone's capacities are always uncertain and somewhat indeterminate, especially in its expressive role, which is precarious. As an industrial input, diamond will always be capable of its material tasks, although other, better materials are always a possibility. Artificial diamonds were a substitute that threatened De Beers' sales of industrial stones. The company solved the problem by taking control of the production of artificial diamond and colluding with GE, the other primary manufacturer.

As an expressive entity, diamonds have weathered decades of capricious shifts in fashion that could have demoted the stone from its place at the pinnacle of the gem world. It was just such a possibility that led De Beers to intervene via advertising in the first place, as will be discussed in Chapter Five. More recently, ‘blood diamonds’ put the trade in jeopardy. While the illicit trade in diamonds transcends the stones themselves, they cannot be removed from the equation, since it is their distribution on the African continent, together with their high value density, that makes them available and suitable for rebel forces to exploit. The Kimberley Process, devised to prevent conflict diamonds from entering the trade, was welcomed by De Beers not only as a way of generating and preserving consumer goodwill, but also as a means to restrict supply.

De Beers’ interventions with diamonds demonstrate the stones’ place in the company’s power. This power is augmented by De Beers’ role in sorting the rough stones, which has given it not just control over the pricing of diamonds, but the very way stones are classified. As will be shown in Chapter Seven, efforts to dispute the classification were key in the U.S. Department of Justice anti-trust investigation of De Beers in the 1940s, with the diamonds themselves a key participant, called on by the industrial users to expose the company’s alleged misdeeds.

Chapter 5: Researching Diamond Knowledge among the Masses

I. Introduction

In 1938, G. M. Lauck, of the advertising firm N.W. Ayer & Son, met privately with De Beers CEO Sir Ernest Oppenheimer and his son, Harry. The topic of discussion was the possibility of advertising diamonds to the U.S. masses. While diamonds were already featured in advertisements, these were due to the independent efforts of local jewellers. This disconnected, non-centralized effort had failed to return diamond sales to their pre-depression levels. The Oppenheimers and Lauck discussed the possibility of superseding the disorderly efforts of jewellers by undertaking a mass campaign advertising diamonds in general. An agreement was reached that Ayer would conduct market research on De Beers' behalf to gauge popular attitudes toward diamonds. That research informed De Beers' decision to launch an ad campaign. In late 1939, the first De Beers' ad was printed. While the campaign appears to have helped increase diamond sales, the path from the advertisements to the sales was not a simple one.

Standard critical accounts of advertising typically dismiss the agency of the members of the masses for whom advertisements are intended. However, neither De Beers nor Ayer ever took for granted their ability to entice members of the masses to buy diamonds. The research intended to help Ayer and De Beers understand the masses was an indispensable aspect of the increase in U.S. diamond sales that came with the end of WWII. Of course, the gauging of mass opinions should not be confused with the mainstream perspective on business responsiveness to demand, which is that consumers are wholly in the driver's seat, and those who seek profit merely follow them where they go. Instead, the research by Ayer gave De Beers and the advertiser important insights into marketing possibilities that may or may not translate into

greater sales. Both recognized that while the masses, as expressed in the research, contained a large pool of possible diamond buyers, the actualization of sales was far from a certain thing.

In this chapter, and the next, I attempt to undermine overly structuralist aggregate analyses of advertising by focusing on the emergent contingencies of De Beers' campaign. Beyond that, however, I wish to step out of the social science's history of oscillating between agency and structure. CasP takes away from structuralist accounts one of their most enduring concepts: accumulation. It does so by empiricizing and disaggregating accumulation, associating it explicitly with capitalization and the quantities of finance. Actor-network theory leaves individuals with agency, but redistributes that agency among an individual's diverse relations within a multitude of collectives. Those collectives include both humans and things and operating across scales that repudiate dichotomization into macro-micro, such as the family, the neighbourhood, the workplace or the nation-state. These relations serve to structure, bound and guide an individual's actions while never fully determining them. In fact, the unique combination of binding collectives provide the ingredients and setting for the individual's irreducible emergent qualities. This binding and structuring of action takes place on a single ontological level. If we are to understand the structuring processes of capitalist society, then more attention needs to be paid to the actual entities mobilized by capitalists, such as particular advertisements, in addition to advertising-in-general. While the latter has been analyzed in terms of abstract determining structures, the former constitute the actual mechanisms by which society is structured.

Advertising enters into milieus of pre-existing, but transformable attitudes and desires. The research by Ayer would indicate to De Beers' that certain attitudes among the American masses toward diamonds needed to be transformed, while others could be amplified and

leveraged in the pursuit of greater sales. For example, even among the wealthy, large stones were perceived as gaudy, while there remained a significant – though fragile – association between diamonds and marriage. Because it was important that De Beers sell all the stones extracted, it needed a market for both large and small stones and therefore needed to eliminate the resistance to the former. Efforts at transformation and amplification were never guaranteed to pay-off. Indeed, while De Beers' advertisements emphasizing marriage and romance succeeded in singularizing diamonds as the symbol of marital engagement, efforts to associate diamonds with holiday gift-giving largely failed and were quickly abandoned.

My analysis will keep advertising grounded in the pursuit of accumulation, but consider it fraught with indeterminacy because of all the relays between the drive for gain and its actualization. Of particular concern are the differential desires and buying habits of the masses, which can only be surmised through either research into the attitudes of a small sample or data gathering and statistical analysis of their actual buying practices. I will attempt to trace the connections from De Beers' tentative contemplation to undertake an advertising campaign, through the market research conducted by Ayer, and into contact with the masses through the content and placement of the advertisements. I will consider the translation of the advertising as it encountered situated individuals who participated in constructing the meaning of diamonds. This chapter will begin the exploration of those relays by considering how the market research constructed the idea cohort within the masses that could be enticed to buy diamonds, but whose desire was waning and susceptible to other enticements. This research played an important role in De Beers' subsequent advertising campaign. The campaign will be analyzed in the subsequent chapter.

II. Theorizing Advertising

The critical theorization and analysis of advertising has been characterized by treatment of the practice as an ideological, rather than a commercial, mechanism within capitalism (Slater 2002, p.62). This theorization has been dominated by a semiotic structuralist approach (see Barthes 1972; Barthes 1977; Williamson 1978; Goldman 2005). The approach relates examples of language and imagery from specific advertisements to abstract ideas of capitalist society in an instrumental manner. For example, in one work Roland Barthes (1977) examined an advertisement for Panzani brand canned tomatoes. However, he completely overlooked the accumulatory interests of Panzani, in favour of abstracted claims about systemic rhetoric. For Barthes, and others within the critical semiotics mode, the particularities of any advertising image only have meaning as a support for the structural connotations (pp. 32-51). In part, this is due to the enduring treatment of accumulation as an aggregate, rather than a differential, process. The uses of language and imagery and how they relate to the specific struggle of a firm for differential gain can have no purchase within the critical analyses when accumulation is only understood as a generalized process.

Liz McFall (2004) noted that although the shortcomings of the semiotic approach have been well recognized, it “continues to inform questions about the meaning of advertisements” (p. 16). Built into this is the necessary aggregation of all advertisements into advertising-in-general, which precludes the consideration of the role of advertising in the differential struggle. As well, it continues to treat advertisements as an ideological mechanism. However, advertisements have important material attributes and consequences. First, as McFall emphasized, advertisements need to be produced. Advertisement production is not an abstract ideological process, but involves people in offices, equipped with the necessary, and ever changing, machinery. In the

case of print advertising, there is also the actual printing process, which is a manufacturing process in the stereotypical mould of production. The printed materials are then handled by prospective buyers, who must flip through the pages, scanning the material for items of interest. It is this process that is of greatest concern to the advertiser and their client. The entire productive apparatus is organized to attract attention to the carefully conceived advertisement. The lack of attention given to these specific materialities by critical theorists is completely at odds with the high degree of attention it is given by the advertisers and their clients. Second, advertising is located along trajectories linking extraction and manufacturing with sales. If De Beers' eventual advertising campaign had failed to singularize the diamond as the symbol of engagement, it is possible the entire diamond extraction industry would have developed very differently, if at all. The role of advertisements in capitalist societies is more than just ideological.

In order to append a materialist component to her analysis, Judith Williamson (1978) described her Marxist semiotic-structuralism as a move away from idealist essentialism (p. 6). However, her postulation of determinant abstract 'structures' is a half measure toward considering the actual entities responsible for the construction of 'ideology' and 'capitalism.' Capitalism, in this approach, is an enveloping system that determines all the activities within it and can be understood by way of analyzing its abstract parts, such as production, exploitation and consumption. Therefore, according to practitioners of such an approach, theory, rather than empirical study, enables us to understand the capitalist totality, with advertising providing a window into its ideology, which constitutes a conceptual part of that totality.¹

¹ Another approach to advertising considers the effects of ads on the masses, generally with a focus on pernicious, negative social outcomes, such as consumerism, negative self-esteem and waste (see Berger 2011). Again, this approach passes through the differential aspect of advertising. An individual campaign is only

While a theory driven analysis of advertising can offer important insights into capitalist processes, it cannot replace an empirically driven analysis that grants specific advertisements a difference-making role in the capitalist order. From an empirical perspective, advertising must be treated as an indeterminate entity that emerges from the intra-capitalist struggle for accumulation. Advertisements then enter into contingent relationships with viewers/readers whose ideal response, from the perspective of those who produced the ad, is a differential purchase, which is a vital link in the accumulatory struggle. By differential purchase, I mean that advertisers wish for buyers to choose their product rather than another. Although consumerism and other negative social attributes appear to be an aggregate consequence of advertising-in-general, these are best understood as the emergent outcomes of the differential struggle among capitalists. Along the way, this struggle passes through numerous entities — advertising agencies, market research firms, ad buyers, magazines, printing companies, television producers, model, newsstand distributors — whose contingent interactions contribute to the production of capitalism.

This perspective also stands in stark contrast to neoclassical economists' treatment of advertising as an informational mechanism (Marshall 1997; Stigler 1961). The sovereign consumer is the central figure of neoclassical theory. Demand and supply must emerge in isolation, with price-quantity determining exchange their only interaction. Their constituent parts cannot overlap because if they did, messy supply and demand functions could potentially have many equilibriums. If advertising were allowed to influence the consumer's behavior, then supply and demand would no longer be independent and the abstract market would cease to produce a single, stable equilibrium. In place of a constitutive advertising, participating in a

considered for its contribution to the sea of advertisements that generate the observed consequences. Each campaign is merely an exemplar of the broad reality.

social order that includes people's desires, neoclassicists postulate advertising as an "instrument for the elimination of ignorance" (Stigler 1961, p.220). Desires are considered exogenous and the best a producer can do is make consumers aware that a product to satisfy their desire exists.

When economists have considered the influence of advertising on consumers, bringing out a more critical perspective on markets as non-competitive, it has remained at an abstract level of advertising-in-general and consumers-in-general (Chamberlin 1933; Robinson 1934; Galbraith 1967; Baran & Sweezy 1966; Fine & Leopold 2002). Edward Chamberlin explicitly noted that "the effects of advertising in any particular case depends on the facts of the case" (p. 167).

Ultimately, the advertisement itself is just one of the entities involved in the on-going reproduction of capitalism. However, it is a privileged one at the very least for its role in communicating to the masses on behalf of capitalists. Since, from the perspective of CasP, the dominant interest of capitalists is differential gain, the differential messages within advertisements have an important role in generating differential sales. Examination of advertising can provide an entry point to understanding relationship between corporations and consumers. Particular advertisements can provide insights into relationships that bear on the power of particular capitalists. This focus on advertising as contingent and indeterminate reinvigorates an empirical perspective on advertising as a commercial practice.

In critical theories of advertising, the practice of advertising is analyzed entirely through the advertisements themselves. Those advertisements are treated in the aggregate as the expression of a totalized capitalist ideology (McFall 2004). From this perspective, particular advertisements, and the interplay between advertisements, or even the interplay between advertisements and the consumers they target, are given no constitutive capacity. While advertising-in-general undoubtedly has important aggregate effects, a differential accumulation

approach recognizes these effects to be an emergent outcome of the intra-capitalist struggle. The abstraction of advertisements-in-particular into advertising-in-general is not restricted solely to theorists. Members of the masses, engaging with advertisements-in-particular, also perform an abstraction, not taking notice of the particularities carefully designed by advertising agencies, but rather experiencing those advertisements as a largely undifferentiated mass. The particular selling point being made on a billboard, in the pages of a magazine or broadcast of a television will be lost against the indifference of viewers to any given advertisement's content. However, it must be recognized that 1) some engagement by members of the masses with particular advertisements also takes place; 2) advertisements are careful, painstaking constructions requiring a great deal of effort; and 3) the particularity of this work and the masses' engagement with it have some place in a company's differential accumulation. Additionally, the engagements and abstractions performed by the masses will have consequential effects on prevailing attitudes, which is why research is an on-going process. Advertisements themselves are a difference-making component of the social order and their flow contributes to the evolution of the societies they enter. It is because of the indeterminacy of an advertisement's impact on the masses that advertising is a key matter of concern for many capitalists.¹

Critical theorists have largely overlooked the intra-capitalist struggle in favour of aggregate level analysis. Individual firms are treated as emblematic (e.g., Fordism, Walmartization) rather than constitutive. Within such analysis individual advertising campaigns are meaningless except as a manifestation of some structural process. The construction of advertisements through the gathering of market research, the strategy sessions of advertising agency and client, the creative efforts within advertising agencies, the art direction of

¹ One of the most widely cited quotes from the advertising world, attributed to early adman John Wanamaker, states, "Half the money I spend on advertising is wasted; the trouble is I don't know which half."

advertisement designers are all treated as inconsequential intermediaries. In these analyses, capitalism itself operates at the abstract level of structures situated in the ether; any particular corporation is fulfilling a role determined by these amorphous structures and has no difference-making capacity of its own. Corporations themselves become mere intermediaries. However, the construction of an advertisement is a laborious, grounded and generative process (McFall 2004). There is no amorphous capitalism operating at a separate level that determines an advertisement's contents. There are obviously larger-scale institutions that affect the construction and content of an advertisement, and the advertisement's affects on the masses. And, we can describe these affects as 'systemic.' However, they must render their effects via other mediators.

'Capitalism' and 'ideology' are not more determinant of the social order than the advertisement executives at N.W. Ayer or the diamond advertisements in *Vogue*. Although many prevailing institutions will guide an advertisement's manufacture, particularly the bottom line quest for accumulation, these too must be kept empirical. 'Ad men' and their clients are part of the dominant class and share its ideals. Executives attend business-schools and perpetuate its teachings. Aesthetic trends within contemporary advertising or being touted in design schools will influence the creative personnel. Advertising is so ubiquitous in popular media outlets that the masses take its presence – and the incessant consumptive drum beat – for granted. Of course, accompanying every one of these affective relationships is the constant presence of the client's purpose: differential gain. But, this universalized capitalist concern will be rendered qualitatively through the interactions of the client with the advertising personnel, the market research, the distribution technologies available and all the other entities necessary to bring an advertising campaign to fruition.

An advertisement's effects are also far from given, as they will have an indeterminate influence among the masses and a particular advertising campaign can always fail, which will have differential consequences, while another may become a classic, superseding its commercial purpose to become a cultural icon, such as the famous 1984 advertisement for the Apple Macintosh. Such successes involve the conjoining of the artistry involved in advertising production, with the commercial concerns of the clients. The on-going struggle between art directors, whose interests and concerns may tend toward the artistic, and account managers, who mediate the clients interests for sales and profits, are well documented in the popular writings of advertising workers, bordering on the cliché. Although the quest for gain must necessarily triumph, the emergent effects of the struggles among varying logics – including the artistic and the accumulatory – will have indeterminate ramifications. Those ramifications can include a slogan entering the popular lexicon, such as De Beer's 'A diamond is forever,' which *Advertising Age* named in 1999 the best slogan of the 20th century.

CasP's reinvigoration of the analysis of capital, and critical analysis of capitalization, points to empirical processes of both the pricing and the priced. The calculations involved in capitalization are performed by people, in rooms, equipped with machines, models, software, informational conduits, best practices and habitual techniques (Latour 1987, pp.232-41; MacKenzie 2008). Emphasizing these quantifications as the central meaning-making process of capitalism should not be taken as a renewed insistence on the 'economic' as the fundamental social institution. Rather, it is a rejection of the category of 'the economy' altogether. Financial quantities emerge from the actual agglomeration of quasi-objective intersubjective assessments that account for a wide range of entities the social sciences have divided into disciplinary categories such as 'culture' and 'politics' and 'economy.' A corporation in pursuit of differential

accumulation is not a strictly economic entity. Similarly, advertising cannot be consigned to any one of the standard categories (Slater 2011). To study accumulation is necessarily to eschew disciplinary boundaries. If the pursuit of relative gain is kept in perspective, then advertising has to be considered, first and foremost, a commercial mechanism in that pursuit. In their attempts to construct a particular world order favourable to themselves, capitalist entities pursue many courses of action, including advertising. Individual advertising campaigns have a on-going constitutive role in the construction of the ever shifting capitalist reality.

McFall noted that critical theory's treatment of advertising in the aggregate is both a cause and effect of the under-analysis of the inner workings of advertising agencies and the construction of advertising campaigns (McFall 2004). An important constituent of this construction is the market research that precedes a campaign's design. In this chapter, I examine two documents produced by N.W. Ayer for De Beers' based on research they did on the state of popular attitudes toward diamonds in the United States. The research, the documents and their findings will all be treated as consequential difference-makers in the eventual transformation of the U.S. diamond market. As such, they had an impact on the accumulation of De Beers. The quantitative analysis of De Beers' accumulation, seen in Figures 1 and 2, expresses a temporal sweep that incorporates uncountable entities and their effects. That incorporation masks the granularity of capitalists' concerns. As will be explored in this chapter, De Beers' concerns extended to the individual attitudes of those sampled to represent the American masses. The reports produced by Ayer performed their own aggregation of those individual attitudes that informed De Beers' decision to launch its advertising campaign.

If capitalism is a deterministic totality, as in standard critical perspectives, the diamond market is merely a logical necessity, and its particularities are inconsequential. An inverse

determinism dominates the pro-market perspective, with markets considered concrete manifestations of an abstracted process of supply and demand equilibration. In this approach, the individual entrepreneurial guile of Sir Ernest Oppenheimer would be celebrated for anticipating latent desire and satisfying it. However, this market – like all markets – is indeterminate and precarious. Neither the structures of capitalism, nor entrepreneurial genius together with pre-existing desire ensured any market's emergence. Instead, the diamond market was created, stabilized and expanded through much effort as well as contingent, but irreducible, events. Advertising played a key role, as did advertising's constituent parts.

The findings of the Ayer research documents contributed to the eventual campaign, which had both successes and failures. The successes were actualized as increased sales and the birth of the modern diamond engagement ring tradition. The failures included an attempt to create a 'brown diamond' tradition for men. The construction of these research documents, while serving a need by Ayer to understand – as closely as possible – how U.S. consumers might be persuaded to buy diamonds, also had to convince De Beers that undertaking an advertising campaign would be advantageous. To do so, the documents construct the idea that the U.S. masses's relationship with diamonds was potent but tenuous. Despite Ayer's own clear interest in De Beers undertaking the campaign, they could not simply impose their wishes on the diamond company through the report. Again, the world lay waiting between Ayer's wishes and the thing. The research and resultant documents served to translate the masses's attitudes into a map of advertising possibility that was then followed in the subsequent campaign.

III. Researching the Actual and Possible Diamond Market

N.W. Ayer's efforts on De Beers' behalf began with market research into the current state of the U.S. domestic diamond market as well as attitudes towards diamonds among actual and possible diamond buyers. This research took the form of two surveys.¹ For the first, researchers from Ayer interviewed 218 jewellers across the U.S. to gather "first hand knowledge about the jewellery, his diamond business and his diamond customers."² For the second, they interviewed 5,097 people considered actual and potential diamond buyers. They hoped these interviews would reveal some of the causes behind falling diamond sales.

The survey reports are full of figures compiled from Ayer's questionnaires, as well as their interpretation of those figures. The contents of the report do not constitute an 'objective' representation of a latent diamond market, simply waiting to be mined for sales. However, neither are those contents an absolute falsehood made-up by Ayer. Rather, the reports were 'texts' in the sense of the Latin root: *texere*: "to weave, to join, fit together, braid, interweave, construct, fabricate, build." Ayer's reports constructed an abstract diamond market from an assemblage that included the researchers and the subjects of the surveys, as well as the survey equipment, which included the questionnaires and a display of artificial diamonds. These texts were meant to explain the recent history of the diamond market and chart possible paths for a future in which De Beers' could achieve greater sales. The reports expressed concern over the

¹ The reports on both surveys were accessed through Mass Observation Online (<http://www.massobservation.amdigital.co.uk/>; last accessed: November 13, 2014). The site has digitized documents gathered by British researchers beginning in 1937 under the name Mass Observation. The purpose of the data gathering was to observe and assess the state of popular opinion. Why a survey of the U.S. diamond market conducted by a U.S. advertising firm was gathered into the database is unclear. It may indicate the importance of the cartel to the U.K.

Unless otherwise indicated, all quotes come from the two surveys, *Trade Survey of the United States Diamond Market* and *Consumer Survey of the United States Diamond Market*.

² Trade Survey, p. 1.

prospects of the diamond market, indicating that although diamonds remained popular, their popularity appeared to be waning. Perhaps predictably, the researchers also found evidence that advertising could have a positive effect on future sales. Perhaps to offer credibility to their findings, the reports included a detailed, unadorned breakdown of the answers to the questionnaire. Despite the self-serving aspect of the researchers' interpretations, when De Beers went ahead with the campaign the direction taken by N.W. Ayer was clearly based in the nascent insights of the survey report.

i. Trade Survey

Ayer first introduced themselves to jewellers through the American National Retail Jeweller's Association and the National Association of Credit Jewellers. The associations' bona fides on Ayer's behalf gave the researchers credibility and access by explaining the purpose of their visit and questions. The survey report notes the high level of cooperation from the jewellers. This eagerness was perhaps motivated by what the jewellers reported to the researchers as a waning interest in diamonds. At 35-40 percent of a store's sales volume, diamonds were an important product for jewellers. About half the jewellers said there had been a relative decline in diamond sales, with buyers shifting their spending to lower profit costume jewellery. Also, a third of jewellers reported a growing trend among couples to forego an engagement ring in favour of a wedding ring set with several much smaller – and less expensive – stones, known as *melée*. This trend was queried in the subsequent consumer survey. Having learned of the movement away from an engagement ring and wedding ring in favour of just a wedding ring, the researchers asked consumer respondents for their opinion. Worryingly, close to 40 percent of women, and over 40 percent of men, approved of this trend. The researchers

note that while some respondents may believe the engagement ring tradition is “sacrosanct,” it is “nonetheless vulnerable.”¹ As noted below, the vulnerability was most acute among younger people. This indicated a worrying attitudinal shift that threatened De Beers accumulation and needed to be address.

According to a majority of the jewellers, interest in diamonds was falling because people had less money to spend. It is worth noting that in 1937, the year prior to the year of the questionnaire, U.S. incomes had hit their highest level since 1929, while total personal consumption as a share of income hit its lowest level. Although jewelry sales relative to income in 1937 were up over 20 percent from their Depression era low, they were down 36 percent from their pre-Depression levels. The jewellers were experiencing a generalized thrift that emerged from the want of the Great Depression. Even though incomes were rising, people were still reluctant to spent.

More than a quarter of jewellers felt the decline in the popularity of diamonds was due to a general decline in interest among consumers. Regardless of the reason, almost all jewellers were confident that a sustained campaign could renew interest in diamonds, with most believing that increase would be “substantial.” When asked if they would increase their own advertising if De Beers were to undertake a national campaign, 85 percent said ‘yes.’ The researchers remarked that this is an “unusual indication of a desire for support and a willingness to cooperate.”²

De Beers’ monopoly position in the diamond market has generated the impression that it could simply impose its demands on others within the market. However, this was never the case. The company’s power was dependent on an agreement among all parties that supply control was

¹ Consumer Survey, p. 6.

² Trade Survey, p. 6.

a necessary component to maintaining the value of diamonds. De Beers position was akin to a buttress holding up the market. The company's collapse could collapse the entire trade and its key position generated compliance within the trade. If De Beers was going to undertake an advertising campaign on behalf of the trade in general, it needed reassurance that the campaign would constitute a single voice, with advertisers own efforts operating in agreement. As the client for the campaign De Beers controlled the voice, but it could not make it say whatever it wanted. The agreement by the jewellers to cooperate with the campaign indicates their reluctant acceptance of De Beers role managing the global diamond trade.¹

Rings were the dominant form of diamond jewellery, with engagement rings accounting for three-quarters of the unit volume and 70 percent of the dollar volume of jewellers' diamond sales. While De Beers' is sometimes credited with — or accused of — inventing the diamond engagement tradition, diamonds were already the most popular choice for engagement rings, which were an important source of sales for the cartel and jewellers. The importance of diamond engagement rings to the diamond trade meant the trend of substituting small diamonds on a wedding band for the larger, more expensive, and more profitable stones found on engagement rings was worrisome. Rings were also the overwhelming form for diamonds of one carat or larger, which made them important in selling the larger, more profitable stones.

A primary distinction among respondents, made by the researchers, was whether the jewellery stores were 'cash stores' or 'credit stores.' The credit stores offered instalment plans on a wide range of goods, of which jewellery was just one type. Interest made from the instalment plans was the primary source of profit for these jewellers. The researchers noted that cash stores were generally independent, stand-alone stores, often operated as a multi-generational concern.

¹ De Beers continues to be regarded as a necessary evil within the diamond trade as most participants appear to accept supply control as the means to maintain the value of diamonds (Siegel 2009).

Conversely, credit stores were more often chains. This was relevant as the chain stores tended to do more advertising. Importantly for the researchers, the cash-credit distinction was useful to assess possible market segments divided by class, as well as age. Both of these divides would be examined in the consumer survey. Further, the differential information pertaining to the cash and credit buyers allowed Ayer to devise the eventual campaign according to existing classifications of magazine outlets as either ‘mass’ or ‘class.’ The former were suitable for aiming advertisements at the “lower strata,” while more affluent buyers could be targeted through the latter outlets.

Young people were important to the diamond trade, with those under 30 buying almost two-thirds of the diamonds by volume. However, because they were buying cheaper stones, they accounted for less than half of the sales by value. Conversely, those over 40 were also important, as they accounted for more high value sales, buying fewer pieces, but bearing larger, more profitable stones. De Beers needed to sell the full range of diamond qualities, so the different demands from the two groups served their purposes well.

Young people were relatively important buyers for the credit jewellers. The researchers claimed that was because “[y]oung men with large ideas and small incomes turn to the credit jeweller.”¹ The option of instalment purchase was cited as an attractive feature for young buyers. This notion of the ‘young men with large ideas’ would become a prominent feature of the eventual campaign.

Lacking today’s extensive statistical data and sophisticated market segment breakdowns, the researchers augmented the class insights gained from the cash and credit distinction by asking the jewellers for their impressions. According to the jewellers, those of “medium income”

¹ Trade Survey, p. 2.

made up half their customers. These middle income buyers were important not only for the volume of customers they represent, but also because they also bought a disproportionate share of expensive jewellery. As with the young men with large ideas, Ayer's campaign for De Beers would hone in on the aspirational aspects of this reality.

As well as asking for the jewellers' impressions of the class and age lines, researchers also asked the jewellers to divided their clientele according to sex. The trade survey found that men were involved in over 90 percent of all diamond purchases, with about half of diamond purchases made jointly by the couple. This includes engagement rings, despite the prevalence of the 'surprise engagement' mythology. The researchers said their findings "indicate the importance of the man in the actual purchase of jewellery, even though that jewellery is for feminine adornment."¹ Men's jewellery accounted for only one sale in twenty and the jewellers indicated that the share of jewellery purchased for men had been falling over the last ten years. However, both the cash and credit jewellers were confident that men were becoming more interested in wearing diamonds. Their appraisal likely informed De Beers and Ayer's attempt to market brown diamonds to men.

ii. Consumer Survey

The consumer survey was partially designed from the responses researchers got from the trade survey. The survey sought the opinions and attitudes of two groups: 1) married couples, and 2) young people of marriageable age. The opinions of young people were considered of particular importance because, as the report noted, "The opinions of these young people have a

¹ *ibid*, p. 2.

tremendous bearing on the future of the diamond market.”¹ The opinions of older, married couples provided the researchers with a background against which they could compare the attitudes of younger people. This would give them a sense of the temporal dynamics of diamond attitudes.

In order to gauge the opinions of married people, the surveyors first had to attract their attention. To do so, they set up a display of imitation diamonds ranging in size from 1/2 to 2 carats. According to the researchers, the display was “highly success in breaking down resistance to the questionnaire.”² Despite the suggestion that popular interest in diamonds was waning, a case ostensibly containing a few thousand dollars worth of the stones was able to turn people’s heads and gain the researchers time with them. The case served two additional purposes: 1) interviewees were asked to estimate the size and prices of the stones on display in order to gauge people’s knowledge; 2) respondents expressed their preferences with regard to size. It is reasonable to assume that use of the display would bias their sample toward those interested in diamonds. The researchers address possible concerns as to the ability for their sample to represent a larger population. While contemporary research would cite the authority of statistical theory, the Ayer’s researchers based their reassurance on a claim that “long experience” has taught them that sampling works.³

a. Married couples

The first question asked of the married men and women was for their preference among diamonds and other precious stones, such as rubies and emeralds. They found that diamonds

¹ Consumer Survey, p. 1.1.

² *ibid.*

³ *ibid.*

were preferred by just over and just under two-thirds of women and men, respectively. When the matter of preference was removed, almost all respondents answered “yes” when simply asked if they like diamonds.

The researchers followed up the question of preference with a gauge of the respondents’ knowledge of diamonds and diamond prices. The researchers’ finding of a decided lack of knowledge was worrisome as a negative portent for the diamond market’s future, whether or not people expressed a desire for the stones. The researchers noted that while both men and women were reasonably accurate in estimating sizes, they consistently under-estimated prices. The one carat stone cost, at the time, between \$500 and \$600. Yet two-thirds of women and almost three-quarters of men estimated its value at less than \$400. The report cited the prevalence of advertisements for discount diamonds as the source of misinformation. This undervaluation, they wrote, made it difficult for jewellers to convince prospective buyers that their prices are not exorbitant. Upon hearing the prevailing prices, the buyer’s “sales resistance is immediately stiffened.” They advocated an advertising campaign to educate the masses on prevailing prices of stones sold by “the honest jeweller.” “Wider knowledge,” the researchers claimed, “would render suspect” the bargain offerings of quality stones at low prices.¹ As will be discussed in the next chapter, this would become an important aspect of the subsequent campaign.

The researchers believed that “dollars available for luxuries have shrunk during the last few years” and they wished to gauge the competition that diamonds faced for people’s luxury spending.² Women were asked for their choice between diamonds and a range of other luxuries including a fur coat, a trip to Europe and a piano. Men were similarly asked which luxuries they would prefer to give as gifts. The women chose a trip to Europe, a trip to Hawaii, a radio-

¹ *ibid.*, p. 1.3.

² *ibid.*

phonograph, a new wardrobe, and a trip to Bermuda ahead of diamonds. The researchers noted that men's choices of gifts closely paralleled the women's preferences. They cite the close parallels between the women's and men's answers as a positive signal that men "are as anxious to give their wives diamond jewellery as their wives are to get such gifts."¹ They also took the opportunity to cite the closeness of the responses as evidence of the survey's reliability.

The respondents were then asked which size of stone on display they preferred. A large majority of both men and women chose a stone of one carat or less. While diamond itself bespeaks luxury, the respondents' tastes had seemingly been shaped by a celebration of thrift, making large stones seem ostentatious. Contrary to the atomistic conception of desire postulated by neoclassical theory, people's desires are social and historical. With an object whose purpose is to be displayed, a particularly large diamond may have been considered a vulgar affront to one's neighbours. Why would one pay more to put on a display of such anti-social poor taste? The researchers expressed surprise at this lowered desirability of the larger sizes. They stressed that "popular taste as well as ability to buy limits the sale of stones over one carat."²

While the survey reports make much of a waning interest in diamonds they also emphasize that the respondents still had positive feelings toward the stones. They noted that even where another luxury was preferred by a majority, there remained a sizeable minority who desired diamonds, such as the one in four respondents who chose diamonds over a new automobile. This interpretation evidenced the fine line traced by the researchers to convince De Beers that, on the one hand, there was a decline in desire, while, on the other hand, there was latent desire to tap into. Balancing on this analytical razor's edge is Ayer's desire to convince the diamond company an advertising campaign could trigger that desire and increase sales.

¹ *ibid.*

² *ibid.*, p. 1.2; emphasis in original.

Although the survey results confirmed that engagement rings were the primary outlet for diamonds in the United States, the researchers also highlighted results indicating that women desired more diamond rings. More than half of the women surveyed who owned a diamond said they would like another. Importantly, almost 40 percent of women said they would like one with a larger diamond. More than half of the men whose wives had a diamond ring said they would like to give their wives another and almost a third said they would give them a larger stone. Three-quarters of women with no diamond desired one and a similar percentage of the men whose wives had no diamond wished to gift them one. The survey did not explore why these women did not have a diamond in the first place. However, being married couples, it does indicate that a significant number of women were either given no engagement ring or were given a non-diamond engagement ring.

Women were considered the primary wearers for diamonds. However, the survey also gauged opinions on men wearing the stones. Almost one-fifth of men owned a diamond ring while about half of men without a diamond ring said they would like one. The researchers wrote that this evidences a “large latent market.”¹ De Beers and Ayer would seek to translate this “latent market” into an actual, profitable market with a campaign targeting brown diamonds at men.

Diamonds are considered objects with investment potential and the researchers asked both the jewellers and the consumer survey respondents about this aspect of the diamond market. The jewellers expressed reluctance to sell diamonds on this basis. However, they noted that diamond purchasers often had concerns about the stones maintaining their value. According to the researchers, distress selling during the Great Depression had created some disillusionment

¹ *ibid.* p. 1.5.

with diamonds' investment potential. The reality of low, and likely negative, returns on the stones had clashed with the popular perception of diamonds as an investment commodity. A loss of perception that a diamond will hold its value undermined the willingness to pay the high prices diamonds command at retail, which threatened those prices and the jewellers' profits. Despite reluctance to promote diamonds as an investment, the jewellers were encouraged that less than a decade later a high percentage of customers said they believe diamonds have investment value. This was confirmed by the surveyors, who found that almost three-quarters of married women, and a slightly smaller percent of married men, believed diamonds have investment value.

b. Married couples by class

The researchers explored class differences in diamond knowledge and desire. However, they did not determine class through information obtained from respondents. Instead, the researchers claimed to have sufficient experience to "closely estimate the position as to income and background of the person interviewed."¹ Based on this touted experiential knowledge, the researchers broke the replies of married couples into three classes. The classes were assessed relative to the municipality in which the interviews were conducted. They designated as 'A class' those with the "highest buying power in town." 'B class' designated the "great middle class who live comfortably but not extravagantly." They suggest that the class includes many businessmen, railroad men, government employees and salesmen, as well the younger sons and daughters of the A class, whose fortunes do not yet match their parents. 'C class' included skilled labourers such as mechanics as well as the "great white collar class" of clerks, teachers, postmen, etc.

¹ *ibid.* p. 2a.1.

The researchers found that among higher class women, although diamonds were still preferred to other gems, the preference was weaker. They also found that while the preference of stone size was correlated with class — higher class women preferred larger stones — even those in the A class tended to limit their choices to one carat and less. Notably, among the A class, the preference for a man's ring was 1.5 or 2 carat stones. This preference for a larger stone for men's rings is one of the reasons De Beers and Ayer would undertake a campaign aimed at men.

According to the survey results, the A class were generally more knowledgeable of the sizes and prices of the display stones, although the researchers noted that even among the members of the higher class, “the number of reasonably correct estimates of cost was small.”¹ The members of the A class were no more likely than those of the lower classes to prefer diamonds over other luxuries. The desire for another or a larger diamond ring varied inversely with class, as did the desire for a diamond among those who do not have one. This result was true for both women and men. Although women from the wealthier classes were more likely to own diamond jewellery other than a ring, more than half of the A class women did not. Further, less than one in five expressed desire for such. This result would bolster the agency's decision to target most of its advertising effort at the middle class.

On the matter of substituting a diamond wedding ring for an engagement ring, the researchers found that the higher class the smaller the percentage who approved. However, they noted, even in the A class, more than a third considered it a good idea. With regard to the investment value of diamonds, the researchers found that class A men were more skeptical and suggested this evidenced “more sophistication.”²

¹ *ibid.* p. 2a.2.

² *ibid.* p. 2a.3.

c. Married couples by age

The answers from married couples were also parsed along age lines. Although the researchers downplayed the significance, they found that older respondents less frequently answered “yes” to the question “Do you like diamonds.” Among those older respondents who did like diamonds, there was a greater preference for larger size stones than with younger respondents. The researchers interpreted this as emerging from both their greater spending capacity as well as a past preference for larger stones. They also found older respondents demonstrated greater knowledge of stone sizes and prices. The preference for diamonds in comparison to other luxuries increased with age. In other words, younger respondents were more likely to prefer competing luxuries. This was interpreted negatively, by the researchers, who asserted that “unless the diamond is made more desirable with the younger people the sale of diamonds will gradually decline as the older people pass on.”¹

Older women were no more likely to own diamond rings than younger women, while older men had slightly greater ownership. The diamond rings owned by younger women were more likely to be engagement rings. According to the researchers, this fact indicates that the diamond engagement custom had grown during the last 15 to 20 years, even as it also appeared vulnerable to changing traditions.

d. College students

The responses from college students were considered of special importance for assessing the diamond market’s future. Both men and women were interviewed. The researchers acknowledged that going to colleges in order to access the opinions of young people meant they

¹ *ibid.* p. 2b.1.

were excluding members of the lower class. However, they cited this as a virtue, because it “gives a better picture of the real future market for diamonds.”¹ Ayer conducted surveys at Princeton and the University of Michigan. The former was intended to test the attitudes of upper class young people, with the latter aimed at gathering responses from the middle class.

Like the married couples, both male and female college students were most likely to chose diamonds as their favourite over other gems. Almost all the college women and men said they like diamonds. As with the married couples, the size preference for a stone worn by a woman was one carat or less. The researchers noted that there was some greater preference for larger stones for men’s rings. They argued that the similarity in size preferences demonstrated a need to remove “certain prejudices” against stones greater than one carat.²

The closeness in response with regard to size between the college students and the married couples gave the researchers yet another opportunity to claim the reliability of their methods. In addition to presenting De Beers’ with evidence that an advertising campaign was needed and could be successful, they had to bolster the validity of their evidence. If the evidence itself was called into question then the researchers lost the foundation for their analytical claims.

The college students had poor knowledge of diamond sizes and “erred widely” on the price of the stones. The researchers added that the students were upfront about their lack of knowledge of diamonds and the fact that they were guessing as to the size and cost. The college women expressed even stronger preferences for competing luxuries than did the married women. The researchers declared that the “strength of competition of other luxuries among these younger women is a serious matter for the future of the diamond.”³

¹ *ibid* p. 1.1.

² *ibid* p. 3.1.

³ *ibid* p. 3.2.

The ring was again the preferred form of diamond jewellery for both men and women. They noted with interest that men at the University of Michigan had a much stronger preference for rings compared to the men from Princeton — 57 percent to 25 percent. The Princeton men, conversely, had a greater preference for diamond shirt studs.¹ The researchers said it is “distinctly encouraging” that the interest in diamond rings among the men raised the possibility of reviving the style.² The stronger desire for a diamond ring among the middle class men may evidence Veblenian emulative ambition on their part (Veblen 1994). Those striving to enter the upper class may display greater allegiance to the symbols of that class than its current members.

As engagement rings made up a large portion of the diamond market, the researchers were obviously very interested in the attitudes of young people toward the engagement tradition. They found that six out of seven of the young men would like to give a future fiancée an engagement ring. Despite the high proportion, the researchers expressed concern because it evidenced that the tradition of giving an engagement ring “is not universally regarded as essential.”³

The survey also asked the young respondents their hypothetical preference, if they had to choose, between a engagement ring and a honeymoon, which the researchers suggested that this is a legitimate financial choice that faced young couples. They found that “only” 30 percent of men and 41 percent of women would choose the engagement ring. The report declaimed, “This symbol of enduring love apparently is not so sacred but that the majority would not forgo it for a transient pleasure.” Most worrisome was that the engagement ring was less important to the men who are “responsible for the purchase.”⁴

¹ Studs are used in place of buttons.

² Consumer Survey, p. 3.2.

³ *ibid.*

⁴ *ibid.*

The researchers concluded the entire consumer survey with an observation on the relationship between young people and the future of the diamond market:

[I]t is evident from the whole tenor of the college replies that the young unmarried people in this country do not desire diamonds as strongly as the older people. Since it is on them that the industry must depend for sales in the future, there is an obvious need to bring the diamond into greater popularity with the younger generation.

The means to address this need is equally evident: an advertising campaign.

IV. Constructing the Diamond Market

The researchers' findings were not simply relayed to De Beers, unadorned, for the company to make of them what it would. The researchers translated those results, and that translation constructed an idea of a diamond market. That idea was meant to convince De Beers to undertake an advertising campaign. The contract for the research explicitly stated that the company had no obligation to follow through on the research. Although De Beers' advertising undertaking now seems obvious, it should not be under-estimated what a leap the company was taking with its eventual campaign. As an unconventional company, controlling an unconventional product, using an unconventional marketing procedure, there was no precedent for it to follow in undertaking a campaign intended for retail buyers. There were other avenues to pursue in trying to increase their own profits, such as incentivizing the jewellers to undertake more advertising.

N.W. Ayer had to convince the cartel that a *centralized* advertising campaign would be worthwhile. Private conversations between Ayer CEO Lauck and the Oppenheims had opened the latter to the possibility that advertising would be advantageous. However, the research

document would be vital in Ayer's efforts to land what would prove to be a lucrative account. It constituted an obligatory passage point the eventual increase in diamond sales. The achievement of the account and the eventual design of the campaign depended on the research and its reporting, although they were not determined by it.

The researchers recognized the importance of the survey, and anticipated questions by De Beers of its veracity and usefulness, making multiple mentions of the reliability of the technique as a barometer of broader attitudes. Although it is possible the figures reported in the document were entirely faked, that is unlikely as the insights gained from the research made Ayer much better prepared in designing the eventual campaign. If the account was won, then the research would be an invaluable part of the design process. It is also unlikely that a large advertising agency would risk jeopardizing its reputation by faking the research it offered to clients.

The combination of results on young people, men and spending on engagement rings lead the researchers to offer what would prove to be a prescient suggestion for the direction of a future ad campaign:

The fact that the typical amount invested in the purchase of an engagement ring is as low as is here indicated, coupled with the fact that an engagement ring is perhaps the symbol of love for another, suggests the need for persuading young men to spend a larger amount for the jewel which should be more important to them and their fiancées than any they will acquire in later life.¹

De Beers' ads are now closely associated with the tradition of giving a diamond engagement ring. This, however, was never foreordained, even once the company made the decision to advertise. Failure was always a possibility. In fact, the reality of failure as a possibility is

¹ Trade Survey, p. 3.

affirmed by the campaign to market brown diamonds to men. While the diamond engagement tradition is now taken for granted, the same cannot be said for men wearing brown diamonds. In order to achieve success, the campaign had to actually generate sales. Sales required the advertisements to connect in a meaningful way with members of the masses. To that end, the construction of the campaign was partially based on the assessment of the current state of the diamond market relative to anticipated possibilities. Ayer's researchers had carefully identified an existing, but fragile desire for diamonds.

The influence of the masses on sales efforts can be analyzed without conceiving of the advertisements as a simple expression of the desires of consumers. Rather, the knowledge of the jewellers, and the desires of the masses, as represented by the answers of survey respondents, were gathered into figures that the researchers and others at Ayer transformed into possibilities for advertising diamonds. Through the mechanism of the survey and subsequent report, all the respondents were enrolled into the assemblage involved in the construction of the eventual campaign. The first stage in this was to construct the idea of the diamond market, both present and future.

The masses, as depicted in the report, were still captivated by diamonds, but their desires were possibly fading, while also being transformed by other considerations, such as the perception of large stones as gauche, and growing desire for other luxuries. According to the researchers, the masses were both in need of -- and disposed to -- advertising to trigger, reinvigorate or transform their diamond desires. Those who did not desire diamonds needed to. Those whose desires were waning needed them amplified. Those who desired other luxuries needed to be channeled to diamonds. Those whose desire was toward smaller, cheaper stones needed to be turned onto larger, higher quality, more expensive stones.

The masses as described in the Ayer report were also largely ignorant about diamonds. They knew neither sizes nor prices. The former was worrying because it contributed to people's preference for smaller stones. The latter was even more worrying as the respondents tended to under-estimate the price. The ignorance and misconceptions worked against the jewellers whose prices would then be regarded as exorbitant. One of the sources of misinformation were advertisements for mail order jewellers, who offered cut rates for diamonds.

The problem with the mail order stones was not necessarily their cheapness, but rather the quality claims made about the stones. These diamonds, the mail order companies claimed, were 'perfect cut' and 'blue white.' They leveraged some of the mystique that existed at the time with respect to diamond mining. The advertisements listed stones as coming from different sources, offering different prices for Jagersfontein diamonds vs. Wesselton diamonds. However, since the vast majority of the stones were coming from De Beers, which controlled all the South African mining, and it did not market the stones according to their origins, these differentiations were meaningless and misleading. Additionally, to offer the diamonds at the prices listed, they would have been of very poor quality. However, because the language of the 4Cs had not been popularized, there was no restriction on the descriptions the jewellers could give.

De Beers wanted a market for the cheap, low quality stones being sold by the mail order jewellers. However, the claims that such cheap stones were of high quality undermined De Beers' business strategy, which was to sell every stone at the highest possible price. This meant that a low quality stone should not be confused with one of high quality. Most importantly, these advertisements undermined the masses' perception of diamonds as intrinsically valuable and therefore worth the high prices that were commanded by high quality stones.

As knowledge of diamonds was not proliferated via formal education systems, what people knew about diamonds can be considered a component of ‘folk knowledge.’ This is the knowledge that circulates along informal channels. It constitutes the basis of what sometimes gets called ‘common sense,’¹ but can include everything from widespread hygiene practices to local horror stories to claims of naturalized gender distinctions. The concept of folk knowledge is most prominent in anthropology, where it is used in the analysis of societies without formal scientific practices (Antweiler 1998; Caws 1974; Crick 1982; Read & Behrens 1989). However, there is no reason to exclude the concept from analysis of Western societies. Rather, it is a concept that can help us transcend the dichotomization between The West and The Rest that marks ‘modernity’ (Latour 1993; Latour 2010). All communities have information that is normalized, but which is relayed outside sanctioned educational channels.

The sources of diamond knowledge are multiple and, during the era considered, included the advertisements for mail order jewellery offering low price stones with claims that they were high quality. The immediate effect of these ads was to attract luxury spending dollars, diverting them from the storefront jewellers that sold more expensive, higher quality stones. Beyond that, with claims that their stones were ‘perfect cut’ and ‘blue white’ the mail order jewellers were manufacturing an idea that high quality diamonds could be had more cheaply than De Beers or retail jewellers were offering them. They were reconstructing diamond folk knowledge, which was a greater threat to the gem diamond assemblage than just the diversion of sales. For this reason, an educational component would be an important feature of the subsequent campaign.

While the researchers took it for granted that respondents from higher classes were more knowledgeable about diamonds, this knowledge differential is indicative of class differences in

¹ Although I have made a distinction between ‘folk’ and ‘formal’ knowledge, these exist along a continuum. The evening news is neither traditional schooling, nor local gossip.

the folk knowledge that people receive. Wealthy people are connected to different network of knowledge circulation than working class people. School systems were unlikely to teach how to estimate the size of a diamond. Yet, among those from more privileged backgrounds, there was some basis for this knowledge; some process brought this knowledge to them. Not least among those sources were diamonds themselves, which those from higher class backgrounds were more likely to encounter. It is worth emphasizing that all knowledge, including folk knowledge, is both material and expressive. In this case, those from wealthy backgrounds were able to experience more diamonds first hand. These experiences would have taken place in a context of whispers about the value of the jewellery or gossip about just how wealthy the wearer or her husband was. Despite the lack of a formal education on stone size and prevailing prices, the wealthier respondents to the survey nonetheless had greater knowledge, if not to the degree desired or expected by the researchers.

The meaning of diamonds gets established and stabilized via diamond folk knowledge. The esteem granted to diamond wearers — assuming the stones were deemed worthy — would be repeatedly experienced and then replicated by those circulating among the higher classes. A window into the circulation of esteem for diamond wearers is opened during Hollywood award season, when commentaries breathlessly report on the millions of dollars worth of diamond being worn by the starlets. It would be within these generally clandestine, informal channels that the disapproval of large stones would have manifest. While there are important class differences in diamond folk knowledge, there are also mechanisms that carry this knowledge across class boundaries, primarily the people who will move within different class milieus. Above, it was noted that middle class college men were more likely to want a diamond ring while upper class college men expressed a preference for diamond shirt studs. The aspirational middle class men,

expressing a desire for a symbol of upper class power and luxury lacked the subtleties of the upper class men's diamond knowledge and it expressed itself in their preference for the more ostentatious piece of jewellery.

The propagation of folk knowledge is extremely difficult to trace except in the instances of its materialization, such as in the recorded responses to the diamond survey. This limitation can make the knowledge difficult to stabilize or control, making it an unstable component of capitalist power. The unreliability of these informal channels was demonstrated to the researchers through the errors in people's responses about the sizes and prices of the sample stones. The survey results also indicated that folk knowledge was either growing poorer relative to the actuality of gem diamonds or was greatly improved with age as younger people's estimates of size and price were more erroneous. Other results, including the greater desire for diamonds among older respondents, gave the researchers reason to believe it was not just a matter of older people having more time to gain knowledge of diamonds. Instead, the mutation of diamond folk knowledge was bringing with it less desire for the stones.

Younger people seemed to have less care for the stones, which translated into less attention and less learning. This ignorance was particularly disconcerting as young people were considered the future of the diamond market. The generational worsening of diamond knowledge and the importance of the young led De Beers and Ayer to undertake efforts via multiple channels at educating people, especially the young, as will be discussed in the subsequent chapter. These efforts constitute an intervention in the circulating folk knowledge, making the ads themselves a source of knowledge. They are the empirical mechanisms through which the rhetoric abstracted in the analysis of Barthe (1977) and other semioticians is actually generated and circulated.

In considering folk knowledge we have less grounds or ability to distinguish between people's knowledge and their attitudes toward diamonds. Of central concern to the semiotic approach to advertising is a distinction between 'meaning' and 'reality' (McFall 2004).

However, as far as Ayer's researchers were concerned, the reality of the diamond market was thoroughly mixed with the meaning of diamonds for people. If diamonds were considered gaudy and audacious symbols of excess, then sales would be weak. If, on the other hand, diamonds meant romance and glamour, then greater sales were possible. Both underestimation of diamond size and price and objections to stones greater than one carat on the basis of style, were matters of concern to Ayer and De Beers, even if the former ostensibly constituted poor knowledge, while the latter constituted an emotional bias. We can see how the two positions twist together. If an observer is unable to tell the difference between a half carat and a one carat stone, then there is nothing to be gained by wearing the latter.

Mainstream value theory would suggest that as desire shifted toward smaller stones the larger sizes should come down in price. However, price was also an indissociable quality of diamonds. Larger diamonds were not desirable just because they were flashier. They were desirable because they were expensive. They expressed one's wealth, making it visible to those who understood the code. However, when the Great Depression made such displays undesirable, then the larger diamonds became undesirable. Lowering the price of those stones would not necessarily bring greater sales as such an act would undermine this vital meaning.

The consequences filter further as resistance among the wealthy to larger stones would possibly undermine the aspirational and luxury aspects of diamonds. Wealthy buyers were to be the outlet for the largest, most profitable stones. Although members of lower classes might not be able to afford the same stones, they could buy smaller versions as an emulative act (Veblen

1994). If the middle class began wearing the same size stones as members of the upper class, who have limited the size of diamonds worn on the basis of style, then diamonds may no longer be regarded as a luxury or an object worthy of emulative display.

The meaning of diamonds cannot be equated with their reality, since the stones have their own reality apart from people's perception of them, and this reality had a part to play in the price of diamonds. However, neither can their meaning be dichotomized with their reality. As will be discussed more fully in the next chapter, the physical properties and capacities of diamonds were leveraged for marketing purposes. Those properties, in particular the collective property of comparative rarity and the capacity for brilliance, had already been enfolded into the meanings people attached to diamonds. That meaning was a vital component of the diamond market and propelled the mining and marketing of the stones.

Survey respondents had generally positive regard for diamonds. A large part of this regard was the stone's association with engagement and marriage. However, the meaningfulness of the stone did not appear to have much relationship with the stone's size. Instead, considerations of style restricted people's desires to stones less than one carat. Although wealthier respondents could afford larger stones, there appeared to be no consideration by them that they therefore ought to buy a larger stone. This lack of meaning relating one's material standing and the size of the stone also helps explain the general support for the trend toward diamond wedding bands. At the time, the engagement ring would have borne a single large stone, and the band, if it had stones, would contain *melée*. However, if the meaning attached to diamonds was simple a connection between the stones and romance, then it could be actualized just as readily with small stones on a wedding band as with a large engagement solitaire.

Although diamonds were also meaningful as a luxury item, that was not necessarily connected to their meaning as a symbol of romance and marriage.

As a luxury item, the diamond was considered second best to most other objects suggested for comparison by the researchers. While the survey did not ask people's reasons and the researchers did not suggest any, it is telling that of the luxury items surveyed, only diamonds can be considered a pure luxury. The trips abroad have an experiential aspect to them, and the other objects, such as wardrobes, automobiles and radio-phonographs have practical uses. Only the diamond has a solely aesthetic role. The diamond's meaning as a luxury did have some connection to its size as evidenced by respondents who already owned a diamond indicating they would like a larger stone. Similarly, the men whose wives already owned diamonds indicated they would like to get another, larger stone. Outside the diamond's meaning as a symbol of romance the size becomes relevant.

Diamonds as a luxury for men was also considered by the researchers. They found that although few men wore diamonds, there appeared to be some receptivity to them. As with the diamonds-as-luxury for the women, the meaningfulness of diamonds for men was connected to size. Both men and women, when asked, expressed a preference for a larger stone, if worn by a man. The meaning of these diamonds was also related to class position as wealthier men and women were more likely to express interest in diamonds. Worn by a man, the stone expresses their social position and power. Size was a relevant factor in such a display.

Diamonds also had meaning for the respondents as a value preserve. Historically, and within certain spheres connected to the diamond trade, the stones had served as a holder of value (Harlow 1998). However, as the researchers noted, the recent experience of the Great Depression had taught some people that diamonds did not readily appreciate or even maintain value. The

retailers expressed reluctance to market the stones as an investment, while customers often inquired about this. Nonetheless, the researchers broached the topic with survey respondents. Confirming the jewellers' supposition that the experience of the Depression had not permanently undermined the idea that diamonds are stores of value, the researchers found a large majority of respondents believed the stones have investment value. They noted, however, that men from wealthier backgrounds were the least likely to view diamonds this way, likely because they had greater experience with other investments and recognized that diamonds were a poor one. De Beers would tread carefully around the diamond-as-value-store idea because if buyers considered the stone valuable in its own right it could entice them to buy more expensive stones. However, as noted above, De Beers wished to discourage the growth of a second-hand market that could emerge if a large number of buyers sold their stones. The ways they subtly tried to thread this issue will be considered in the next chapter.

The knowledge of the respondents, intended to represent the knowledge of the masses, which included a mix of information about diamonds as well as attitudes toward them, was used by the researchers to approximate the current and future state of the diamond market. To achieve sales would require accessing diamond folk knowledge. If those sales were to grow, then the knowledge itself would have to be transformed. In particular, young people would have to become more interested in diamonds. In fact, as the next chapter will explore, the eventual campaign would place much emphasis on engagement rings, largely targeted at younger buyers. In addition, some advertising in 'class' outlets emphasizing diamonds as a particular luxury, while other advertising focused on men. At the same time, the research documents indicate marketing paths not taken by Ayer and De Beers.

For example, surveyors found that more than half of married women with a diamond ring would like another, and almost 40 percent would like a stone bigger than their current stone. Among the men, a majority whose wives had a diamond ring wanted to give them another, and almost a third wished to give them a larger stone. While De Beers could have pursued a line of marketing urging women to add to their diamond jewellery, or indulge in a larger stone this did not become part of the campaign. They also found that almost three-quarters of women who did not own a diamond would like one. Similarly, three-quarters of men whose wives had no diamonds would have liked to give one. Yet, De Beers did not undertake any sort of 'It's Never Too Late' message with its advertising. Another largely untaken path was in advertising non-ring jewellery. With their focus on engagement, the ads implicitly focused on diamond rings. Yet, they found that almost 70 percent of women had no diamond clips, brooches, wrist watches, earrings, or necklaces, which they believed "represents a tremendous untapped market."¹ What non-ring advertising was undertaken was focused in the "class" outlets intended to reach wealthier members of the masses.

V. Conclusion

The interventions of De Beers into the folk knowledge of diamonds were based on the information gained by Ayer's researchers. Although this research is important, we should not overstate its role in the eventual marketing. Contrary to the mainstream economic perspective of the sovereign consumer and advertising-as-information, market research is not simply a matter of learning what consumers desire, with advertising as an informational conduit. However, contrary

¹ Consumer Survey. p. 5.

to the claims of Galbraith (1967) and other critical economists, this research was not a map for the wholesale landscaping of people's psyches according to industrial dictates. The Ayer research expressed a version of 'the world' that lay waiting between De Beers' wish for greater accumulation and actually achieving that thing.

We do not need to accept either the mainstream or the critical position on the sequential relationship between sales and desires. Instead, both sales and desires can be considered indeterminate, precarious and interconnected. Advertising neither leads nor follows. Instead, advertising is an addition to a complex process of desire construction in which the desirer him or herself participates, alongside the entities that make up 'popular culture' or 'social norms,' such as reportage on diamonds worn by celebrities, or the practice of giving diamond engagement rings among one's friends. This is why so much corporate time, attention and money continues to go toward market research and marketing. Desires and buying habits are continually in flux and the differential struggle means corporate interests are served by locating, modifying and capturing desire.

While advertising is an intervention designed to provoke sales, its efficacy is far from guaranteed. Prior to the design of an advertising campaign, businesses try to pry open the black box of the masses to gain greater understanding of the actual and possible market. This is just one of the ways that the cultural economic reality violates the mainstream economists' conception of consumers and producers meeting solely in the instant of exchange and then being 'quits.' Market research tracks down buyers after the fact to try and understand why they made their purchase. They try to identify potential buyers before the fact to entice them to make the purchase. The on-going relationship between sellers and buyers violates the neoclassical assumption of the independence of supply and demand.

In the case of De Beers and diamonds, the effort to identify and understand the actual and potential buyers of diamonds took the form of trade and consumer research. From the survey results, the researchers did not simply claim to present a snapshot of the diamond market. Rather, they used various insights from jewellers about diamond trends and those from respondents of different ages to offer a dynamic imagining of the diamond market's recent history. Even the surveys were dynamic objects, with the consumer survey designed, in part, based on the responses of the jewellers.

The researchers interpreted the numbers compiled from the survey in a context that connected peoples' attitudes to the potential for sales. For example, when just under half of all college men express some desire for a diamond ring, this is taken as a good indication the waning practice of men wearing diamonds could be revived, thereby generating sales. However, when almost 1 in 7 men indicate they do not plan to give their fiancée an engagement ring, this response indicates that the engagement ring tradition is not sacrosanct, which could lead to falling sales. The advertising campaign that Ayer hoped to create for De Beers' was situated within this analysis. The researchers suggested the latent desire of men might be triggered by an advertising campaign. Meanwhile, the trend away from diamond engagement rings could be countered, also by an advertising campaign. The platform for intervention into these matters of concern was — according to the advertising agency — advertising.

These insights from the survey would inform the eventual campaign. However, that campaign, as an engagement with the masses, was an indeterminate, contingent process not least because the masses are important mediators, translating the advertising effort. Further, the advertisement is never occurring within a *ceteris paribus* order and the masses are subject to other forces. Those forces will have a bearing on the achievement of a sale. The emergent

advertisements will be considered in the next chapters in the context of other processes relevant to diamond sales, in particular the advent of WWII.

Chapter 6: Advertising Diamonds as a 'Mundane Objects'

I. Introduction

De Beers' undertook a national advertising campaign in the U.S. in 1939 on the basis of the research and analysis of N.W. Ayer. The campaign's focus was on diamond engagement rings. The diamond engagement ring tradition was not started by De Beers, but the singularization of the diamond had De Beers advertising among the necessary contributions to its emergence. Without the campaign it is unlikely the tradition would be what it is today. However, the company's role has to be situated among other participants. The emergence of the tradition, the particular form that it took, and its endurance had multiple causes distributed among a range of entities. Some are obvious, such as the N.W. Ayer advertising agency, American jewellers, the national magazines in which the advertisements appeared and the readers of the advertisements. Less obvious, perhaps, is the role played by more nebulous entities such as WWII, The American Dream, tradition and nostalgia.

A unique product, coming from a unique company, the diamond advertisements were also unique, and indeed innovative, in both appearance and content. Most advertisements at the time were constructing what Michael Schudson called "capitalist realism" (Schudson 2013, pp.210-8). Technologies were front and centre, extolling innovations in materials and production processes. Advertisements named patented chemicals, cited 'research laboratories,' described technical components and connected products to high-profile technologies. These were all linked explicitly and boldly to the brand of the company selling them. These products were the embodiment of American progress and acquiring them was synonymous with achieving The American Dream (Marchand 1986).

De Beers advertisements, by contrast, made an emotional appeal, connecting diamonds to the feelings and memories of a young couple. Diamond's material quality of hardness was leveraged to construct the idea of diamonds as a durable, constant reminder of the couple's formation and an object around which the future memories of their life together could be built. In addition to selling the stone as a romantic object perfectly suited to the expression of love and coupledness, this message constructed the idea of the diamond as an heirloom. Heirlooms exemplify the confounding and confusing meanings of the term 'value.' On the one hand, it is used in an explicitly quantitative manner, such as when referring to financial value. It is typically assumed that an heirloom has some kind of resale value. On the other hand, the word denotes a principle that one holds to be important, which many would suggest are precisely what cannot be quantified or monetized. Almost by definition, the value of an heirloom as a connection to one's past, transcends its monetary value. It is this non-quantifiable component that dissuades families from parting with their heirlooms. By marketing the diamond as an heirloom-in-the-making, De Beers intended to prevent the emergence of a second hand diamond market, which could pose a serious threat to the company's strategy of supply control.

The campaign was not a matter of De Beers newly transforming diamonds into an object of romance. That was already a role the gem stones served. Rather, the advertisements were an effort to bolster and augment that meaning, in order to leverage it into greater sales and greater profits. Accomplishing this end was not just about selling *more* diamonds. It was also about selling diamonds across the entire range of qualities. This goal required not just an emotional appeal for couples to include a diamond in their life. It required an educational appeal to teach men and women alike that not all diamonds are the same and that size is not the only differentiator.

The quality gradient of diamonds is another distinction between De Beers' product and those being hawked in the surrounding advertisements. Even if RCA has several lines of radios there are orders of magnitude more differentiation among the diamonds to be sold. As noted in Chapter Four, in 1945 De Beers had 190 categories of rough stones. To these categories the cutting would have created further differentiation. Then, for any given quality there is a range of sizes. To sell diamonds across the range of sizes and qualities, at their highest possible price, theoretically achieving perfect price discrimination, De Beers attached the stones to the aspirational drive of Americans. Although enrolled in a different manner, the De Beers advertisements also made use of The American Dream. Men were encouraged to buy the stone not in accordance with their current lot in life, but in accordance with their hopes for the future. Where the romance of the advertisements spoke to the couple's past, the aspiration spoke to their future. The diamond was to serve simultaneously as a storehouse of memories as well as of hopes and dreams.

In addition to the well-known engagement ring campaign, De Beers also ran advertisements in so-called 'class' magazines that promoted diamonds as a fashion item. The same meaningful attribute of constancy was consolidated in these advertisements. However, in these advertisements, instead of serving as a repository of the couple's nostalgia and hopes, diamond's steadfast beauty becomes a conduit of renewal as stones could be set and reset, updated with changing fashions. This campaign served De Beers' accumulatory interests as engagement rings would overwhelmingly be purchased by young men with less disposable income. Older, wealthier men were the intended buyers of larger and more expensive diamonds for fashion purposes.

The war affected many facets of the diamond campaign, from the imagery used to the textual content to the educational component. N.W. Ayer was faced with a daunting task of justifying a luxury purchase at a time when popular discourse extolled sacrifice. The existing campaign was readily adopted as the diamond was positioned as an expression of connection across the distance that separated a soldier and his fiancée or wife. The diamond expressed the promise of their future together.

The wartime advertisements added to the educational component, informing readers that gem diamonds subsidize the extraction of industrial diamonds, keeping down the costs of a vital input to the war effort; buying a diamond was not a needless extravagance but a contribution to victory. This message was reinforced through the jewellers who were given advice through advertisements in trade magazines on how to sell. If the war was invoked as part of a potential buyer's resistance to the purchase, the jewellers were advised to describe diamond's role in the war effort and the relationship between the extraction of gem and industrial stones.

The enrolment of the jewellers into the diamond campaign was a vital component of its success. De Beers was marketing a product they did not sell: cut gems. The provocation of desire would only result in accumulatory success if the jewellers were able to complete the sales, in turn driving greater demand for the rough stones De Beers did sell. It was in the company's interest to standardize the retail relay as much as possible. The Ayer research indicated that jewellers were receptive to the idea of a national campaign, primarily because of the importance of diamonds, especially engagement rings, to their profitability. De Beers' leveraged this receptivity to gain greater control over retail selling by offering implements that complemented the campaign, such as full-size posters of the advertisements, radio spots that jewellers were encouraged to localize and common talking points.

The importance of the jewellers to the engagement campaign's eventual success becomes evident when that success is compared to the failure of the 'brown diamond' campaign that De Beers' targeted at men. The effort required a much greater leap of faith by the jewellers, with little indication they were willing to take that leap. The campaign's timing right at the beginning of the U.S. entry into World War II also greatly undermined its possibility for success.

The De Beers' engagement ring campaign is both celebrated and vilified based on a cursory overview of the diamond engagement ring tradition and De Beers' perceived role. The company's success was never guaranteed. The campaign took multiple forms, such as advertisements targeting women and supplementary items to reinforce the campaign with jewellers. It is impossible to reduce the campaign's success to any single component, but neither can the constitutive role of these components be neglected. While we can now look back on De Beers' advertising as a whole, the company and N.W. Ayer could not have produced it as a whole. The research generated an aggregation of attitudes towards diamonds that then informed the construction of the campaign. While the campaign was a response to that aggregation, it had to be constructed piece-by-piece. I attempt to detail aspects of the campaign that panoramic political economy would typically neglect in its analytical preference for sweeping concepts such as 'ideology.' However, such details, I argue, are precisely what constitute the qualities of accumulation.

II. Differential Advertising

The basis for my analysis of De Beers is the CasP theory of value and its concept of differential accumulation. Although the framework does not explicitly articulate an approach to qualitative analysis of accumulation, differential comparison presents itself as a suitable method.

If a capitalist entity seeks to differentially accumulate, then differentiating itself qualitatively is a necessary — though not sufficient — step. With that supposition, I consider how De Beers' advertising differed from others struggling to attract the spending of buyers.

The differences with other corporations' advertising efforts were not the only differentials that emerged in my analysis. As noted repeatedly, De Beers wished to sell the entire range of diamond qualities at a range of stabilized prices. The differential qualities among the stones also inspired differential advertising content and the use of differential outlets. The differential content and outlets were intended to bring diamonds to the attention of differential segments among the masses. Although there is no means to directly reduce De Beers' quantitative accumulation to these differences, I nonetheless consider them differences that mattered. These differences, even though some were small details in De Beers' advertising, affected the knowledge of, and desire for, diamonds, which has accumulatory consequences.

Differential qualities among corporations could be incredibly subtle. That was not the case with De Beers advertisements. De Beers early advertisements are strikingly different from those that surround them. The first eye-catching aspect was the amount of empty space on the page. The advertisements also used text very differently, both in appearance and content. The most obvious typographical difference is in the size of the brand name. In fact, the De Beers advertisements largely lack a brand name, with the company's name given more as an informational signifier than as a brand signifier.

Differences in the content of De Beers' advertisements turned on the emotional appeal made in the diamond advertisements compared to the techno-gadgetry celebrated in those that surround them. The content within the diamond advertisements was also different based on the outlet for the advertisement. Advertisements intended for 'mass' publications were different

from those for 'class' publications. The language used, and the appeals made, also changed if the advertisement was destined for women's publications. As well, the content often invoked important differences between diamonds and other commodities. In doing so, the other commodities were never denigrated. Rather, diamonds were cited as incorporating all the emotional feelings that a couple may feel for another object while having the durability to be sustained throughout their relationship. This imperishability, the readers are told, is why diamonds are the traditional symbol for a couple's commitment.



*"For him the diamond dawns are set
In rings of beauty . . ."* —TROWBRIDGE

A YOUNG MAN just engaged is apt to share subconsciously the poet's state of mind. He perceives a world of unsuspected beauties—a future in which the Golden Age is reborn in one predestined couple. Unfortunately for lovers, such a mood, while excellent for the discovery of diamonds in the sky, does not always lead to comparable success on earth. There are many things a man must consider when undertaking one of his lifetime's most important purchases—his diamond engagement ring. . . . That with this symbol, he institutes a new dynasty which will bear his name beyond his generation. Once bestowed, it is imperishable. The woman he makes his wife will never relinquish it to meet more affluent circumstances. . . . Each man owes it to his future to give the most beautiful diamond he can buy. There are but a few simple rules for its selection. Go to a reliable jeweler. . . . Diamond prices vary with weight, color, quality, and cutting. This table will guard you from dubious "bargains." Many jewelers will be glad to assist you in the purchase of a handsome stone by extending payment over a period of months.

DE BEERS CONSOLIDATED MINES, LTD., AND ASSOCIATED COMPANIES

CURRENT PRICES OF QUALITY DIAMONDS
(Exact weights shown are infrequent. Fractional weights at relative prices.)

One-half carat, \$100 to \$200		One carat, \$325 to \$600	
Two carats  (Square-cut)		(Brilliant)	\$900 to \$1750
Three carats (Marquise) 	(Brilliant) 		from \$1500

Size alone does not determine diamond value. Purity, color and perfection of cutting affect the prices of diamonds, regardless of weight. These prices do not include mounting.

Image 1: Differential Appearance, De Beers Advertisement, *Life*



ANNOUNCING
REAL SILK'S

Only in Realsilk
You can get some features in other hosiery but *only in Realsilk* can you get all these features every time.

- 1. No garter bugaboo**—No-Hole Hem prevents fastening garter in thin part of fabric.
- 2. Hem Guard**—strengthens stockings at weakest point—where seam meets hem.
- 3. Less Snags and Runs**—because Realsilk is knitted from pure silk thread of most snag resistant twist (Grenine). No fuzzy fibres to catch or snag.
- 4. Shades stay true** because Realsilk dyes are finest obtainable. Stand up after repeated washings.
- 5. Toe and Heel Insurance**—Special reinforcements.

**THIS IS THE MONTH TO FIND OUT WHY
IT WILL PAY YOU TO WEAR REALSILK HOSIERY**

- The Realsilk Representative who calls on you this month can prove this statement



No shopping hurry—no parking worry the Realsilk Shop-at-Home way. We call on you. You don't even have to leave home to shop.



Realsilk's First Advertisement (*left*)—This double page appeared in a leading national magazine August 5, 1922, during Realsilk's third year of business. It inaugurated a new economical system of selling hosiery—direct from the mills to you.

It introduced the now-familiar Realsilk Button of Recognition to the homes and offices of America—also the higher quality of hosiery it stood for.

Today that same button is proudly worn by over 10,000 men and women—Realsilk Representatives—and the product it stands for is worn by more people than any other single brand of hosiery.

FROM MILL TO MILLIONS

Copyright 1929, Real Silk Hosiery Mills, Inc.

Image 2: Different From, Real Silk Advertisement, *Life*

RCA VICTOR offers you the BEST BUYS in its history!

Hear! See! These new instruments. You will agree that all previous standards of value are surpassed by the new RCA Victor Radios and RCA Victrolas

A FEW YEARS AGO such a set as RCA Victor Model K-30, at the price asked, could well have been dismissed as impossible. But the men in RCA Laboratories have forced too many secrets from the mysterious science of electronics to be halted by the word "impossible." From the beginning these men have made discoveries that have raised the performance of radio instruments to ever higher standards, while constantly lowering the cost to you.

Because the Radio Corporation of America is the only organization engaged in every phase of radio transmission and reception, RCA Victor can draw upon unmatched experience in creating refinements and plus values for you. The superlative tone of RCA Victor instruments, for example, reflects the engineering experience gained in creating higher standards of broadcasting for NBC and in perfecting the recording and reproduction of Victor and Bluebird Records. Visit your RCA Victor dealer and learn how this experience and research combine to produce the best buys for you.

You can buy RCA Victor Radios on C.E.T. easy payment plan. For finer radio performance—RCA Victor Tubes.

- NOT 6— NOT 7—BUT **8 TUBES** INCLUDING FAMOUS RCA VICTOR MAGIC EYE
- NOT 6— NOT 7—BUT **8 PUSH BUTTONS** FOR EASY TUNING
- NOT 8"— NOT 10"—BUT **12" DYNAMIC SPEAKER**
- NOT 1— NOT 2—BUT **3 BANDS** FOR DOMESTIC AND FOREIGN RECEPTION, POLICE, AVIATION, AND AMATEUR CALLS



Designed for Use with TELEVISION ATTACHMENT

Model K-30—BIG, beautiful cabinet, costly push-pull audio-amplifier gives finer tone and volume to spare. Clear Vision Illuminated Dial for easier visual tuning. Plug-in connections for Television Attachment and Record Player. Many other features fresh from RCA Laboratories.

HAS BUILT-IN ANTENNA— NO OUTSIDE AERIAL NEEDED

Other Spectacular RCA Victor Values!



RCA Victor Table Model T-62 harmonizes with modern home furnishings. Improved Automatic Tuning for 6 stations, American and Foreign reception. Plug-in for television attachment or record player.



Modern streamlined table radio with emphasis on American and short wave reception. Model 5Q55 is designed for use with television attachment or record player. An unusual value at a low price.



Enjoy both radio and records with this RCA Victrola. New Mercury fully automatic on-off switch . . . viscaloid damped pick-up . . . Electric Tuning for 6 stations . . . foreign and domestic reception.

Trademarks "RCA Victor," "Victor," "Magic Eye" Reg. U.S. Pat. Off. by RCA Mfg. Co., Inc.



RCA Victor
A SERVICE OF THE RADIO CORPORATION OF AMERICA

Image 3: Different From, RCA Victor Advertisement, *Life*

i. Differential Appearance

Compare Image 1, a September 1939 advertisement from De Beers, with the advertisements for Real Silks stockings and RCA radios in Image 2 and 3, both examples of those that surrounded the diamond advertisement.¹ When faced with page after page dense with text and image, both for the editorial and advertising content, the relatively large amount of unadorned space is a stark contrast. Although the white space could be considered wasted space, the first goal of an advertisement is to attract attention. The pitch being made is just noise if no one is actually engaging with the advertisement. White space has been called the “ultimate luxury” of design (Heller & Vienne 2012). The advertiser is paying for the advertising space and then leaving it empty.² In addition to making the advertisement stand out, design experts Steven Heller and Veronique Vienne claim the white space “frames images with an aura of inaccessibility” (p. 150). However, the De Beers’ text, which will be discussed more fully below, is intended to bridge the gulf of inaccessibility. The entire purpose of the advertisement campaign was to convince the U.S. masses that there was a diamond for them; just for them. Regardless of who you are, you can be a part of this luxury not just touted in the advertisement copy, but flaunted by its very use of space.

The differential use of space is also evident in the way the text is structured. The De Beers text is in a block with only two different font sizes in one typeface. The text is fully separated from the small image. The advertisements in Image 2 and 3 both have multiple typefaces in at least four font sizes. The text is spread across several blocks, some of which

¹ These advertisements all appeared in *Life* magazine.

² The most famous example of this use of luxurious white space to attract attention are the Volkswagen advertisements of the 1960s that are icons of advertising history. Unlike those advertisements, the advertisements by De Beers do not call attention to the fact of the unused space. De Beers was advertising before the advertising industry responded to the audience’s self-awareness of being sold to.

overlap the images. Both of the other advertisements have prominent brand names in their own large font typeface. For both Real Silks and RCA, the brand name is at the very top of the page and would be among the first thing your average reader would see. Even if the text were not read, it would hard to miss the brand name. This was typical of most advertisements of the era.

In 1939, when De Beers' campaign began, branding as a practice was relatively young (da Silva Lopes & Duguid 2009; N. Klein 2000). Less than 60 years old, it was even younger as an explicit marketing tactic (Gardner & Levy 1955; Schwarzkopf 2009; Stern 2006; Bastos & Levy 2012). However, in those 60 years it had become widespread to the point of ubiquity. Branding became necessary in the age of industrialized production. The spread of standardized machines and manufacturing processes meant products were less differentiated. In order to distinguish themselves from their competitors, companies had to emphasize their trademarked name, associating it with particular claimed qualities for their product. Differential branding became a substitute for differential quality.

De Beers was not advertising such a product. Diamonds were a primary commodity that were cut to a more-or-less universalized standard. The cartel controlled the vast majority of the world's diamonds and had no serious competitors. While the jewellers faced competition, and some would brand their jewellery designs, it was unimportant to De Beers which among them was successful, as long as they did not undermine the diamond tradition itself. The advertising for diamonds, although targeted at consumers, was not for De Beers' diamonds, but just *diamonds*. As such, the company did not need to emphasize itself and it kept its name — De Beers Consolidated Mines, Ltd., and associated companies — in a font no larger than the rest of the text. While the association of brand names and images of the other products would create a differentiating message even for those who skipped the text – not just hosiery, but Real Silk

hosiery – the De Beers ads did not differentiate among diamonds, with the images of cut diamonds as the only identifying object if one did not read the text.

The only real typographic distinction within the text is between the main body, where the company is trying to transform the meaning of diamonds, and the secondary educational section. The secondary section, where average prices for various sizes are listed, because of its educational aspect, could be considered more important than the main body of text where the emotional appeal is made. However, it is rendered in a smaller font to keep the emphasis away from such quotidian – though pragmatic – concerns. If diamonds are to be an object for all members of the masses, both wealthy and aspirational poor alike, then price information must be shared as a practical matter. But, it cannot encroach on the central theme: diamonds as a universal symbol of romance and marital intent.

The romance of diamonds is reinforced by the simple, relatively small, image used in the advertisement. This is one feature of the advertisements that will change quite quickly during the campaign. Larger images will be introduced, although even when they start using full page images, with text overlaid, the pages will still be remarkably empty compared to the surrounding advertisements.

ii. Differential Content

The content of the advertisement copy is also markedly different between De Beers and the other advertisements. First, although by today's standards the De Beers advertisement is quite text heavy, it has far less text than those exemplified. Secondly, that text, in solidifying the connection between diamonds and romance, while appending it to American aspirations, attempted to be poetic and made a decidedly emotional appeal. The other advertisements largely

touted technological marvels with no attempt to incite the reader's emotion. In fact, while the diamond advertisement copy explicitly declares a relationship between the diamond and the man buying-slash-giving it — “symbol [of] a new generation that will bear his name” — the Real Silk advertisement only invoked the buyer in the context of how easy their stockings are to buy and made no reference to actually wearing them. The RCA Victor advertisement extolled the value of such a finely engineered product, but never described a listening relationship. The use of the latter two products is taken for granted while the diamond text gives a sentimental purpose to an otherwise useless object.

The materiality of the non-diamond products is front-and-centre in the advertisements. It takes the form of descriptions of their cutting edge technological features. Real Silk informed readers of its “snag resistant twist” and RCA told the reader that the Victor has “not 6, not 7 — but 8 tubes.” For diamonds, however, there is a poetic invocation of its materiality with the declaration that once a man bestows the ring upon his betrothed, “it is imperishable.”¹ Materiality is also introduced as part of the transitional educational element that invokes the 4Cs before they were labelled as such: weight, color, quality and cutting.² Technology is never discussed, even though new methods of cutting diamonds were making the process more precise and, thereby, the diamonds more lustrous. Yet, in contrast to the rhetorical tide of technological rhapsodizing contained in other advertisements, many of the diamond advertisements invoked a fictional timelessness.

Beyond my claim that these details matter for the differential accumulation of De Beers is a broader argument that such details matter for capitalists in general. This contrasts with the

¹ Although the famous and succinct “A diamond is forever” would not emerge for almost a decade, aspects of that idea are found even in the first advertising copy.

² Weight would become carat and quality would become clarity to join color and cut as the 4Cs.

abstractions of both critical and mainstream advertising theory. While my analysis is not of Real Silk or RCA, the details within their advertisements can help to make this point. The particular details disappear in the critical treatment of advertising-in-general as a mechanism of capitalist ideology. For mainstream theory, the content is merely informational.

The advertisements for hosiery and radios are not pure conduits of either ideology or information. Rather, they are mediators meticulously constructed as a confluence of the accumulation seeking company, the product to be sold, the intend buyer imagined or constructed by research and the advertising agency. The phrases used, either ‘snag resistant twist’ or ‘not 6, not 7 — but 8 tubes,’ likely emerged after considerable copywriting effort. Both phrases conveyed and reproduced the era’s technotopian capitalist realism, but they were also important in their particularity as both companies sought not accumulation-in-general but differential accumulation. As such, they needed to differentiate themselves from those who struggled for the same spending by the masses. These details were intended to be differences that made an accumulatory difference. This relationship between these qualitative details and differential accumulation existed regardless of their success in actualizing differential gain.

Although the emotional appeal of a diamond advertisement may seem obvious, such an assessment is an inappropriate retrojection. Casting into the past as given what is now taken for granted is only analytically tenable if we treat the particularities of capitalist undertakings as transcended by the structural forces of capitalism as a whole. In place of such panoramic readings, I am analyzing these undertakings as contingent creations that could always have been otherwise. It is not difficult to imagine the N.W. Ayer creative team responsible for the advertisements adopting the technophilic approach seen in the Real Silk and RCA advertisements. They could have connected the gem stones to the new industrial technologies

making use of diamonds. Instead of invoking the dreams of farsighted lovers, American romance could have been connected to the technological marvels of the nation's resurgent industry. They could have noted that the brilliant cut diamond we now take for granted as *the shape* of a diamond was itself the product of the same sort of industrial genius. This cutting edge design, the advertisements might tell us, together with new cutting processes were ensuring diamonds sparkled like never before. We can never know for certain, but, as will be clarified below, had such a course been chosen, it is likely the campaign would have failed.

iii. Differential Outlets

The connection between diamonds and engagement was the primary message of the diamond advertisements aimed at the middle and lower classes by way of 'mass' publications.¹ These advertisements addressed themselves to men. However, Ayer also targeted women with advertisements placed in 'women' publications. These advertisements invoked other giving occasions and other forms of diamond jewellery. They had continuity with those that ran in the 'mass' outlets, beginning with references to engagement rings. The advertisements then suggested "more lavish diamond tokens of his homing love." Within this narrative, the engagement ring, bearing the steadfast diamond, is just the first durable expression of the couple's own steadfast love. The narrative moved on to suggest there is a standard selection of diamond jewellery among women and that a good husband will give these other pieces to a deserving wife. An April 1942 advertisement asserted that a larger solitaire and a bracelet with a single band of diamonds are "every woman's basic jewels" and "her rewards of happy wifehood."

¹ Examples of 'mass' outlets, also called 'general' outlets by Ayer, were *Time*, *Life*, *The Saturday Evening Post* and *Collier's*. 'Class' outlets included the *New Yorker*, *Fortune* and *Town & Country*.

C. D.
Record Book
Date 10/16/41




On a husband's chifferier

It is thus he always sees her, fair and untouched by life as the day he brought her his young man's love and the first of her lovely diamonds.

The second, a glorious solitaire, marked the establishment of a deeper bond between them . . . the lifelong assurance that illness, change or grief could not alter her bright image in his heart. She had found her first gray hair before his third sparkling diamond gift arrived — yet her laugh rang so sweet and young he could scarcely credit the number of that Christmas anniversary. Of all the jewels her case now holds, she prizes and wears most constantly these three: her engagement diamond; a second, more impressive single stone, the gift of married love; and her first, most precious diamond bracelet. For years they have been the basic jewels of gentlewomen everywhere. An especially fine selection awaits the purchaser in today's market. Perhaps it will be your good fortune to receive such a gift this Christmas. Merely remember that color, cutting and absence of imperfections influence diamond values permanently. And a reliable jeweler should be consulted in the choice.

De Beers Consolidated Mines, Limited, and Associated Companies.

Current Prices of Unmounted Quality Diamonds. (Federal tax included.) Weights shown are infrequent. Size alone does not determine value. Many jewelers will extend payments.



Two carats, priced from \$100 to \$1200
 One-half carat, priced from \$100 to \$200
 One carat, priced between \$100 and \$700
 Three carats from \$1500

17—1941—42—8 3-10 x 11 1-4—Harper's Bazar, Dec.; Vogue, Dec.; Ladies' Home Journal, Mar.—
N. W. Ayer & Son, Inc. 13380

Image 4: Targeting the Elites, Class Outlet Advertisement, multiple outlets



C. D.
 Record Book
 R. S. S. S.
 8/20/29

*"Bright as young diamonds
 In their infant dew . . ."* — DRYDEN

THE YOUNG PEOPLE just engaged and planning their future home are in the happy state which discerns ultimate significance in the most prosaic object. . . . In the meshes of a mixing machine, they find deathless romance. . . . The pattern on their china assumes the importance of Han dynasty painting. Nor may one cry a lacking sense of value in those to whom all values take on sublime importance. . . . Let them but remember this: of all their early purchases, one alone is most likely to survive their lifetime. . . . The choice of the diamond that marks their engagement calls for calmest forethought. At the outset, they should seek the advice of a reliable merchant. (Many will be glad to assist you in the purchase of a handsome stone by extending the payments over a period of months.) They should acquire a stone whose flame, purity and deep brilliant cutting will be lastingly precious. This is as important as purchasing a diamond whose size will honor their future destiny. With their diamond, they obtain one of the few imperishable mundane objects. That is why it traditionally symbolizes the immortal passion.

DE BEERS CONSOLIDATED MINES, LTD., AND ASSOCIATED COMPANIES

CURRENT PRICES OF QUALITY DIAMONDS
 (Exact weights shown are infrequent. Fractional weights at relative prices.)

One-half carat, \$100 to \$200		One carat, \$325 to \$600	
Two carats (Square-cut)		(Brilliant)	\$900 to \$1750
Three carats (Marquise)		(Brilliant)	from \$1500

Size alone does not determine diamond value. Purity, color and excellence of cutting affect the prices of diamonds, regardless of weight. These prices do not include mounting.

Image 5: Differentiating Diamonds and Other Commodities, multiple outlets

The categories of ‘man’ and ‘woman’ also informed the differentiation of De Beers’ advertisements. The advertisements in the mass outlets appealed to men’s aspirations and men’s memories. Although the advertisements in the women’s outlets had similar content, they were scripted differently. The woman’s relationship to the diamond was mediated by the man’s gaze. An advertisement that ran in late 1941, early 1942 (Image 4) stated: “It is thus he always sees her, fair and untouched by life as the day he brought her his young man’s love and the first of her lovely diamonds.” The diamonds, durable and unchanging, are symbols of youth and a reassurance that the years “could not alter her bright image in his heart.” The advertisements contained the same price information and suggestion that a reliable jeweller be consulted.

These advertisements aimed at female readers ran in *Ladies’ Home Journal*, which was classified as a ‘mass’ outlet, as well as *Vogue* and *Harper’s Bazaar*, two ‘class’ outlets. They stopped running in the later war years. In the post-war years non-engagement diamond jewellery was given great emphasis with these advertisements in only the latter two class women’s outlets.

The advertisements had images of cut diamonds and many of them conspicuously excluded the brilliant, the most common cut for engagement rings. The advertisements maintained the emphasis on the diamond’s constancy. For example, an advertisement from May-June 1946 cited the diamond as a “never changing fashion” that is “ever new.” However, the message changed subtly by the next year. A January-February 1947 advertisement noted that one’s diamonds “may change their settings through the years.” Although the advertisement copy goes on to make the familiar claim of the diamond’s constancy, the notion of change is decidedly different from the messages of the diamond engagement ring advertisements. There, the diamond is the central image, and the primary symbol, of the engagement ring. For the engagement advertisements, Ayer and De Beers did not try and divorce the diamond’s role from its setting in

a ring, which is an indispensable component of the tradition. With the other diamond jewellery, while they reinforce the diamond's eternal qualities, they also acquiesce to changing fashions and indicate that diamonds are suitable for such changes.

The class magazines were also the outlets for the advertisements touting brown diamonds for men. This effort will be described more fully below. For now, it suffices to indicate that although the research found men of all income levels had some desire to wear diamonds, the advertisement campaign chose to target the men of means that read the class magazines. Although doing so was informed by these men's greater ability to purchase diamonds for themselves, it was also part of the symbolism Ayer and De Beers were associating with these manly stones. Part of the expression of the diamond engagement campaign was there is a diamond for everyone. This was not part of the 'diamonds for men' message. If De Beers watered down the target audience, and tried to appeal to all men they risked alienating the wealthy men who could afford the largest, most profitable stones.

iv. Differential Objects

The content of the De Beers advertisements created an important differential between diamonds and other commodities. The Ayer research document found that the move against diamond engagement rings had practical considerations. The text of some of the advertisements offered a subtle rejoinder to such concerns. For example, a November 1939 advertisement (Image 5) described the types of commodities a newlywed couple might purchase — China, a mixing machine — and acknowledged how important they will be to the couple. However, it then goes on to assert that “of all their early purchases, one alone is most likely to survive their lifetime.” The advertisement copy does not specify the diamond as a luxury in this context, the advertisement's exorbitant use of white space notwithstanding. The china, the mixer and the

diamond engagement ring are all designated “mundane objects.” The meaning of diamonds, in their role as engagement symbol, is as a paradoxical luxurious necessity.

According to the advertisements, while all early purchases will be marked by the passion of young love, only the diamond is “imperishable” and therefore suitable to serve as the symbol of a couple’s “immortal passion.” In a September 1940, a beloved woman’s possessions are invoked as significant of a relationship’s early days: “Do you remember the crisp green primavera frock you wore?” Inevitably, the reader is reminded, such possession will perish, despite the precious memories associated with them. Through it all, the diamond will prevail “after these ephemeral things are gone.”

The Ayer research found that diamonds faced competition from other luxury items. Initially, as with the comparison to “mundane objects,” the advertisement copy did not differentiate between the diamond and other luxury items. In a December 1940 advertisement, the man’s vision of his future is described as containing “furs, and shining cars and jewels.” However, once again, the diamond is differentiated. While the furs and cars can be replaced as a man makes his fortunes, the diamond engagement ring, imbued with the singular romance of its giving, “can never be replaced.” In this instance, the imperishability of the diamond is both a blessing and a curse. The antidote to the curse of the diamond’s irreplaceability is for the man to “select this stone for his lifetime, to the measure of all the hopes he plans to realize.” This is subtle encouragement for men not to just buy the stone they can afford now, but the stone that accords with their aspirations. This topic will be dealt with more extensively below.

Finally, diamonds were brought into comparison with other gifts given as romantic gestures. A May 1941 advertisement describes flowers pressed in the pages of “old diaries” as fragile symbols of special memories. “But fortunately for men, and for the women who love

them, all symbols are not so fragile. ... In the deathless fires of his engagement diamond a man may set his truest, most ecstatic message to blaze in changeless glory.” While change is relentlessly turning over everything that surrounds a couple, the diamond expressed the couple’s own constancy. All that is solid melts into air ... except a diamond.

In all of these comparisons with other commodities the diamond is never elevated nor the other commodities denigrated. Instead, the diamond and all the other commodities are given a role in a couple’s life: the flowers a man gifts, the clothes she wears, a couple’s first purchases as newlyweds, and the luxuries he aspires to give her later in life. These day-to-day acts and things, while mundane, are romantic because they comprise the couple’s life. The diamond is singular among all these commodities as capable of enduring throughout their life. In fact, according to the advertisements’ copy, the diamond’s endurance will serve to preserve the memories of these other things, even when they are gone. It will retain the romance of all the other commodities as they founder and fall away. According to the advertising campaign, the diamond may be a luxury, but it is an eminently practical one, transcending the luxury category and thereby differentiated from every other commodity.

III. Advertising to Transform the Diamond Assemblage

The purpose of the diamond campaign was, obviously, diamond sales. Achieving those sales required enticing the masses to buy. This was far from a simple or given undertaking. The label of ‘the masses’ obfuscates the diversity among its members in their knowledge, ideals, desires and intentions. I have used the term ‘diamond assemblage’ to describe the agglomeration of diverse entities that affect the entire global flow of diamonds. The assemblage included the diamond knowledge, ideals, desires and intentions that members of the masses had, since they

played an indispensable role in the global mobilization of the stones. Mapping the intersections of the masses with the diamond assemblage was the purpose of the Ayer research described in the previous chapter. The advertisements then made use of that map to orient De Beers' efforts at transforming the masses into diamond-buyers.

The advertisements offer insight into the different relations that Ayer and De Beers were trying to manage as a means to generating diamond sales. Central to the effort was stabilizing the connections among diamonds, romance and engagement. This was not just a matter of provoking the one-time purchase. De Beers has an on-going interest in diamonds once they have been slipped onto the fingers of newly engaged women. Namely, they need to prevent recommodification and the emergence of a sizeable second-hand market. Such a market would pose a threat to the cartel's control of the global diamond supply.

As I have noted many times, De Beers desired a certain degree of diamond knowledge among the masses. For this reason, education figured prominently in the advertisements. They wanted the masses to know the range of prices they would encounter at most retail outlets. They also needed the masses to understand the qualities that influence prices beyond the size of the stone. Another important attribute of the 'knowledgeable buyer' that De Beers sought to construct was recognition of the jeweller as a source of expertise. The willing participation of jewellers in the diamond campaign was important for the cartel. The knowledge the advertisements purveyed was not static, but shifted as the social context changed, namely the entry of the U.S. into World War II. Informing the masses that gem diamonds helped to subsidize the extraction of industrial diamonds, a vital input to the allied war effort, was a means to invalidate concerns about buying a gemstone during wartime. The advertisements leveraged

the claimed subsidization to legitimize diamonds as a necessary symbol to close the distance between a newly engaged woman and the soldier taken far afield over the oceans.

The war had a dramatic effect on the content of the advertisements, although the basic building block of connecting diamonds with romance remained the same. The war also factored into the advertisements De Beers directed at merchants that were intended to include them in the advertising effort. However, as seen in the introduction, the war's most important effects came after the war when the return of soldiers sent the U.S. marriage rate to record highs.

In contrast to the successful entrenchment of the diamond engagement tradition, and the ideal of men buying the most expensive diamond they could afford, De Beers' efforts to market brown diamonds to men was a distinct failure. By the time the campaign began men had largely eschewed jewellery and despite indications from the research document that men were receptive to wearing diamonds, we have no current tradition among men of diamond wearing.

i. Relations with the Generations

The meaning De Beers gave – and continues to give – diamonds in its advertising is as an impervious symbol of both a couple's past and of their future. Like the couple's love, goes the narrative, the diamond is a constant. This construction relied on the materiality of the diamond as well as the pre-existing tradition of diamond engagement rings. De Beers and Ayer differentiated diamonds from other commodities, which are, according to the advertisements, much more ephemeral, and therefore temporary. While the first flowers a man gives a woman will eventually die, the memory of those early flower-giving days will persist with the diamond he gives her. Some of the early advertisements suggested that a couple's engagement ring was an heirloom in the making that will be passed down through the generations. The advertisements appealed to

men's dynastic aspirations. Men were told that the engagement ring will symbolize to future generations the origins of the family's lineage and will serve for them the same memory-preserving purpose it served for the couple.

This message, however, had a function beyond the immediate sale. It was intended to prevent the recommodification of the diamond. On a large enough scale, recommodification would put the masses into competition with De Beers, undermining the strategies of supply control. This sort of movement of a thing out of and back into the state of being a commodity is irrelevant to capitalism seen from a purely Marxist perspective, where production is the defining process (Fine & Leopold 2002). Arjun Appadurai (1988), however, suggested that a thing exist in a "commodity situation," when "its exchangeability ... is its socially relevant feature" (p. 13). Serving as a store of wealth has been an important part of diamonds' social history, and continues to be a feature of their on-going role in society. This means they always exist in a 'commodity situation,' at least from the perspective of the masses.

flowering of tradition

In the women who bear his name, the man of importance sees the flowering of his tradition. Jewels that have shone upon his fairest ancestors are lit with fairer radiance in their gentle keeping. And to them he adds the gifts of his own pride and gratitude.

Diamonds are traditionally the bearers of noble family sentiments. No light of love so pure—no brilliance so endless as that lit in their sleepless fires.

In his selection of his gifts of diamonds the informed layman, like the connoisseur, seeks for fine color, exquisite cutting and absence of imperfection rather than for mere size alone. A trusted jeweler is his consultant, naturally. Diamond values are permanent. From the many fine stones now available, a man may build with confidence a collection of diamonds to adorn the beautiful women of his family now—and for generations yet to be.



PAINTING BY MARIE LAURENCIN, FROM THE DE BEERS COLLECTION

Current Prices of Unmounted Quality Diamonds. (Exact weights shown are infrequent.) Size alone does not determine values. Purity, color and excellence of cutting affect the price. Many reliable jewelers will arrange payments for fine stones over an extended period.

- ONE-HALF CARAT, PRICED  BETWEEN \$100 AND \$200
- ONE CARAT, PRICED BETWEEN  \$325 AND \$600
- TWO-CARAT STONES, GENERALLY PRICED  FROM \$600 TO \$1750
- THREE-CARAT STONES  ARE OBTAINABLE FROM \$1025

DE BEERS CONSOLIDATED MINES, LTD., AND ASSOCIATED COMPANIES

Image 6: Permanent Value and Dynastic Aspirations, multiple outlets

In 'Have You Ever Tried to Sell a Diamond,' Edward Jay Epstein (1982a) detailed the reselling of diamonds. He found that most sell for a fraction of their retail price. This is why the jewellers expressed to the Ayer researchers a reluctance to tout investment as a selling feature. It was also part of the reason De Beers had to prevent the resale of the stones. When the illusion of the 'commodity situation' met the reality of recommodification, it could undermine the perception of the stones as inherently valuable. Yet, in the advertisements, De Beers still toyed with the notion of a diamond as an investment item. An advertisement from June 1941 (Image 6) stated, "Diamond values are permanent." This assertion is made despite the research document noting that a portion of people's apprehension toward diamonds was the experience of the Great Depression when crisis selling had taught them that diamonds do not hold their value. De Beers was playing with the double meaning of 'value' as both financial quantity and importance or merit. The advertisement continued that the diamonds a man buys can "adorn the beautiful women of his family now — and for generations to come." Yet, the commonplace financial meaning was definitely implied in the clear assertion that diamonds hold their value.

The advertisements constructed the idea that the value of the diamond well exceeded whatever monetary value it might have. If the couple, or their descendants, were to sell the diamond they would be losing the memories and the heritage that made the diamond special to the family. In theory, every diamond ever mined and turned into a gem still existed. In this way, the durability of diamonds, which was a key component of the meaning-making, had become a liability. The large increase in diamond extraction and sale that had come with the discovery of the Southern African sources meant the quantity of diamonds owned by the masses well exceeded that mined each year by De Beers and the other cartel members. If the advertising campaign was successful, then the threat would only worsen.

De Beers' concern with a potential second-hand diamond market and their response to that evidences how the very small becomes relevant to accumulation. Of course, any single diamond sold second-hand poses no threat to De Beers' profits. The threat emerges when that market begins to scale up. However, in order to diminish the threat of widespread recommodification De Beers had to entice each diamond owner to keep hold onto their diamonds and keep them in the family. Hence, the text of De Beers' advertisements extolled the diamond as an heirloom in the making. The specific words and phrases chosen to convey this sentiment would have been agonized over and continually tinkered with. A particular word can become a matter of concern.

Once the advertisement's design was settled, it had to be distributed in print publications for the masses to engage with. Diamond owners, despite posing a threat as a collective, must be reached as individual readers. This conundrum, of the relationship between the collective and the individual, is as vexing for the capitalists as it is for the social scientists, who are unsure how to escape the structure-agency oscillation. The need to engage at the level of individual buyers is one of the reasons for the increasingly complex and sophisticated market research industry.

As much as the U.S. is considered a forward-looking nation, a land of entrepreneurs and innovation, it is also a nostalgic nation. Nostalgia is not the same as history (Dudden 1961; Wilson 2005; Coontz 1992; DaSilva & Faught 1982). The latter is messy and complicated. It can cast doubt on the perceptions we hold of ourselves and our societies. In contrast, nostalgia is history distilled of its messiness; something we can look back on fondly; something that reinforces our self-perception. It has been said that "nostalgia is memory with the pain removed" (Lowenthal 1985, p.8). The U.S. glorification of its own past is a decidedly ahistorical nostalgia. As with much of U.S. culture, nostalgia is commodified and capitalized, exemplified in the

popularity of shows like *American Pickers*, *American Restoration*, *Antiques Roadshow* and *Pawn Stars*. The entertainment value is learning the suggested value of objects from the past.

A significant second hand market in diamonds has not yet emerged, for, I believe, two reasons. The first is the success of De Beers' efforts to make diamonds an object of nostalgia that transcends monetary value. The second is the relatively brief history of the contemporary diamond engagement ring tradition. In the introduction I suggested that the diamond engagement ring tradition was catalyzed by the return of soldiers from WWII and the dramatic spike of the U.S. marriage rate in 1946 and 1947. The six plus decades means that the generations currently inheriting the first generation's engagement rings generally had a personal connection with the wearer and the giver as either their parents or grandparents. This makes the rings much more meaningful and less likely to be sold. Once these original couples move further into the past, the appeal of perceived monetary returns may exceed the actual memories that make the rings and their diamonds a meaningful object of nostalgia.

While the topic of nostalgia and consumer behaviour has been explored (Havlena & Holak 1991; Holak & Havlena 2002), nostalgia's intergenerational operation — with its effects actualized decades later — has not. Nostalgia as considered in the marketing research has a certain false quality. It is a lament for a bygone time that did not exist, connected to contemporary objects. In the case of diamonds, however, nostalgia was not intended to provoke sales. Rather, a future nostalgia was intended to be focused on the diamond in order to prevent its resale. This suggests that the use of nostalgia as rendered in the early De Beers' advertisements to address the company's intergenerational concerns were unique. This uniqueness owes something to the material uniqueness of diamond, namely its durability.

ii. The Diamond Knowledge of the Masses

One of the attributes of De Beers' supply control strategy was stable prices for rough stones. While De Beers sought the highest possible price for their stones, they did not seek to push prices higher in response to growing increased sales. Instead, they maintained an orderly price increase, stockpiling stones when sales were low and then using that stockpile to satisfy sales when they were high. This practice of price stabilization fits the practice of "administered prices" that Gardner Means (1935) identified in the 1930s, in contrast with the mainstream economic theory of monopoly pricing. According to mainstream theory, even monopoly prices are set by supply and demand and changes in demand would cause would bring movement in both price and quantity.

Despite De Beers' control over the price of rough diamonds, which would have a large effect on the retail prices of cut diamonds, the cartel had no assurance that retail prices would follow the same trajectory. De Beers feared a sudden spike or precipitous drop in diamond prices could catalyze a surge in selling by the masses. The sudden influx of stones into the market would crater the price. However, beyond the immediate fear of a drastic price decline, which all capitalists fear, De Beers feared the qualitative effects of such a decline. The price history of diamonds is part of their image and allure. The endurance of the high price of diamonds is a remnant of their one-time extreme rarity, which made them exclusive playthings of the very wealthy and powerful. Demand presumably well exceeded the paltry global supply.

When the discovery of the Southern African mines substantially increased the supply of diamonds, the stones became available to many more people and prices began to fluctuate like other commodities. De Beers was established as the result of an agreement among the mine companies, London jewellers and British bankers about the need for supply control. The

company drastically reduced production and carefully managed the trade in order to stabilize prices at a high level. This policy helped to lock in the perception of diamond's inherent high value. If diamonds should become available at a fraction of the prices maintained by De Beers, it could shatter the illusion of inherent value. De Beers' greatest fear – from Rhodes, through the Oppenheimers – was that if the price of diamonds plummeted, it might never recover (Epstein 1982b; Gregory 1977; Hocking 1973).

De Beers' need to exercise greater control over retail prices aligned with the company's need for the masses to have greater knowledge of diamond prices. The Ayer researchers had found that those surveyed dramatically under-estimated the cost of stones. This worked against the retail jewellers who were perceived as over-charging. By publicizing the prices of diamonds as found in most retail stores the advertisements worked to educate the masses. However, although this was generally in the interest of the jewellers, some complained that the advertising of prices was actually De Beers way to control retail prices. Jewellers who charged more than what was listed in the advertisement felt compelled to adjust their prices inline with those advertised. De Beers and Ayer responded that the prices listed were based on surveys of the jewellers themselves. However, it is unclear how those surveyed prices were translated into the price ranges listed, and that translation gave the company some control over how the prices were reported.

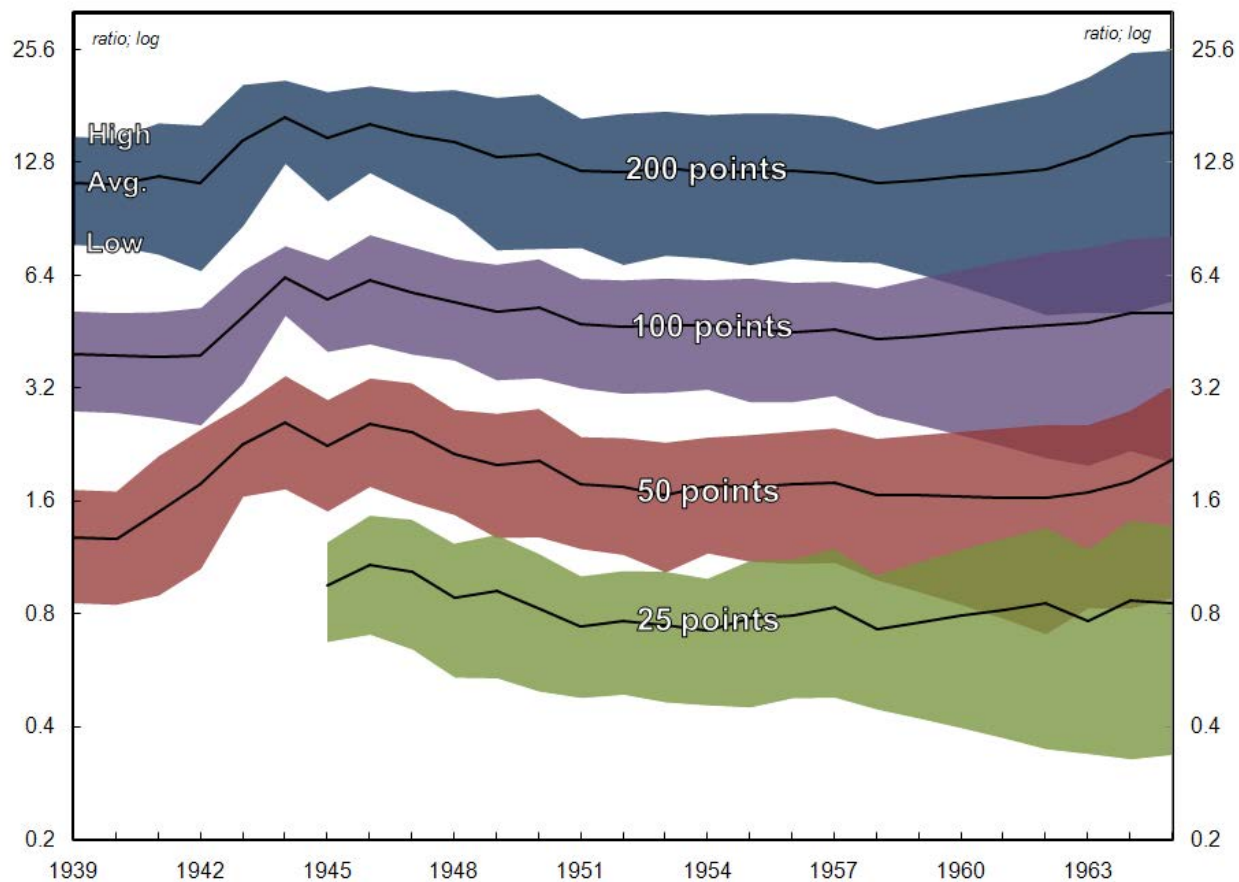


Figure 13: Covering the Market, Diamond Retail Prices, 1939-65

DATA: Life, various issues

NOTE: One carat is 100 points. Prices are relative to US CPI (1937-41=100). The bands express the range of values reported in De Beers advertisements for various diamond sizes. The average values are the mean of the upper and lower prices. Annual values calculated from all advertisements appearing that year. Values for 1944-65 have been adjusted to account for 20 percent annual tax that was included in listed prices for 1939-44. Data for 1959-61 was unavailable and has been imputed as a simple linear change from 1958-62. Values shown on a log scale.

Figure 13 shows the price ranges for 25, 50, 100 and 200 point stones¹ listed in De Beers advertisements from 1939 to 1965, relative to the consumer price index (CPI). The series are displayed on a logarithmic scale. The 25 point prices were not reported until 1945. Table 2 contains the growth of the upper and lower bounds for two general periods: the war years (1939-46) and post-war years (1945-65).

¹ One carat is equal to 100 points.

BOUND	High				Low			
	25	50	100	200	25	50	100	200
1939-46	-	179%	125%	92%	-	188%	113%	119%
1946-65	52%	55%	60%	101%	-23%	-18%	-22%	-27%

Table 2: Closing the Gaps, changes in advertised diamond retail prices, 1939-65

What the graph and table shows is a strong increase in the relative price of diamonds for all sizes, at both the top and bottom of the range, during the war years. In the post-war years the upper prices for all sizes was relatively unchanged until the late-1950s, when they began to increase. The lower end stones, on the other hand, fell in price relative to the CPI for most of the post-war era. This pattern demonstrates the actualization of De Beers' policy of price stabilization. However, it is unclear whether the policy's intended effect was achieved because the prices reported in the advertisements imposed pricing discipline on the jewellers or the jewellers accepted the logic of De Beers' pricing policy and followed suit.

During the early war years, the volume and value of diamonds imported into the U.S. fell from their pre-war levels. At the same time, the value of jewellery sales, of which diamonds made up a significant proportion, rose. This may evidence an increase in margins by jewellers in response to the effectiveness of the diamond campaign. Consideration of the per carat price of diamond imports for both rough and cut stones suggests that this may have been the case (Figure 14). From 1938 through the 1940s the import price of rough stones fell and then levelled off while the price of cut stones dramatically increased. In 1939, the per carat price of rough stones was 92 percent that of cut stones. By 1945, rough stones were only 28 percent the price of cut. If we interpret the per carat rough price as the value going to De Beers and the cut price to include the margins of the gem cutters and jewellers — in this case, non-American jewellers, then the price changes seemed to greatly favour the cutters and jewellers.

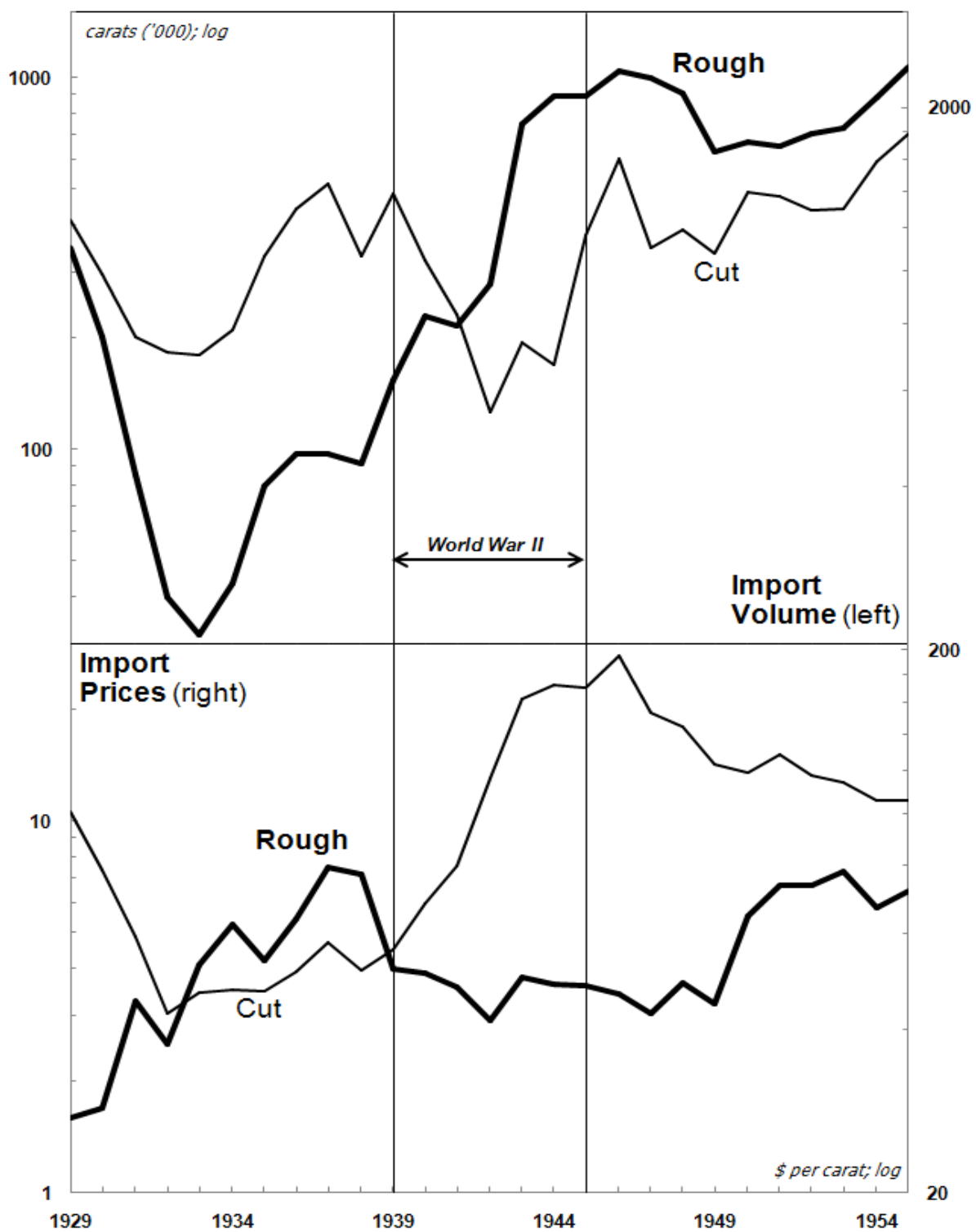


Figure 14: Import Volumes & Prices, Cut & Rough Diamonds, 1929-55

DATA: USGS Minerals Yearbook, multiple issues

NOTE: Prices are per carat calculations from import volume and value and shown on the right hand axis.

Import volumes are on the left hand axis. Both axes are expressed in logarithmic scale.

However, this data needs to be interpreted with some caution. The per carat prices are only truly comparable if the quality mix remained relatively unchanged. There are significant reasons to believe this is not the case. Over the course of the Great Depression, the price of rough imports rose and from the mid-to-late 1930s, their price was greater than those of cut stones. What this indicates is that the dramatic drop in the volume of rough stones imported were largely composed of the smaller and lower quality stones, which were intended to satisfy the middle and lower class demand, and carried a lower per carat price. More of the qualitative mix was composed of high quality stones, which are more costly per carat.

The increase in the price of rough imports was not only a matter of satisfying the greater demand by the wealthy who managed to sustain their wealth during the depression. It also likely expressed De Beers policy of favouring Belgian cutters. When diamond demand was high, more cutting work would have been available to U.S. cutters. The most desirable work was cutting the high volume, mid-priced, mid-quality stones. However, as demand declined, mid-quality stones that would have previously been cut in the U.S. were instead used to prop up the Belgian cutters. This support of Belgian industry was a condition of the continued participation in the cartel by the Belgian mining companies that controlled the stones coming out of the Belgian Congo. This, I suggest, is why the rough stones showed a much greater decline in volume relative to the cut stones.

This interpretation is supported by the subsequent course of the prices of rough and cut diamonds. From 1938 to 1939, the price of rough stones dropped sharply. It is possible that more rough stones were sent to the U.S. cutters in anticipation of the disruption of the Continental cutting industry. This supposition is bolstered by the dramatic increase in import volume. At the same time, the price of cut stones increased sharply, and the volume greatly declined. This may

be interpreted as above to evidence a much greater margin for jewellers and cutters. However, again, it likely expresses is a dramatic shift in quality, with the cut stones now being of relatively higher quality, perhaps representing the transfer of investment grade stones by those seeking to flee the Nazi menace. The 1942 USGS Minerals Yearbook confirmed this qualitative interpretation: “The quality of cut imported was excellent; that of rough was mediocre” (p. 1515). Following the war, when the Belgian cutting industry was reestablished, the qualitative mix, and quantity, of imported rough stones shifted again. The qualitative underpinnings of the quantities and prices of diamonds well exceed the supposed strictures of the laws of supply and demand.

The prices reported in the advertisements can also be translated for their perceived expression of consumer desire for diamonds. The sharpest price increases reported in the advertisements were for the half carat stones, as well as the cheaper one and two carat stones. These stones had the greatest appeal and affordability to the U.S. middle class, especially the young men heading off to war. The sharper increases for the cheaper two carat stones may indicate partial effectiveness of De Beers’ efforts to transform the general bias against stones larger than one carat that Ayer researchers found.

As De Beers’ advertisements stressed, “Size alone does not determine diamond values.” They wanted readers to know that “purity, color and excellence of cutting” were also factors in the price.¹ However, if the cheaper stones, which are the lower quality stones, were increasing in price more than the higher quality stones, it could represent a preference for size. Diamond buyers demonstrated a desire to have the money spent translated into a larger, rather than a higher quality, stone. When the cheaper diamonds at each size subsequently fell in price, while

¹ Although the terms of the 4Cs — carat, cut, clarity and colour — were already used in the advertisements by the early 1940s, they were not consistently combined until the 1950s.

the higher quality stones increased, we may be seeing the eventual impact of De Beers' educational effort. Buyers were finally choosing stones based on their other qualities. As the larger stones had their higher end increase more than the smaller stones, it could express the wealthier buyers' greater knowledge.

The relative price drop of the lower quality stones could also express the movement of stones from industrial to gem classification in response to increased demand. Further, more of these stones may have been moving through the storefront jewellers rather than other channels such as the mail order jewellers described in the previous chapter. In general, the greater price spread, with more overlap between the lower end of larger stones, and the higher end of smaller stones, expresses the success of De Beers' efforts to 'price discriminate' and effectively sell its entire range of diamonds. That ability to sell stones across the range of qualities made the company's grading, as described in Chapter Four, even more important. Constructing a knowledgeable diamond buyer was an important component to achieving this sales success. It allowed for a finer gradient of retail prices that aligned with the gradient of rough stones.

Despite the importance I have placed on the role of price reporting, the inclusion of prices was not obvious. In fact, as documents from the Department of Justice antitrust file show, it was a matter of some controversy. Initially, the listed prices included the sales taxes. However, the value of the tax was removed after Ernest Oppenheimer found the prices to be listed too high. This consternation also precipitated the inclusion of the 25 point stone. The documents also reveal that although Ayer and De Beers were not simply imposing the list prices, they were also not following a constant methodology in calculating them. When the listed prices were to be changed, this was vetted by Ernest Oppenheimer.

The overtly educational component of the advertisements remained throughout the period of my analysis into the early 1960s. It was included in all advertisements, except those printed in women's class magazines. The non-size qualities of diamonds were most stressed in the men's class magazines. The language appealed to the presumed reader's intellect (Image 6): "the informed layman, like the connoisseur, seeks for fine color, exquisite cutting and absence of imperfection rather than for mere size alone." According to the advertisement, if a man is going to give a gift of diamonds, then he needs to appreciate more than just size. Of course, when size gets emphasized in the women's class magazines, with nothing less than three carats shown in the advertisements, presumably the intended outcome is the sale of large, high quality stones: the most expensive and most profitable. Wealthy men could not be allowed to substitute quality for size. They had to be combined if the marketing strategy of selling every quality of stone at the highest possible price was to be actualized.

iii. Relation between Meaning-making and Knowledge

Before moving on, it is worth noting that the emotional appeal should not be considered entirely distinct from the knowledge that De Beers was trying to proliferate. Even within the advertisement structure, the one flows into the other, and above I refer to a 'transitional educational element.' The layout of the advertisements generally had two components. The primary component made the emotional appeal, while the secondary component had some basic information about diamond prices, and the qualities that determine price. However, within the primary component, reference is made to the content of the second. The text linked the emotions invoked with knowledge being imparted. For example, in the advertisement in Image 5.5, the

text moves from reference to diamonds as “traditionally the bearers of noble family sentiments” into the importance of understanding the multiple qualities that determine diamond prices.

The meaning associated with diamonds can be considered part of the knowledge of diamonds. However, the effort at meaning-making is much less straightforward than the amplification of information. Meaning-making is therefore both easier and more difficult than the transmission of information. It was easier for De Beers because the company was not wholly inventing a new meaning for diamonds. Rather, they were building on existing meaning, which the Ayer research found to resonate among respondents. Diamonds were already associated with romance and marriage and the advertisements were reinforcing what the masses already knew. The company could then attempt to append to that existing meaning anything else they desired.

As noted in the previous chapter, at the time De Beers began their advertising campaign, diamonds were the most popular stone for engagement rings. However, the tradition was waning. Couples were choosing to incorporate the symbolism of diamonds into their marriages via the wedding bands, which was a tradition that threatened De Beers’ sales as the stones on the band were small, less profitable *melée*. So, the task that De Beers undertook was to leverage the association between diamonds and romance and connect it with the aspirations of The American Dream. It was not just about having diamonds as a symbol of romance, but having the diamond that appropriately symbolized the future the couple imagined for themselves. Or, given the time, the future the man envisioned for his family. The romantic elements in the advertisements were familiar and spoke to the already widespread meaning of diamonds. These were subtly modified to make the diamond’s meaning as one of familial aspiration.

At the same time, the meaning-making was harder because information is much more concrete, locatable and verifiable, with sources and evidence that are more easily identified and

corroborated than is the intended and ephemeral meaning. The price ranges quoted have more solidity and authority than lyrical declarations about the “ultimate significance in the most prosaic object” (Image 5). If in doubt about the diamond prices, any reader of De Beers’ advertisements could compare the quoted prices with those suggested by local jewellers. This is not to claim that De Beers was merely objectively relaying the facts about diamond prices. However, the possible sources of information are much more formal, limited and limiting than those for meaning-making.

Meaning is predominantly made through myriad informal circuits, a process that proves both fascinating and difficult for social scientists to either study or theorize (Mead 2009; Foucault 1970; Bourdieu 1991; Parsons et al. 1965; Luhmann 1995; Habermas 1984; Giddens 1984; Garfinkel 1986). While advertisements can attempt to participate in meaning-making, there is little guarantee of successfully transforming meaning in a way that generates sales and profit. In fact, the sheer proliferation of advertising mediums and content, as well as the frequency of advertising campaign turnover in the 20th century, could be a testimony to the general failure of most advertisements to construct or transform meanings as intended. The current diamond engagement tradition, the enduring fascination with diamonds and a widespread acceptance of their inherent value points to the success of De Beers’ efforts at meaning-making, which has proven a more durable component of diamond knowledge than the temporary facts about prevailing prices.

iv. Relations with the Jewellers

The jewellers who supplied diamonds across a range of qualities were an important node in the diamond assemblage for the actualization of De Beers’ selling strategy. The company

required their goodwill and compliance to the system. De Beers wanted to minimize some of the discounting practices that other retailers might use if they found a certain line of products was not selling. Regardless of whether it was high quality three carat stones or middling quality half carat stones, the company did not want discounting associated with diamonds in any way.

De Beers sold rough stones in what were called 'series.' The sight holders who bought from De Beers were given a range of qualities that represented the quality distribution the cartel had on hand. For these buyers, it was a take-it-or-leave-it proposition. They could not filter through the selection, picking and choosing which stones they wanted. That meant the buyers needed all of these stones to move through subsequent links in the chain, culminating in the retail jewellers. If certain qualities and sizes went unsold, then it was the jewellers who ended up sitting on the merchandise, growing tempted to hold a 'diamond blowout sale' in order to liquidate merchandise. One way for De Beers to limit this temptation this was to get the jewellers fully invested in the meaning making, which precluded undermining the idea of diamonds' inherent value.

Part of ensuring the continued cooperation of the jewellers was paying homage to them in the advertisements. In addition to informing the masses the prevailing range of prices for various sizes, and explaining that the prices were determined by more than just size, the advertisements also recommended the buyer should seek a jeweller who was "reliable" or "trusted" or "experienced." As knowledgeable as the masses might become, they were encouraged to consult the far more knowledgeable jeweller, whose touted role was to help the buyer find the right diamond for them. Of course, that right diamond for the jeweller, and for De Beers, was the most expensive diamond the buyer could afford. Because De Beers did not sell cut stones, while the advertisements were for cut stones, the advertising campaign was, ostensibly, on behalf of the

jewellers, which explains the research finding that the jewellers surveyed overwhelmingly supported the idea of a campaign.

Given the important role of the retail jewellers, the advertising campaign was not just directed at the masses. De Beers also produced advertisements targeted at the merchants. These advertisements ran in industry journals such as *The Jewelers'-Circular Keystone (JCK)* and *National Jeweler*. With these advertisements, De Beers declared to the jewellers that the national campaign was the jewellers' own campaign: "Who's Behind All This Talk About Diamonds? You are!" The advertisements also advised the jewellers on talking points to use with potential buyers when selling diamonds. For example, during the war, jewellers were told to explain the importance of industrial diamonds to the war effort and the role of gem diamonds in supporting the extraction of these vital inputs to the war effort.

C. D.
Record Book

Lewis 9/18/41

Magnificent new
DIAMOND
window display



JEWELERS — here's an opportunity to place your own diamond merchandise in a diamond advertisement! For you wise ones who want to tie in to the powerful national campaign, a special window display has been created. A full-color illuminated Kodachrome miniature glows from an actual advertisement set in a rich green velvet frame (19" x 22" over-all), out of which spills a crimson velvet setting for your own diamond rings and bracelets. It is designed to arrest the eye . . . to display admirably your own merchandise . . . to create the aura of elegance essential to the world's most precious gem . . . and to establish you directly as a part of the splendid advertising campaign seen in seven magazines.

The vivid green and red colors make it particularly impressive for Christmas display. Price complete, ready to install, \$10; with two extra insert Kodachrome advertisements, giving three displays in all, \$15, f. o. b. New York. Weight packed, 12 lbs. Limited supply — order today from The Reuben H. Donnelley Corp. (Diamond Promotion Dept.), 305 East 45th Street, New York City. De Beers Consolidated Mines, Ltd., and Associated Companies.

21A-1941-42 National Jeweler Sept.

Image 7: Concerned with Windows, *National Jeweler*, September 1941

The consolidated content of talking points was intended to reinforce the meaning-making of the advertisements directed at the masses. The talking points were augmented and reinforced by materials that De Beers offered to the jewellers. For example, one advertisement (Image 7) offered a window display that allowed the jewellers to “tie into the powerful national campaign.” The display included an advertisement that ran in the mass outlets to make help remind passers-by of the campaign and connect the jewellers to it. From among the diamonds-in-general that De Beers was advertising, the jewellers were to give their own merchandise a presence. By joining the broader campaign, the message said, the jewellers could stand out. Although the displays and the campaign were designed on De Beers’ behalf, the advertisements emerged from the relationship among De Beers, diamonds and the retail jewellers. The jewellers had to be taken into account. De Beers’ matters of concern did not stop at the level of South Africa mines or their diamond stockpile in London. Rather, it extended to the windows of retail jewellers throughout the United States.

In addition to these structural items, the jewellers were offered promotional materials, including poster reproductions of the magazine advertisements. De Beers also offered audio advertisements that jewellers could run on local radio with their stores’ names inserted. They appealed to the cost concerns, noting that making such advertisements by themselves is “[p]rohibitive in price.” The jewellers were encouraged to “[l]ocalize the national influence.” This way, the jewellers could leverage the national campaign that the De Beers’ advertisements were hyping as “powerful” and having “set America talking diamonds.”

In fact, the very first advertisement that De Beers ran as part of the campaign was not in the popular magazines, but a July 1939 advertisement in *JCK* announcing, “Within the week, DIAMONDS will be Nationally Advertised.” The advertising copy drew on N.W. Ayer’s

research insights and reminded jewellers, “Diamonds are the backbone of every jeweler’s prosperity.” The advertisement referenced the surveys to give the campaign authority and the jewellers were “invited to make this campaign your own.” The invitation by De Beers was given added weight by a report in *JCK*, which called the campaign the “most encouraging piece of news that the jewelery trade has had in years” (July, 1939, p. 54). The campaign, according to a follow-up story, claimed that De Beers’ advertisements were amplifying the message that “diamonds are desirable,” which it noted was known “throughout the ages” by virtue of literature. Now, however, the article claimed, diamonds were in stiff competition with other luxuries. According to *JCK*, De Beers, on behalf of jewellers, was taking up the challenge, to get jewellery back to its “rightful and natural place in the affections and desires of men and women” (August, 1939, p. 63). The same issue of *JCK* had a full page advertisement from New York diamond dealers Arnstein Bros & Co offering congratulations to De Beers “for their foresight in sponsoring a great National Advertising Campaign” (p. 64) and one from Harry Winston also applauding De Beers’ “foresight” (p. 66).

Although the advertisements used the language of including the jewellers as actors, participating within the campaign, the purpose of the advertisements was precisely the opposite. De Beers wanted the jewellers to be mere intermediaries — unproblematic relays of the stones into the hands of the masses. Of course, De Beers recognized the jewellers’ status as mediators, translating the meaning of the stone with their own advertising, store set-up, selling features, talking points, etc. The standardizations they sought to impose on the retail level jewellers was a means to transform potentially problematic mediators into intermediaries and reduce the uncertainty associated with unrestricted creative capacity. It was because the jewellers had to be

taken into account, and the need for De Beers to be confident in their obedience that its concerns extended to seemingly mundane details like window displays.

The most important component of the jewellers' semi-autonomy that needed to be controlled was their ability to set prices. As noted above, some jewellers complained that De Beers' inclusion of price ranges in the advertisements constituted a way for the company to set prices. A 1943 letter from De Beers to Ayer, concerning the successful efforts by jewellers to remove price ceilings on diamond jewellery confirms as much. Contrary to expectations that De Beers would desire such a removal, it approved of the price ceiling as a means to stabilize diamond prices and reacted with alarm to the jewellers' efforts. The company expressed its hopes that the resumption of popular advertising, once again informing the public of average price ranges, "may effect some control."

v. War's Transformations

World War II was more than a context for the advertising campaign. The war had a transformative effect on the diamond assemblage and this affected the advertisements. The diamond assemblage also had a transformative effect on the war, but that will be discussed in the next chapter. Just as De Beers was a powerful force with which the entire diamond trade had to contend, the power of the war effort had to be contended with by De Beers. The war could have completely upset the market for gem diamonds. Such extravagances were contrary to the prevailing wartime ideal of sacrifice. During the Civil War, women were encouraged to refrain from wearing jewellery and even to donate their gemstones to the war effort.¹ The first effects of

¹ In a scene from *Gone With the Wind*, Scarlett and Melanie donate their wedding rings to the Confederate army.

WWII were in De Beers' advertisements to merchants. Before the U.S. had entered the war, provisions to the allied war efforts were driving an increase in U.S. production. The merchant advertisements celebrated, "Defence contracts are spreading 12 billion dollars into towns from Maine to California." This money would increase hiring and wages. Therefore, the advertisement asserted, the "economic barrier to marriage for millions of young couples is dissolving." Of course, the jewellers were encouraged to take advantage of this opportunity "by tying-in ... to the dramatic national diamond campaign." The U.S. had a sizeable contingent of soldiers involved in the war effort before officially entering the war. A July 1940 advertisement for merchants called attention to this and suggested that, with soldiers being shipped off, "[y]oung love finds a new urgency." The advertisement left no room for misunderstanding what this meant: "The diamond business booms." Once again, the advertising copy insisted that if the merchants wanted a share of this boom, they ought to acquire the De Beers campaign's promotional materials.

In response to the U.S. entry into the war, De Beers' reduced its advertising. Consider the series of advertisements placed in *Life*, one of the mass outlets. *Life*, a weekly magazine, carried the very first De Beers advertisement in its September 11, 1939 issue, with one more in October, two in November and another in December. Then, the advertisements ran more or less monthly, minus the summer months, until June 1942. No De Beers advertisements ran in *Life* again until September 1943. When they returned, they bore the effects of wartime. Image 8 is the returning advertisement. The picture is a forlorn woman, staring out to the ocean. A diamond on her finger, the text reads, is a "pledge to safe home-comings and fair rewards in their new-day life to be." This is clearly in reference to soldiers fighting overseas. However, the text still contains the aspirational component of the early advertisements. Now, those aspirations are rewards for the

sacrifices that both the men and women have made. The diamond is not an untoward luxury. It's a symbol of safe returns. Who would deny a couple such an important symbol? The text of the wartime advertisement is now wholly devoted to the emotional appeal. The educational elements have been completely shifted to the text box explain diamond prices. However, another box was added. In case a couple was unconvinced and thought a diamond might be an inappropriate symbol, De Beers offered another reason to continue to buy the gem stone: industrial diamonds.

It is worth quoting the blurb in its entirety:

Industrial diamonds — a key priority for high-speed war production — come from the same mines as gem stones. Millions of carats are used in the United States industries today. The occasional gem diamonds found among them help defray production costs for all these fierce little “fighting” diamonds. Consequently, there are no restrictions on the sale of gem diamonds.

A new relation is being established for the masses: that between gem and industrial diamonds. De Beers' advertisements in class outlets took on a decidedly different tone. Primarily aimed at men, the advertisements were sombre, and the primary text made the case that gem diamonds subsidize the production of industrial diamonds, helping to keep down the cost of the war. The romantic aspect of diamonds was moved down to the bottom of the text. Additionally, the usual education component was excluded altogether.

C. D.
Record Book

How far its beam A little light, so constant and so sweetly clear
it finds his heart across the widest waters and hours of loneliness.
That is his diamond on her finger — an ever-fixed beacon, pledge
to safe home-comings and fair rewards in their new-day life to be.



LITVAN BY MARION LAMOTTE. PRINTED FOR THE DE BEERS COLLECTION

Facts You Should Know About Diamonds: These are average current prices for unmounted quality diamonds, including federal tax. (The exact weights shown occur infrequently.) Size alone does not determine diamond values. Color, cutting, brilliance and clarity have an equally important bearing. You should have a trusted jeweler's best advice when buying diamonds.

Industrial Diamonds — a key priority for high-speed war production — come from the same mines as gem stones. Millions of carats are used in United States industries today. The occasional gem diamonds found among them help defray production costs for all these fierce little "fighting" diamonds. Consequently, there are no restrictions on the sale of diamond gems.

DE BEERS CONSOLIDATED MINES, LIMITED, AND ASSOCIATED COMPANIES

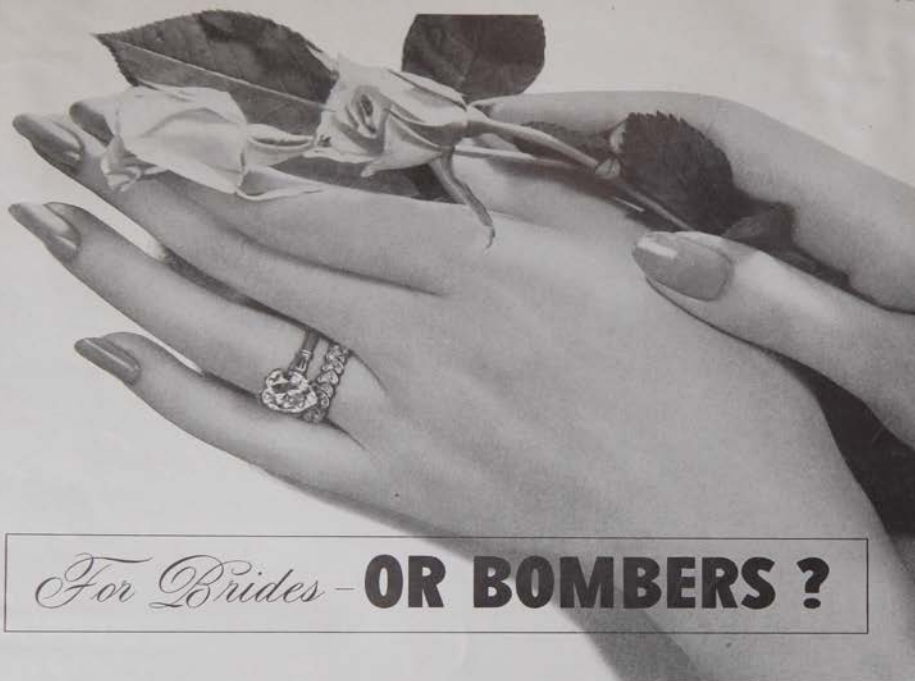
One-half carat		\$200 to \$350
One carat		\$400 to \$800
Two carats		\$1050 to \$2500

1—1043-44—1 page, 4 colors—9 3/8 x 12 1/8—Life, Sept. 27; The Saturday Evening Post, Oct. 16—N. W. Ayer & Son, Inc. 8042

Image 8: War Affects the Diamond Campaign, multiple outlets

C. D.
Record Book

V. Carter
4/19



For Brides - **OR BOMBERS ?**

THE machines that fashion the delicate mechanism of his giant motors must be true as your own sweet heart. . . .

That's why they are dressed with tools set with DIAMONDS.

Nothing is too precious if it helps keep him safe, up there. . . .

And nothing except a diamond is so efficient for the infinite speed and precision work required in many tasks to build our flying fleets.

Any bride would give her diamond for such a vital task. . . .

But, fortunately, no bride needs to. To the chagrin of the enemy, our

side controls almost the world's entire supply of another kind of diamonds to do the countless jobs of speed and skill in pouring out armament for the United Nations' Victory. Almost 5,000,000 carats will be used by the United States alone this year. Your lovely gem stone has helped put them to work!

How can that be?

By helping pay for the great quantity of industrial diamonds needed. Gem stones and industrials are found and mined together. Only one out of each four carats discovered in 16 tons of blue ground is fine enough to be gem quality. Its

sale defrays a great share of the mining costs for all.

Then diamonds are for brides and bombers BOTH?

Yes, gem diamonds and industrial diamonds are fighting helpmates in our war economy.

See that your customers understand these points about the dual position and meaning of diamonds in the world at war. Published in the interests of the jewelry trade of America by De Beers Consolidated Mines, Ltd., and Associated Companies.

Image 9: For Brides or Bombers?, multiple outlets

Although the claim regarding the extraction of diamonds was strictly true — gem and industrial stones do come from the same mines — it was also very misleading. At the time, the vast majority of industrial diamonds being used by U.S. industry were coming from the Belgian Congo. An alluvial source of stones, these mines produced few gem stones, and most were of poor quality. De Beers included in its cartel the Belgian mining companies that worked the Congolese deposits so as to retain control of the diamond trade. In return, they paid a premium for the company's diamonds. However, most of the diamonds actually going into production were coming from large, existing stockpiles, since before the war the extraction of industrial stones well outstripped their use. The relationship among De Beers, U.S. industrial diamond users, the U.S. government and the diamonds themselves will be discussed further in a subsequent chapter. For now, it suffices to indicate that the blurb was wholly intended to serve a marketing purpose and reduce the resistance of the masses to buying gems at a time of war.

The advertisements for merchants also introduced talking points for the jewellers to confront buyer resistance. In advance of the resumption of advertising in popular outlets, De Beers targeted and prepped the merchants. They were told to emphasize the “dual position and meaning of diamonds in the world at war.” A June 1943 advertisement (Image 9) asked, “For Brides — or Bombers?” The answer it gave, after explaining how diamond tools are used in the war effort, is that “gem diamonds and industrial diamonds are fighting helpmates in our war economy.” A March 1943 advertisement that ran in *JCK* rendered gem diamonds into a symbol of freedom. The headline that accompanied an image of a diamond ring screamed: “Emblem of love ... or weapon of war?” The text tells us that “a Jap” and “a German” would say it was “a weapon.” “Over here,” in contrast, “It is the same flashing symbol of love and beauty it has always been.” The text goes on to contrast the allies ready access to industrial stones with the

Japanese and German war efforts need to confiscate gem diamonds for use in industrial applications. The fact that American men can continue to give diamonds should be touted as evidence of the very thing they are fighting for.

Although De Beers was insisting that the masses need not feel any guilt about buying gems at a time of war, and even tried to make it an act supporting the war effort, they still capitulated to the sense of sacrifice. The advertisements in *Life* that ran from 1939 to 1942 listed prices for stones up to three carats. The prices for these most extravagant of stones were listed as “from \$1,500” with no upper limit. Although this lower limit was less than the upper limit of the two carat stones, presumably the open-ended pricing and size were an extravagance even beyond the justifications for gem diamonds made in the wartime advertisements. The three carat stone never returned to the mass outlets. Additionally, the advertisements for non-engagement diamonds placed in the class outlets ended for the duration of the war.

After the war was over, the advertisements again changed. Most obviously, the blurb about industrial ‘fighting diamonds’ was dropped. The text celebrated the return of servicemen. In a December 1945 advertisement, the text read that with their return “the waiting’s ended; ahead lie only years and pleasures to be shared.” The diamond is invoked as the means to retain the memory of his joyous return. But of course, the stone should be “as fine as earth affords.” The images for the series of advertisements after the war were all of soldiers’ marriages. This imagery was touted to the merchants as “deepening and spreading an understanding of the diamond engagement ring tradition.” This portrayal seems prescient given the the dramatic spike in the U.S. marriage rate that correlated with a spike in jewellery sales. The end of the war also brought back the advertisements aimed at women placed in class outlets. This renewal was

presented to merchants as a second campaign, aimed at “fashion-conscious women” in addition to that in the mass outlets, which focused on the diamond engagement ring tradition.

My argument is that the diamond campaign emerged as the convergence of entities, the contributions of which cannot be reduced to them, since the campaign is an *ex nihilo* creation; the campaign is an emergent addition to the world. The masses, as translated into the market research survey, the jewellers and diamonds were all participants in creating the campaign. However, all of their contributions were mediated by the accumulatory demands of De Beers. When the war broke out, its force was felt through many different institutions that had their own effects on the campaign, including U.S. manufacturing, soldiers and widespread rhetoric about sacrifice. With the end of the war, these institutions were transformed and the campaign necessarily changed in response. All of this defies generalizations about advertisements as either mechanisms of information or instruments of mass manipulation or a moderated position between these two extremes.

vi. Men's Relations with Diamonds

De Beers' efforts to transform the diamond engagement ring tradition were very successful. Diamonds became the singular symbol of a couple's engagement. The aspirational component, which was intended to counter a trend toward smaller, cheaper diamonds, has become contained in the widely quoted 'two months salary' benchmark for what a man should spend on an engagement ring. That success was far from guaranteed. Without the catalyst of the returning soldiers provoking a dramatic spike in the marriage rate, the diamond engagement practice may not have been given the status of a tradition. Women today frequently cite their mother's and grandmother's diamond engagement rings as the basis for their own desire for a

diamond engagement ring (Falls 2005). The contingency of the engagement ring success is made more evident if we compare it to the failure of the effort to get men wearing brown diamonds.

The practice of men wearing jewels had waned with the rise of the sober and practical bourgeoisie, who favoured discrete and “proper” attire in comparison to the “sumptuously clad aristocrat” (Perrot 1994, p.31).¹ The infamous businessman ‘Diamond Jim’ Brady was notable precisely because this sort of adornment was unusual. However, the Ayer survey described a desire among men to return to wearing diamonds in some form. On the one hand, the form that this diamond jewellery could take was constrained by the endurance of the relatively simple manner of dress for men. On the other hand, the survey found that both male and female respondents preferred larger diamonds for men. It was from these components that De Beers launched the ‘brown diamond’ campaign in *The New Yorker* in December 1941. The perceived market were wealthy, fashion-conscious men.

¹ The history of this transition is, of course, much more complex and it has implications for the history of the diamond engagement ring. Initially, the rise of the bourgeoisie resulted in the adoption of aristocratic fashions outside the court by those aspiring to the commanding heights. It was with the industrial revolution that the political struggle between the aristocracy and middle class men gave political meaning to a simpler manner of dress. By that time both aristocratic and middle class men had adopted modest clothing in order to bolster their claims to humble service to society against the claimed vanity of their opponents (Kuchta 1996). This had important gender implications, as men on both sides leveraged their proclaimed modest masculinity in part on their distinction from women, whose clothing remained colourful, excessive and adorned. Men displayed their own modesty, while one of the tasks of bourgeois women was to adorn themselves as a symbol of the family’s successes (de Grazia & Furlough 1996). The giving of the diamond engagement ring could be considered a symbol of these newly delineated roles.

No. 20
3MM 1.41 Clarion 1029

Do not use this paper after June, 1941

THE NEW YORKER


USE 110 SCREEN

ENGRAVERS' PROOFS OF BLACK AND WHITE OR TWO COLOR (ROP) ENGRAVINGS must be proofed on this stock

Do not over- or under-ink engraving • Proof side to side and use color bar, part 50% screen, part solid, 6" long in direction of proofing →

10-1941-42-7 x 10 3-16—The New Yorker, Fall—N. W. Ayer & Son, Inc. 10347

C. D.
Record Books
Lewis 10/14/41



JEWELRY DESIGNED BY RAYMOND C. TARD OF NEW YORK

Diamonds for men are back - in color.

New York men are wearing diamonds again . . . new *brown* diamonds . . . attractive gems with various depths of color, ranging all the way from the lightness of champagne to the richness of cognac. . . The brown diamond ring is bringing a new note of individuality to the modern gentleman. The subdued stones are shown in many cuts: square, emerald or brilliant. The new brown diamonds are also adding dignified elegance to formal evening wear—in studs, vest buttons and cuff links. You can consult your jeweler to have them custom-made.

Image 10: Brown Diamonds for Men, *The New Yorker*, December 1941

These advertisements were greatly differentiated from those for women's jewellery. In place of luxurious and romantic imagery, the advertisements were rendered in stark black and white, with brown the only colour (Image 10). These diamonds are not the eternal symbol of romance and memory as evoked in the advertisements for women's stones. Rather, these were at the cutting edge of fashion. As the first advertisement declared: "New York men are wearing diamonds again." This assertion contains Veblenian emulation. 'New York men' is a synecdoche for the powerful and if a man wants to project his place within — or aspirations to — power, then he would be well advised to join in the resumption of diamond wearing. The advertisements contained the frequent paradox of advertising that one wants to stand out in order to fit in and vice versa. Informed that other men are wearing diamonds, and encouraged to join the trend, readers are nonetheless informed that brown diamonds are "a distinctive addition" to their wardrobe that bring "a new note of individuality."

The decision to position brown stones as the diamonds for men seems to be a compromise with the subdued style of menswear where power is conveyed in subtle features, such as fit, rather than flamboyant displays. However, if De Beers were successful, it would also greatly augment the value of the stones, which would otherwise be turned to an industrial purpose. The most commonly desired feature of diamonds is little to no colouring, the very rare fancies in pinks, blues and deep yellows, notwithstanding. The stones being marketed to men, according to the advertisements, range in colour "from the lightness of champagne to the richness of cognac." Regardless of the luxurious names given to the stones, brown stones were, and are, ill-suited to be gems, since they lacked the sparkle associated with diamonds. The sizeable brown stones that De Beers was trying to market as gems would go from tens of dollars

per carat as industrial diamonds to hundreds or thousands of dollars per carat if turned into gems. The aesthetics of men's fashion and De Beers' accumulatory interests were fully aligned.

The brown diamond campaign suggested various items that could bear the stones, from rings to shirt studs to cigarette cases. Such direct suggestion differentiated with the diamond engagement ring campaign, which took the form of jewellery for granted, or the advertisements aimed at wealthier women, which largely left the potential forms unstated. With no education component of suggested prices or suggestion to consult the expertise of a jeweller, the advertisements used a different approach to include the jewellers. Having touted the brown diamond as a symbol of individuality, the advertisements suggested for men to "consult your jeweler to have them custom made."

A December 1941 *JCK* advertisement celebrated the campaign to jewellers as the "first truly new idea in men's jewelry in years." As with the general campaign, merchants were being asked to participate. However, this was a much larger transformation of the diamond assemblage than the engagement ring meaning-making and required a much bigger risk to be taken by the jewellers. Unlike the engagement ring tradition, which was already an important component of the jewellers' business, there was no existing diamond market for men. When De Beers undertook the engagement advertising campaign it was relatively easy for the jewellers to participate. They already carried diamond engagement rings to satisfy any increased demand that the campaign might create. The brown diamond campaign, on the other hand, had no pre-existing components among the jewellers. To satisfy any demand, they would have to stock brown diamond inventory. There is little evidence that the jewellers widely participated in the brown diamond campaign, which contributed to its failure.

The timing of the campaign was also a factor in its failure. The U.S. was attacked at Pearl Harbour the same month as the campaign launched and the U.S. officially entered the war. The January 1942 issue of *JCK* ran an editorial understandably justifying to its readership the continued sale of jewellery during wartime. Jewellery, the editorialists claimed, “contributes to ... civilian morale without interfering in the war effort.” It goes on to describe various scenarios in which those contributing to the war effort have their spirits bolstered by a piece of jewellery. However, in every scenario, the jewellery is being worn by a woman. Men’s morale is raised by giving a woman a piece of jewellery not by wearing it. *JCK* is not deliberately undermining the brown diamond campaign, but this renewal of the general sentiment that jewellery is predominantly woman’s adornment worked to the same effect.

De Beers did not immediately abandon the brown diamond campaign, running advertisements at least until the end of February 1942. The class outlet advertisements that connected gem diamonds in general with industrial diamonds and the war effort used the same aesthetic as the brown diamond campaign. An advertisement that appeared in the *New Yorker* touting the importance of the diamond for the war effort showed several diamond-bearing objects, including an engagement ring, a diamond drill bit, and a brown diamond ring. However, the text made no mention of brown diamonds for men. Instead, the relationship between men and diamonds, like in the *JCK* editorial, is one of purchasing and giving, as it largely remains.

IV. Conclusion

In this chapter, I sought first to establish the differences between De Beers advertising and those that filled the print media of the era. These differentials were accounted for, in part, by some important differences between the products being sold. A luxury item intended for the

masses, diamond's role was a symbolic one. However, I also noted that the De Beers campaign could have gone in a different direction more in keeping with the technological utopianism of other products. Had it done so, its success is doubtful. The focus on emotional appeal, subordinating, but certainly not abandoning, the luxury of diamonds, enabled the continued advertising of the stone during WWII. The reluctance to keep touting luxury is exemplified by the decision to stop running advertisements directed at women for additional diamond jewellery. Even though these advertisements also heavily weighed the claimed emotional aspect of giving a diamond, there was an undeniable 'you've earned it' luxury component, as well. The continued wartime advertising had to carefully navigate between the diamond as symbol of sacrifice and love on the one hand, and an object of luxury and display on the other. Today's diamond engagement ring tradition was born in the aftermath of the war and indicates the campaign's success.

By suggesting a diamond could symbolize a couple's eternal bond, playing with the physical fact of diamond's hardness, the stones were well situated to become the unparalleled symbol of engagement, as they did with the end of the war and the return of U.S. soldiers. From this perspective, excessive emphasis could be placed on the 'genius' of the creative team who had the prescience to understand the potential of diamond and properly situated it in the context of the popular psyche. However, this would be an anachronistic reading from a world where the diamond engagement tradition is firmly entrenched. At the time the advertising campaign was being undertaken failure was certainly an option. Any temptation to give excess credit to the advertising team is tempered by the abject failure of the brown diamond campaign.

As much detail as I might be able to include in this chapter, it is next to nothing compared to the level of detail that would have consumed the Ayer team working on the

campaign. Additionally, the campaign was transformed in important ways in response to the society-shattering events of WWII, although it retained certain continuities. The maintenance of these stable and changing elements was a necessity if the U.S. diamond market was to be stabilized and augmented. Such seemingly minor tinkering has been excluded from political economy in part because its focus on production has led to a neglect of consumption, while the concept of consumption itself has subsumed the actual processes of buying and selling. When consumption and advertising have been considered, usually they have been analyzed at the largest scales. However, aggregate matters such as total U.S. advertising spending, or the influence of advertising on the media landscape, contain within them the day-to-day operations of actual advertisements. The effects of those advertisements, both cultural and accumulatory, is notoriously opaque. In the case of De Beers' diamond campaign, we can almost certainly point to the contemporary diamond engagement tradition as evidence of its inordinate success. That success played an important role in the company's post-war accumulatory fortunes and the on-going importance of diamonds as a global commodity.

Chapter 7: The Differential Governing of Diamonds

I. Introduction

Like all corporations, De Beers' relationships with different governments was an important aspect of its accumulatory fortunes. It had to navigate among the conflicting interests of African, European, Middle Eastern and American nation-states. It had different relationships with those governments based, in part, on their place in the global diamond assemblage, but also based on differing principles of governance. Of particular importance was the perspective of different government agencies on the appropriate relationship among governments, markets and corporations. During WWII, both the U.S. and British governments took an interest in the diamond trade. As indispensable industrial inputs, and compact means of transporting value, both governments sought to protect their access to the stones and close off diamond flows to Axis countries. However, while various agencies of the British civil service treated De Beers like a partner in these efforts, the U.S. Department of Justice (DoJ) considered De Beers an illegal trust that prevented a properly functioning diamond market and the realization of the 'true value' of both gem and industrial diamonds. Most importantly, according to the DoJ, this undermining of 'the market' was in turn undermining the war effort as it required American users of industrial diamonds to pay more than they otherwise would.

These differences illustrate the shortcomings of theoretical approaches to the state-capital relationship that treat both sides as homogeneous abstractions and singularize the relationship. Despite the U.K. and the U.S. both being capitalist states, the differing treatments of De Beers by the two governments is illustrative of different principles and policies with respect to capital. These differences were consequential both for the governments and for De Beers.

The struggle among capitalists for differential gain generates important differences in relationships with governments. For example, although the U.S. is rightly considered very friendly to corporations (see for example Nace 2003; Bakan 2006), it also has a well-entrenched antitrust tradition that illustrates a tension between markets as a competitive ideal and the realities of corporate power. Despite being the original advocate of competitive markets, the British government lagged a half century behind the U.S. with respect to antitrust legislation.¹ This difference was very important to De Beers' accumulatory success as the U.K.'s position allowed it to control supply as it did.

In addition to its relationships with the U.S. and U.K. governments, De Beers had important relationships with the Belgian and South African governments, as well as the quasi-governmental agencies operating in British Mandate Palestine. De Beers also had concerns that involved Canada, the Netherlands, France and other countries. Governments other than national were also parties to the diamond assemblage, such as the municipal government of Antwerp, Belgium. Although there are analytical abstractions that might be applicable to all these governments, De Beers was having to deal with them in their particularities. If it had tried to adopt a single position toward all governments, it likely would have failed to achieve and maintain its accumulatory fortunes. In fact, the company queried the possibility of an accepting U.S. position on its policy of supply control, as it had in the U.K., and was rebuffed. That difference was important and – against the company's efforts to transform it – a seemingly immutable matter of fact.

Belgium was important to De Beers as the home of the world's most important cutting centre, located in Antwerp. The Belgian Congo was also the largest source of industrial stones.

¹ Although the U.K. had a tradition of competition law, which has been cited as an inspiration of the U.S. 1890 Sherman Act, it did not adopt antitrust type legislation until the post-war era (Dabbah 2003; Dunne 2015).

Through two government controlled corporations that mined the Congo, Belgium was a participant in the diamond cartel. With the Nazi occupation of the Low Countries, Antwerp was lost as a cutting centre, resulting in the British government and De Beers seeking to establish an alternative. The Belgian government-in-exile, which operated in London, continued to exercise control over the Belgian Congo and its mining companies. Most importantly for De Beers, Belgium maintained their participation in the cartel. The government-in-exile leveraged that control of a large portion of industrial diamond production to ensure favourable treatment by both De Beers and the U.K. government.

Both South Africa and Zionist organizations in Palestine lobbied to replace Antwerp after its occupation. At the same time, the Belgian government-in-exile demanded reassurances that after the war, its place in the global diamond assemblage would be restored. Meanwhile, the U.S. DoJ was trying to convince other government departments that Belgium should be lured away from the cartel in order to secure industrial diamonds at a lower cost for American users of the stones. It faced opposition not just from the U.K. government and De Beers, but also the U.S. State Department, as well as the U.S. Foreign Economic Administration, the job of which was to manage inter-departmental conflicts in overseas jurisdictions. The latter two U.S. agencies agreed that De Beers' near monopoly helped to secure Allied access to the stones and keep them out of the hands of the Axis. De Beers had to continually negotiate these complex relationships, which included the complicating factors of ethnicity and personal relationships among much else.

In this chapter, I briefly consider the theoretical foundation of the state-capital relationship, which I critique in the context of CasP, giving prominent consideration to Nitzan and Bichler's own critique and their concepts of the "state of capital" and "modes of power"

(Nitzan & Bichler 2009). My emphasis will be examining differential inter- and intra-governmental relations as a necessary corollary to a differential conception of accumulation. Government is not intended as a synonym for state, but is rather given analytical priority as a more empirically grounded object of analysis. The differential perspective is intended to enrich, rather than replace, existing theories of state-capital relations, as it remains necessary to consider the relationship between states-in-general and capital-in-general. In this use, ‘the state’ refers to the abstraction that grounds the system of international relations in which nation-states retain a dominating legitimacy and remain obligatory conduits for corporate activities. Below, I will describe the radical redefinition of ‘state’ by Nitzan and Bichler. Briefly, they uproot the concept from its grounding in the nation-state and define ‘state’ as the space ordered by power employing a defining logic. With this conception, they claim that we are now in a ‘state of capital,’ where the logic of accumulation, and its mechanisms of capital and capitalization, are the definitive tools of power.

Although I follow Nitzan and Bichler’s redefinition of state, I suggest that this reconceptualization allows for multiple types of state — each defined by its own logic — to occupy a single space as long as those logics can be brought into alignment. In particular, there remains an important state of sovereignty that organizes nation-states, which operate according to a logic of so-called ‘national interest.’¹ The state of sovereignty, which has organized the system of international relations since the 1648 Treaty of Westphalia, must be contended with by capitalists in its own terms.

¹ The notion of ‘national interest’ is an amorphous one. While this is a problem analytically, it is a strength in practice. Social scientists who use the concept are able to define any manner of activity as serving the ‘national interest.’ However, this analytical maneuver largely mimics the concept’s deployment by those within the dominant institutions of the nation-state. Every government, every bureaucrat, every self-proclaimed patriotic business and person can declare that they are acting in the ‘national interest’ regardless of how contradictory the activities. This plasticity is part of the concept’s practical usefulness.

While increasing corporate power has created new aporias in the state of sovereignty, such piecemeal erosion and re-establishment of sovereign control has been a constant fact of the state of sovereignty (Croxton 1999). Through all the *longue durée* waves of accumulation, as the capitalist centre of power has shifted, capital has yet to fully escape sovereignty (Arrighi 1994). Nor is there, despite evidence of capital's increasing power relative to government, any clear evidence that such an escape is imminent. During the time period of my analysis, the Western Allied governments imposed broad, sweeping controls that brought capital to heel in service of sovereignty. While the war has been described as a war of capital, it was still undertaken in the terms of – and in accordance with – the logic of national interest and the state of sovereignty.

In addition to arguing that there is a logic that orders the state of sovereignty, I argue that there are a proliferation of other logics that also operate and must be taken into account by capitalists and factor into the relationship between nation-states and capital. For example, although the U.S. DoJ undertook its antitrust lawsuit based in a logic of national interest, it could not pursue its case in any manner it wished. Instead, it had to adhere to the law, which forms its own logic distinct from that of national interest. De Beers modified its behaviour in accordance with its understanding of the logic of the law to avoid falling under U.S. jurisdiction and being subject to its antitrust laws. In order to establish whether or not the law applied to De Beers required a great deal of effort by the DoJ. While it was convinced that prosecuting the corporation was in the U.S.'s national interest, it was beholden to the law.

As well, the various individuals involved in the global diamond assemblage had their own interests that went beyond the simple quantifiable self-interest of mainstream utilitarian value theory. Those interests come from – but are not reducible to – their participation in various

collectives. The best example of this might be the Jewish organizations that lobbied to bring the diamond cutting industry to British Mandate Palestine. Although forming a nation-state was their intention, they operated according to an ethnocentric rather than national interest logic. Their efforts were a factor in De Beers' relationships with the British and Belgian governments.

All of these other logics have important confounding and transformative effects on the relationship between capitalists and governments because the relation must always pass through individuals and organizations that bring their own ideals and interests that are not — nor could they be — synonymous with the interests of government or capital. Not all of these logics can be properly accounted for in any given analysis. However, they should not be dismissed since the capitalists themselves cannot dismiss them.

Renewal of theorization of the relations between state-in-general and capital-in-general requires clarification of what we mean by capital. Adoption of the CasP perspective leads to an emphasis on governments' roles in protecting the institution of ownership. This means legally backstopping and ideologically legitimizing private property and markets, advancing the mechanisms of capitalization, such as standardized accounting practices and stock market oversight, as well as occasionally saving capitalists from themselves, since the pursuit of differential success can threaten capitalism as a whole. It is in the latter role that we can understand the U.S. government's support for antitrust measures. Antitrust policies are motivated by a commitment to theoretically competitive markets that are an important component of the legitimization of capitalism. Documents from the DoJ suggest that officials considered De Beers' monopolistic control over the diamond trade both detrimental to specific U.S. corporations and antithetical to American capitalism in general.

Development of a systematic conception of a differential state-capital relationship is beyond the scope of the dissertation. Rather, I will treat De Beers' relationships with different government agencies as an accumulatory matter of concern that required different courses of action and provoked different responses. Those responses emerged as a necessary enmeshing of the logics of accumulation and national interest. Analysis of De Beers' relationship with the U.S. will primarily rely on materials pertaining to the DoJ antitrust case, including fieldwork and research conducted by the U.S. Office of Strategic Services (OSS), the predecessor to the CIA, which performed intelligence operations during WWII. I will also make use of U.S. State Department documents that portrayed De Beers as a reliable corporate partner in efforts to control the flow of diamonds. This will illustrate the differential relations that exist among the entities that comprise a single government. Documents from the U.K. Ministry of Economic Warfare (MEW) will offer most of the data on the company's relationship with the British government. The relationships with South Africa, Belgium and quasi-governmental bodies in British Mandate Palestine will be examined through documents from both sources, with important supplementation coming from David De Vries' *Diamonds and War*, which details the struggles in British Mandate Palestine among Jewish organizations over the establishment of the diamond cutting industry there.

This analysis will highlight how capitalist entities, with accumulation as their motivating logic, must confront other powerful entities with their own logics. In the case of governmental entities, that logic can be identified as 'national interest.' Although this is a broad, imprecise phrase, that could presumably encompass any policy, any course of action, or any national practice, the setting of WWII allows us to narrow it down to victory. Failure to achieve victory threatened the very existence of many of the nation-states involved. The various agencies and

personnel involved may have operated according to other logics, such as rent-seeking or self-aggrandizement. However, I am going to assume that all government bodies, and officials, were informed by a sincere desire to win the war. These other logics had to be brought into alignment with the logic of national interest, although they could play a role in determining one course of action over another.

My argument is founded on a presumption that the logic of national interest is neither necessarily contrary to nor wholly aligned with that of accumulation. Importantly, for my argument, neither national interest nor accumulation can be considered ontologically or practically subordinated to the other, even within capitalist nation-states. Instead, the two logics must be continually reconciled. A great deal of energy is expended by both government and corporate officials to achieve this reconciliation. Although this task has been made easier by an increasing perception by officials within government that national well-being is synonymous with growth and profits, bringing the two into alignment remains an important, time-consuming task. During WWII, very little of De Beers undertakings were wholly free of some form of government interventions. While the wartime government oversights were unusually extreme, those oversights did not completely retreat in the post-war era.

De Beers had to contend with governments whose interests were not necessarily served by the actions the company wished to pursue. These conflicts had to be resolved. Such resolution can be considered an indispensable component of *creordering*. Negotiating this terrain required: 1) changing the company's course of action; 2) convincing government officials that the national interest is served by proposed undertakings, or, 3) defying the government. Even more granularly, while one department may be convinced that a set of policies serve the national

interest, another department may believe the opposite. In trying to navigate contrary positions, De Beers had to make decisions that would bear on its accumulation in indeterminate ways.

II. Navigating De Beers Within the Capitalist Mode of Power

The discovery of new diamond sources in the early-20th century, located by those pursuing profits outside the De Beers cartel, caused concern as it undermined the company's policy of supply control. The saving grace was that all these sources were relatively small and lacked coordination to pose a challenge to De Beers. However, these small discoveries were key to Ernest Oppenheimer's ascendance from outside the cartel to eventual control over it. Oppenheimer was able to use cutting edge cross-ownership practices to gain control of a sizeable share of this outside diamond production. The De Beers' insiders had not detected the growing challenge because the centralization of ownership was hidden behind multiple ownership entities commanded by Oppenheimer. Eventually, Oppenheimer was able to leverage his ownership to get inside De Beers, rising to become its CEO. Production was an important component of this struggle as the threat posed to the cartel was always a drastic increase in extraction that threatened the stable diamond prices it carefully nurtured. But, production cannot be distinguished from the tools of ownership, with cross-ownership now a standard mechanism of control.

David Graeber (2006) argued that Marx used the phrase 'mode of production' in a decidedly unformulated manner (p. 62). The formulation that emerged from Marxist thinkers entailed two constituent concepts of 'forces of production' and 'relations of production' that together comprise the 'mode of production.' According to Graeber, despite the necessity of both concepts in this formalization, analyses rarely dealt with the empirical forces of production. He

suggested this was because historical societies considered to belong to the same mode of production often involved very different forces (p. 63).

Despite the failings of the internal bifurcation as it pertained to analytical deployment of the ‘mode of production’ concept, the distinction could be usefully employed to formalize the ‘mode of power.’ At the very least, it could organize the research required to identify various modes of power, which I suggest are far more numerous than the postulated ‘modes of production,’ not least because the dominant institution of a particular mode of power need not be productive in nature. Additionally, as I will argue below, multiple modes of power can be operating in the same space at the same time.

In the case of the capitalist mode of power, capital and capitalization constitute the *force of power*. Attendant to that is the complicated machinery of quantification, required to translate the complex social reality into the commensurable units of finance, discussed in Chapter Two. The capitalized parts of that complex social reality constitute the *relations of power*.¹ The forces of power are the mechanisms used to order the society, while the relations of power are what gets ordered. As new facets of society become consequential to accumulation, they become matters of concern for capitalists and thereby relations of capitalist power.

While production of ‘stuff’ is an important – seemingly indispensable – component of the mode of production, so too, as Graeber noted, are the processes that produce people (Graeber 2006, pp.69-71). Contained in this, but worth explicitly noting, are the processes that produce

¹ Deep historical analysis of shifts in global social orders is well beyond the scope of this dissertation. However, just to example the possible efficacy of the ‘forces of power’/‘relations of power’ distinction, we might think about earlier social orders in which The Church is the dominant institution. The state, in such a society, could be considered the state of worship. Doctrine is conceived of as the force of power. Obedience by the populace was focused on their faith in the doctrine of The Church, which legitimized its hierarchy. The relations of power were all those over which The Church could proclaim its dominion, with obedience expected by virtue of the populace’s faith in the doctrine as it prescribed those relations: marriage, sex, tithing, health care, etc.

institutions, sub-cultures and every other collective entity into which humans and things agglomerate: mothers, miners, the *Friends* fandom, political economists, black South Africans, jewellers, students at Yale, the homeless, givers and wearers of diamond engagement rings.... These groups require both people and things and their production is irreducible to one or the other. Instead, they are the emergent product of all their parts. All of these groupings can be translated into the financial quantities on the basis of their expected effects on the elementary particles of capitalization. This translation is not a revelatory reduction, exposing an essential truth. Instead, the translations of capitalization are a useful expression that facilitates the creordering required to retain and expand power.

The capitalists, whose interests are affected by these people, and the things that bind them, will intervene in the productive systems under their immediate control. However, they also intervene in the production of people and collectives, which is a more circuitous process requiring entry into domains outside the production of 'stuff.' This creordering can only ever be part of the on-going reformation of these collectives, which will have many other dynamics affecting changes. Not least, the members will have transformative effects beyond what the capitalists desire and devise.

As the N.W. Ayer report on the U.S. diamond market found, the attitude toward diamonds was shifting against the interests of De Beers. The company's capitalization — as seen in the introduction — expressed the cartel's loss of relative control. It had to do something. Subsequent study linked its waning sales, profits and capitalization to the waning interest of the U.S. public in diamonds. The causes of this shift in attitude were many, including the Great Depression, changing marriage traditions, and competition from other luxuries. The people whose attitudes were surveyed by N.W. Ayer were intended to be representatives of the broader

population. It was through the members of that population that these attitude changes were being produced. And, this is what provoked the company to directly intervene through the advertising campaign and attempt their own attitudinal production.

At the same time, the most important collective of the era — the Allied war machine — began to drive increased sales for industrial diamonds. As with the shift in diamond attitudes, this was a change that De Beers did not directly provoke, although this one was definitely in the company's interests. Alongside the increased use of diamonds, however, was a widespread suspicion of 'profiteering.' As will be discussed more fully below, WWII did not generate any widespread backlash against profit in general. However, there was a shared ideal about 'excessive' profits. This would be an important component of the DoJ antitrust case against De Beers. Those earning profits beyond what was deemed 'reasonable' were considered to be profiteering at the expense of the war effort.

Examples of the attitudes critical of excessive profits are found both in the popular media as well as in the DoJ archival documents. In a 1941 column lamenting the slow pace of wartime production, Walter Lippmann, the furthest thing from an anti-capitalist, complained that the U.S. Administration had not put "defence ahead of business as usual" (Lippmann 1941). When a U.S. Assistant Attorney General suggested special legislation against profiteering he claimed his anti-trust division found the government was being charged "excessive and unreasonable prices" (Anon 1941b). A gossip column from 1941 relayed that "certain corporations apparently connive to grab off the gravy" (Tucker 1941). Profiteering was advanced as 'anti-American' by Leon Henderson, the head of the price stabilization division of the U.S. Defence Commission. Henderson said those who raise prices "would clip the American eagle's wings to feather their own nest" (Anon 1941a).

War time profits were actually a long-standing matter of concern to Americans. In 1775, General George Washington expressed his concern that the struggle against the British might be undone “for the Sake of a little Gain” (quoted in Brandes 1997, p.1). Stuart Brandes argued that with its founding, the United States explicitly adopted this concern in its efforts to distinguish itself from the British aristocratic system, where the poor overwhelmingly paid the price for war. Instead, Americans intended to distribute those costs more justly. However, the question of what that actually meant was a difficult one. Brandes detailed how the question has returned again and again with every conflict the U.S. entered.

This was not just an expressive component of the war. The answers to the question had material consequences. U.S. contracts with wartime producers set prices established in negotiations with businesses. These included what was considered a reasonable return. Over time, these limits have shifted, as politicians and military officials and bureaucrats determined what constituted a ‘reasonable’ return. There is no indication that a complete cessation of profit was ever seriously considered. It was taken for granted that: 1) there ought to be profit, and; 2) there ought not be profiteering. What exactly constituted profiteering is unclear. However, it is certain that popular attitudes were opposed to it and government policies and oversight were intended to preclude it.

The government also addressed the matter through an ‘excess profits’ tax. Such a tax was first instituted federally during WWI. At the time, ‘excess’ was defined in relation to average rates of profit prior to the war. Others suggested that the returns considered reasonable should be lower than their non-war levels, in keeping with the ‘sacrifice’ that war demanded (Wells 1951). The tax was re-implemented in 1940 and adjusted upward in 1941 and again in 1942. The result was the highest corporate tax rates in U.S. history, measured both by the legislated rates and by

the effective rate. The legislated rate was 95 percent, while the effective average rate for 1941-6 was 53 percent, hitting an all-time high of 58 percent in 1943.¹ During the five years prior to the war, the average effective rate was 24 percent.

De Beers wished to preserve its control over industrial diamonds as part of its policy of supply control. Part of this preservation required taking into account U.S. attitudes and policies toward price, profit and the war effort. As such, De Beers promised to maintain prices for industrial diamonds at pre-war levels. This was intended to keep the U.S. and U.K. from seeking to acquire industrial stones from outside the cartel. Such acquisition would have effectively broken up the cartel, since these sales would have had to come from a cartel member. In particular, there was concern that the Belgian companies that controlled the Belgian Congo diamond sources — responsible for the vast majority of the annual production of industrial stones — might be lured away from the cartel. De Beers intervened to order the relations and reap the benefits of increased industrial diamond use.

The pathways of creordering are complex. However, one of the most important is via government policies. Corporate lobbying is an ever growing activity and lobbyists weigh in on almost every possible policy change. The revolving door between the corporate and the bureaucratic world also serves to tie the two together. The most high-profile mechanism of corporate leveraging of government is the aspiration of businessmen to political office. Both Ernest Oppenheimer, and his son Harry, held political office at various levels of government in

¹ The effective tax rate is calculated from the U.S. Bureau of Economic Analysis tables on gross domestic income. 'Taxes on corporate income' is divided by 'Corporate profits with inventory valuation and capital consumption adjustments.'

The inventory valuation adjustment may actually be a consequential calculation, since one of the ways of increasing profits during war is to increase the price of inventoried items. It is precisely this kind of price increase that the adjustment is intended to remove from corporate profits for the purposes of national accounting.

South Africa. Much of their focus was on ensuring policies benefitted the city of Kimberley and the mining industry, both of which were important keys in De Beers' success. Most corporate interventions in government policy-making and changing are differential in nature, as capitalists squabble over the social order, seeking to transform it in service of their differential gain. At the same time, capitalists will coalesce and close ranks to ensure the endurance of the accumulatory game itself. While these government-focused activities could all be thought of as 'production,' as Graeber suggested, that would muddy the term, bringing needless baggage to a new theorization.

The shifting mass of collectives, together with the apparatus needed to translate it into the quantities of capital, is, according to Nitzan and Bichler's definition, *the state*. It includes the traditional entities included in theorization of the state, but much, much more. Graeber (2006) asserted that "it is in the nature of systems of domination to take what are really complex interwoven processes of action and chop them up and redefine them as discrete, self-identical objects" (p. 71-2). This, Graeber continued, is what has allowed these objects to become property. By my formulation, the relations of power are these 'complex interwoven processes of action,' some of which have endured for centuries or even millennia, while others will be short-lived phenomena. The forces of power are what enable the simplified understanding of these complex processes. The forces of power will define each mode of power, which shifts the attention and concern over social relations, rendering some highly visible and others invisible.

The capitalist force of power is defined by capitalization. The mix of relations of power may have certain necessary features. For example, the capitalist mode of power may require industrial production. Or, perhaps it requires a monotheistic religion and belief in an afterlife. Or, it may require the nuclear family, or possibly electoral representationalism. But, these necessary components, if indeed any are necessary, cannot be treated as the sole entities of relevance.

Instead, the owners — and social scientific researchers — must contend with the entire differential complex; what Nitzan and Bichler refer to as, following Cornelius Castoriadis, the *nomos* (Nitzan & Bichler 2009, p.281). This does not preclude abstractions to enable analysis of the complex. But, it should preclude giving ontological precedence to certain entities and relationships.

III. Mode of Power or Modes of Power?

In the argument above, I suggested that there can be multiple operative modes of power, with each defined by their force of power. An equivalent claim is that multiple states can exist in a single time and space. Although I have taken up Nitzan and Bichler's reconception of the state, my formulation departs from theirs as a practical matter. In their conception of historical modes of power, Nitzan and Bichler's purpose was different from mine. Their intention was to identify a dominant mode of power, which constitutes a hierarchy of principles that "over the longer term, encompass and creorder other principles."¹ As I have focused in on a 'snapshot' of this process, in order to articulate the qualities of De Beers' accumulation, I have found it useful to adopt the idea of a 'state of capital,' but also to acknowledge a consequential 'state of sovereignty' with which De Beers had to contend. From this analytical position, I tentatively suggest that the latent continuity of other states constitute important confounding features of the social order.

Nitzan and Bichler (2009) stated that the purpose of reconceptualizing the state as the 'particular configuration' of the social order, is to simplify accounts against the increasingly

¹ Nitzan, Jonathan. 2015. Personal communication.

complex and wide-ranging state theory (p. 275). As such, they claim that although “[o]rganized power can take different forms ... insofar as the overall structure is hierarchical, it constitutes a *single nomos of power*” (Nitzan & Bichler 2009, pp.281; emphasis in original). The institution of this *nomos*, Nitzan noted, is a process, in which one set of principles is becoming “increasingly dominant.” Nitzan stated that, seen as historical processes, the key principles of the capitalist mode of power — primarily differential capitalization — are inherently totalizing. Through their application, they subjugate and internalize all other principles. But, he added, they can never completely succeed. They can never become total because their very drive to achieve that end tends to create new counterforces which in turn need to be harnessed. The indeterminacy of the process means that other logics, or operating principles, can at times overshadow the logic of accumulation. However, he continued, “in and of itself, this overshadowing, as long as it is partial/local/temporary, does not negate the broad historical notion of a capitalist mode of power.”¹

For my purposes, trying to understand the comparatively local relations between De Beers and various governments, this longer term understanding of a singular *nomos* is insufficient. This insufficiency is not a defect of the theorization of Nitzan and Bichler, but a feature of the comparative scales of analysis. A world map is useful for locating a major city on the globe while insufficient for navigating that city’s streets. Similarly, Nitzan and Bichler’s ‘state of capital’ concept helped me locate De Beers within the capitalist order, but it proved insufficient for understanding the complexity of their differential relationships with governments. A more detailed mapping of the logics involved was required and Nitzan and

¹ *ibid.*

Bichler's conceptions of both 'state' and 'mode of power' proved useful tools for that re-formulation.

I conceive of differing logics that define conjoined — though distinct — states that come together as capital and government pursue their interests. The boundaries and intersections of the two logics are continually negotiated as the logics are brought into agreement and disputes between them resolved. The alignment of the two logics is never complete and there are important areas of conflict. While in agreement with Nitzan and Bichler that the state of capital appears to be dominant, and increasingly so, the process of its domination takes place as a local, empirical struggle where the polarities of power may be radically realigned. Part of the malleability of the capitalist mode of power is its ability to feed on these realignments. As long as the fundamental logic of accumulation itself is not threatened, then some capitalist will be the differential beneficiary of a course of government action, even if it was taken solely in the national interest.

The realignments of power, and the consequences that ensue, may be better understood if other modes of power are admitted as relevant participants affecting the accumulatory struggle. I argue that organized power informed by different logics constitute other modes of power, i.e. other states. Notably, there remains the state of sovereignty, which is conceptually a return to the basic building block of the traditionally conceived state, although predicated on Nitzan and Bichler's reconception of state. The sovereign state continues to be consequential for accumulation according to its own logic and not just the logic of accumulation.

My interpretation of Nitzan and Bichler's concept of 'state of capital' is that there now exists a dominant space defined by the logic of capital and accumulation that includes not just business entities but others typically abstracted into the mainstream conception of the state. I

have suggested that the quantitative machinery that converge in capitalization comprise the force of power, while the qualitatively diverse entities that are priced into those capital values are the relations of power. Government plays a vital role in both the forces and relations of power.

Government departments, in as much as they are expected to affect the elementary particles of capitalization will be priced and thereby incorporated into the relations of power. However, as Nitzan and Bichler have argued, government departments are increasingly defined by, and beholden to, the capitalization formula as a means to translate the future into the present and inform policy decisions.

The boundaries of the traditionally defined state are unclear. There are questions about what is included and what is excluded. The state of capital's boundaries, on the other hand, are theoretically locatable by virtue of the forces and relations of power definitions. Wherever we find capitalization as a mechanism prescribing decision-making we are in the state of capital. This encompasses both the spaces translated into capital values – the relations of capitalist power – and those translating them – the forces of capitalist power. By this interpretation, I contend, the state of capital can co-exist with other states. This includes the traditional logic of 'national interest.' Wherever we find decision-making made on the basis of the 'national interest' — as fuzzy an ideal as that may be — we are in the state of sovereignty.

The state of sovereignty constitutes its own mode of power. We can think of its force of power to be governance, enacted through bureaucratic agencies that perform policy formation, tax collection, statistical analysis, welfare provision, surveillance, national defence and more, all grounded in the sovereign state's monopoly on the legitimate use of violence. The relations of sovereign power are all those subject to governance. As such, we can see how there would be significant overlap between the state of capital and the state of sovereignty. Consider the issue of

children's advertising. Many governments have intervened to dictate what sorts of advertising corporations can direct at children. Advertising is just one arena subject to both sovereign and capitalist relations of power.

This co-existence can continue as long as the two logics do not come into irresolvable conflict. Nitzan and Bichler's longer-term perspective focuses on the capitalist mode of power as a singular *nomos*. However, this does not preclude the endurance of other logics, which I am framing as defining other modes of power.

The trajectory of domination by the logic of capital and accumulation is neither a linear nor an absolute relegation of the logic of national interest to the dustbin of history. Rather, the logic of national interest is increasingly being redefined in the terms of accumulation. It is a matter of transformation more than subsumption. Should conflict between the two become intransigent and an absolute resolution one way or the other be required, it is far from certain who the victor would be. If wartime restrictions on accumulation are any indication, the state of sovereignty remains capable of quickly and definitively subordinating the state of capital.

To exemplify their claim that the state of capital has subordinated the state of sovereignty, Nitzan and Bichler (2009) wrote,

There is little doubt that George Bush Jr. and his administration believed that they represented the 'national interest' of the United States. But it is also fairly obvious that this same administration, whatever its formal leeway, could not have deviated too much from the underlying dictates of profit and accumulation (p. 301).

While I do not disagree, we can turn this example around: There is little doubt that Jeffrey Immelt and the executives of GE believe they represent the accumulatory interest of their firm. However, the company cannot deviate too much from the underlying dictates of the national interest. Of course, corporations routinely abandon one nation-state for another; a process that is

abetted by multilateral agreements on trade and capital flows. However, capital has yet to completely abandon the system of international sovereignty, which transcends any particular nation-state.

As we pass through the localities of the social order, neither accumulation nor national interest are definitively 'underlying,' even if, as a broad historical process, the logic of accumulation is the more expansive and expansionary. Instead, they are twisted together such that each state must account for the other, while remaining distinct in important ways. When GM CEO Charles Wilson famously said in 1953, that he thought "what was good for the country was good for General Motors and vice versa" he was espousing this twisting together of the two logics. Although the logic of national interest is increasingly being framed and defined in the terms of the logic of accumulation, it retains its own vitality, with its own forces and relations of power. These remain consequential in the immediate struggles for accumulation.

The conjunction of accumulation and national interest can be seen most clearly during wartime because, as noted above, during those times the national interest can be defined most clearly: victory. During WWII, there were never any serious suggestions that accumulation ought to be abandoned for the duration of the war in deference to the national interest. In fact, through the use of War Bonds, the logic of capital and accumulation was leveraged for the purpose of the national interest. The population was encouraged to save to support the war effort. But, that saving was not intended to be an enduring sacrifice. Rather, their support was an investment in the future, as implied by the name given to the bonds in Canada: Victory Bonds. Not only would victory save the nation, it would bring returns to those who patriotically invested in the war effort.

War Bonds were not the only government undertaking to emerge from the convergence of the logic of accumulation with the logic of national interest during WWII. Diamonds also had a place in this convergence. The war effort required the U.K. government to import a lot of goods from around the world, especially the U.S. As the U.K. was in no position to balance those imports with exports, there was a great deal of Sterling circulating in the global financial system. If the holders of British currency became reluctant to continue to hold it, then the U.K.'s purchasing power would be threatened, making imports more expensive and the war effort cost much more. Even rumours of a devaluation could have led to widespread dumping of the currency. As such, the government needed to find exportable goods that could ensure some level of demand for Sterling and confidence among the currency's holders. Diamonds were such a good.

With De Beers headquartered in London, and with many diamond traders who had fled the Continent settled in the U.K., there was a considerable supply of diamonds, the consumers of which primarily resided outside the U.K. The diamonds themselves were an important participant in the maintenance of Sterling's value, as the stones' value density made it easy to ship large quantities of highly valuable goods relatively easily.

To bring Sterling back home, among the measures adopted by the British government was a requirement that 85 percent of imported diamonds had to be re-exported. The enforcement of this policy enrolled De Beers, which refused to sell to any diamond dealer who sold more than 15 percent of their stones within the U.K. The policy caused some consternation among diamond cutters and polishers, who objected that they occasionally needed to buy industrial quality stones for productive purposes. Some of the dealers also objected that the qualities of stones being provided by De Beers were not in demand overseas, which was preventing them from meeting

the export quotas. Although the profit-seeking that motivated the sales of diamonds was allowed to continue, it was closely monitored, with De Beers' given a quasi-regulatory role.

De Beers did not object to this policy or this role as it aligned with its strategy of supply control. Among the concerns of the British government was that diamonds would be hoarded as a means of clandestine wealth storage. Officials were suspicious of the diamond traders that had emigrated from the continent. Anti-Semitism played a role in this suspicion as the diamonds that Jewish traders brought with them aligned with stereotypes that judged Jewish people to be greedy. De Beers was wary of hoarding as it could result in significant sources of supply that might later compete with their own. Additionally, De Beers wanted to ensure that the supply of gem diamonds in the U.S. was sufficient to supply the demand they were trying to generate through their advertising campaign. If U.S. jewellers lacked the supply then the price of cut diamonds would increase, contrary to the company's interests in stable diamond prices. The interests of the government and the corporation were fully enmeshed on the matter.

Accumulation by corporations in the warring capitalist countries was allowed to continue, in part, due to the capital controls imposed in the wake of the Great Depression — another threat to the sovereign state — that were still in place. This allowance prevented widespread capital flight and investors were largely stuck putting their capital toward domestic productive purposes, which often became highly profitable because of government purchases for the war effort. U.S. systems of production became subject to much greater government oversight, but there was never an attempt to completely staunch profits. Wartime production was a site where the state of sovereignty and the state of capital overlapped and aligned.

Another reason accumulation in general was allowed to continue was a tempering of the accumulatory mindset. Although profit-seeking is considered as American as apple pie, popular

attitudes have formed about what constituted 'reasonable profit,' and capitalists have had to account for such attitudes in their accumulatory efforts. During the war, they had to make the logic of accumulation conform with the general idealization of sacrifice in service of the national interest.

During WWI, the logic of accumulation was much more strictly curtailed. Stock markets around the world were shut down because the existing open global financial system enabled capital flight that was seen to threaten the capacity to service the war effort. The demands of capitalists were subordinated to those of the nation-state whose very existence was threatened. This subordination did not mean the logic of accumulation had to be abandoned. Rather, the government officials engaging with profit-seeking companies took it for granted that this logic could be conjoined to, and operated in service of, the logic of national interest, as long as it was subordinate.

During times of war, there is a heightened expectation that a country's corporations will serve the national interest, although without any suggestion that accumulation itself be sacrificed. Rather, the language that gets adopted pertains to 'reasonable' levels of profit. It was taken for granted that the private producers of wartime goods would continue to generate a return for shareholders. However, these returns could not be pursued at all costs. I argue that is still the case. There remain important strictures on the capitalist relations of power and governments operating according to the logic of national interest are perhaps the predominant source of those restrictions.

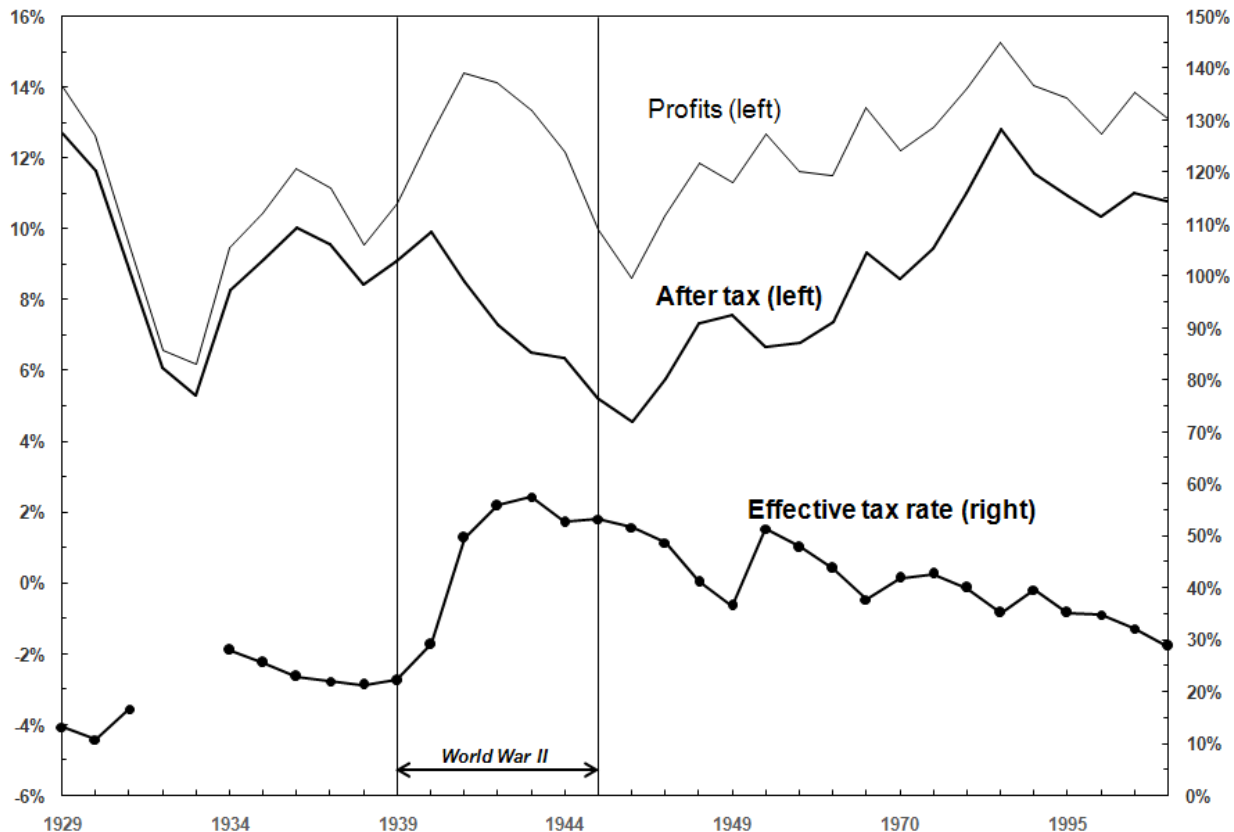


Figure 15: Conflicting Logics I: U.S. Corporate Profits Before and After Tax, 1929-2010

DATA: US Bureau of Economic Analysis (www.bea.gov)

NOTE: Profits are corporate profits plus interest divided by gross domestic income (GDI). After tax is profits plus interest minus corporate taxes paid. Effective tax rate is the taxes paid divided by corporate profits. Corporate profits are after inventory valuation and capital consumption adjustments. Interest is net interest plus miscellaneous payments for domestic industries. Profits in 1932-3 were negative. Data points for 1929-50 are annual. Data points for 1955-2010 are every five years as centred five year moving averages.

The top series in figure 15 expresses the before and after tax profits of U.S. corporations as a share of gross domestic income (GDI). The values from 1929-50 are annual. After that, the data points are every five years as a five-year centred moving average. The bottom series is the effective corporate tax rate. The before tax profit share climbed to a near-record high in 1941, the year the U.S. entered the war, seemingly refuting any suggestion that discourse about ‘reasonable’ and ‘excessive’ was having an actual impact on corporate profits. However, the after tax profit share expresses a dramatically different picture reinforced by the effective tax rate. As noted above, the U.S. implemented an ‘excess profit’ tax, which resulted in the highest

effective corporate tax rate in U.S. history. This would suggest that the use of taxes was a more effective constraint on corporate profits than any other form of control, such as fixed prices or stipulated margins in government contracts. Although public disapproval of high profits does not appear to have affected corporate behaviour it likely gave government officials confidence that tax measures would be welcomed.

It is notable that the wartime gap between before and after tax profits lingered long after the war and has only been slowly winnowed down. This, I argue, is evidence that the conflict between the logics of accumulation and national interest is an on-going one. There was no decisive post-war shift back to the pre-war tax regime. However, the slow decline does offer evidence that the logic of capital and accumulation is increasing its relative dominance.

Figure 16 compares the profits of all U.S. corporations with those of the S&P Composite Index. Although not perfect, the publicly traded corporations that make up the S&P index would generally be larger and, as understood in the CasP framework, more powerful, than the average U.S. corporation. Both series are indexed (1934-9 = 100) and then divided by an index of the GDI. The series focuses on 1929-60 to emphasize the war era, when the larger S&P firms experienced a more substantial relative decline than the inclusive totality of U.S. corporations. Between 1940 and 1945, the relative profits of the S&P index declined 59 percent, compared to a 47 percent decline for all U.S. corporations. Given that the larger firms were the more likely to win contracts with the U.S. government (Brandes 1997; Herman 2012; Rockoff 1998), it is possible that they were differentially affected by the non-tax measures implemented to limit corporate profits.

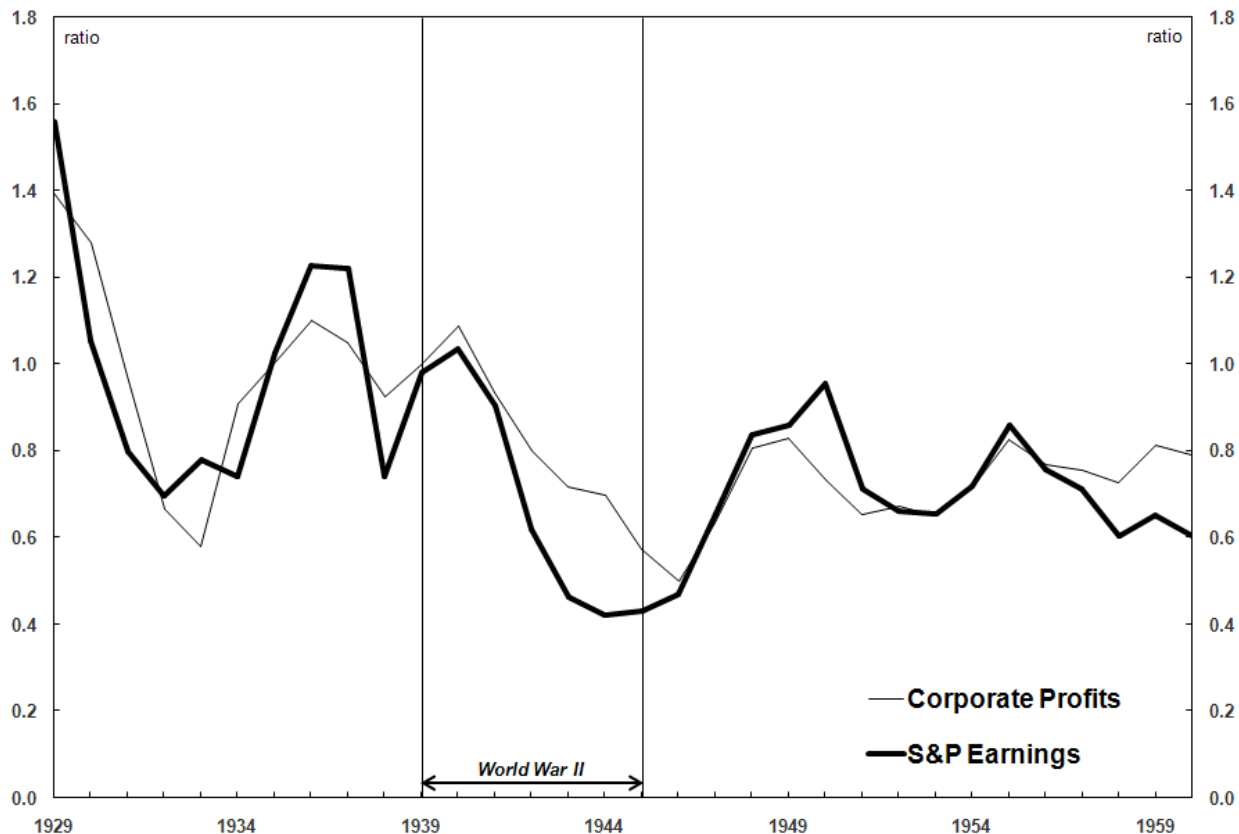


Figure 16: Conflicting Logics II: U.S. Corporate Profits relative to GDI, 1929-60

DATA: Corporate profits: US Bureau of Economic Analysis (www.bea.gov); S&P Earnings: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm).

NOTE: Corporate profits are after tax corporate profits with inventory valuation and capital consumption adjustments plus net interest and miscellaneous payments. Both series are indexed (1934-9 = 100) and divided by the indexed Gross Domestic Income (GDI).

Once again, the immediate post-war trajectory of the value of corporate profits relative to the GDI suggests the lingering effects of the logic of national interest's wartime domination of the logic of accumulation. The wartime average relative value of corporate profits were 19 percent below the pre-war value. The S&P earnings were 34 percent lower. In the post-war era, for a substantial period of time both series remained below the pre-war relative value, averaging 27 percent lower from 1946 to 1960.

The idea of what constituted a 'reasonable' return was part of the U.S. Department of Justice's case against De Beers and its associated companies. In defending the cartel, Don Bliss,

a bureaucrat with the U.S. State Department, claimed that De Beers “only took a small service charge and did not derive large profits.”¹ DoJ officials took issue with the claim, citing various sources who claimed De Beers marked up industrial stones by as much as 500 percent.² As evidence, officials repeatedly noted that the company had reinstated a sizeable dividend.³ It was not accumulation *per se* that was contrary to the national interest but rather an *unreasonable* level of accumulation.

The argument of the DoJ was that these mark-ups and profits meant U.S. users of industrial stones were having to pay more for the stones than they would if there was a competitive market for industrial diamonds. As such, industrialists were substituting inferior inputs for the industrial diamonds, resulting in an inferior product, harming the Allied war effort. It was suggested that the lack of a “competitive market” meant there was no means to ascertaining a “fair price” for industrial diamonds.⁴ Among the possible alternative schemes envisioned was for the U.S. to negotiate directly with industrial diamond producers. There was no suggestion among the DoJ officials that such government intervention may contravene their idealized notion of how markets function. Far from a contradiction, the officials took as a given that U.S. government policy and action necessarily serves both the national interest and ‘the market.’

¹ Stimson, Edward S. May 13, 1944. “Conference with Mr. Donald Bliss.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

² *ibid.*

³ Anonymous. April 15, 1942. “Industrial Diamonds: Preliminary Investigation.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive. Livingston, J. Sterling and Wilson E. Haas. April 16, 1942. “In re: Industrial Diamonds.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive; Berge, Wendell. January 28, 1944. “Re: Proposed Equity Suit Against De Beers Consolidated Mines, Ltd., et al.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

⁴ Stimson, Edward S. May 13, 1944. “Conference with Mr. Donald Bliss.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

Meanwhile, officials in the U.K. Ministry of Economic Warfare saw the role De Beers was playing as effectively relieving them of the necessity to explicitly regulate the flow of diamonds. They recognize industrial diamonds as a vital wartime input. However, because De Beers controlled a single channel that flowed through London, the task of controlling diamonds was much simpler. In fact, one British government official remarked that problems with the diamond trade emerged not with De Beers but with the subsequent buyers and sellers whose activities much more closely resembled a competitive market.¹ While U.S. officials generally considered ‘the market’ the optimal vehicle for conjoining financial and national interests, the U.K. officials considered it a nuisance that made supply control more difficult.

During WWII, De Beers could not have openly traded with the enemies of the U.K., even though it was almost certainly in their accumulatory interest to do so. The demand for industrial diamonds in Germany and Japan was very high. The cartel certainly could have realized much higher prices selling to the Nazis and the Japanese. One DoJ document suggested intelligence found smugglers willing to pay 1,000 to 5,000 times the going prices for industrial stones.² As well, some have suggested that De Beers did smuggle diamonds to the Axis nations, although the evidence for this is very circumstantial. Of course, the argument can be made that their longer-term interest was served by the victory of the allies. However, this simply demonstrates the point that the logics of accumulation and national interest have become increasingly conjoined.

The control of the flow of diamonds was explicitly a joint effort by the British government and De Beers. The government included a De Beers’ official — Otto Oppenheimer, brother of De Beers’ CEO Ernest Oppenheimer — on the diamond committee of the MEW that

¹ Indecipherable. January 14, 1941. “Memorandum: Though there is little concrete evidence....” Board of Trade. BT64/69. London: U.K. National Archive.

² Stone, William T. May 4, 1944. “Untitled: In compliance with the War Department’s request....” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

vetted diamond exports. Shipments of industrial diamonds to the U.S. flowed through the British consulate. As noted above, De Beers was also enrolled in the enforcement of the British government's policy of requiring 85 percent of imported stones be re-exported. The oversight being provided belonged to both the state of capital and the state of sovereignty as their logics were enmeshed.

This argument is not to suggest that De Beers was acting patriotically. And, although the U.K. government accepted De Beers role, government officials did not ascribe the company's role to patriotic service. One official from the British High Commission in South Africa commented on a South African newspaper article touting De Beers' support for the war effort through the guarantee of pre-war prices on industrial stones, sardonically observing, "I do not know whether De Beers are acting quite so altruistically as they suggest."¹ An official in the Dominion Office acknowledged certain difficulties negotiating with the corporation, but remarked that both the Ministry of Supply and the Board of Trade believed De Beers "have behaved in a reasonable manner."² That 'reasonable manner' was a course of action that brought into agreement the logics of national interest and accumulation. The logics do not align as an ontological given. Neither did some abstract structuring force ensure they would become aligned. Rather, work by those within the two states was needed to bring the two logics together. At no point did the government expect De Beers to abandon its for-profit *raison d'être*, but they also were not going to allow the company unfettered pursuit of differential gain. Similarly, De Beers knew their actions would have to be acceptable to the logic of national interest, but they could not wholly relinquish the accumulatory logic.

¹ Price, C.R. November 8, 1941. "Untitled: My Dear Clutterbuck...." Office of the High Commissioner, Pretoria. WT316/35. London: U.K. National Archive.

² Clutterbuck, P.A. September 8, 1941. "Untitled: Many thanks for your letter...." Dominion Office. WT316/35. London: U.K. National Archive.

It is not simply a question of whether “government organizations and institutions are autonomous from or subservient to” the logic of accumulation (Nitzan & Bichler 2009, p.302). The development of capitalist society has created governments and corporations such that they are mutually constitutive; the national interest and the accumulatory interest are continually *made to align*. The boundaries where courses of action violate one logic or the other *too much* are where corporate and government officials negotiate. The negotiations are facilitated by the shared and intersecting components of the two groups. The revolving door between governments and corporations, the inclusive schooling of bureaucrats and corporate officials, the monetary rewards to those on both sides owing to corporate gains, the pursuit of elected office, the funding of that pursuit, as well as the glory of national recognition that money cannot buy: these all equip corporate and government functionaries to bring the accumulatory and the national interest into agreement. Where disagreements occur there exist mechanisms from tribunals through to Supreme Courts that can resolve issues without forcing the two logics into irreconcilable — and potentially mutually destructive — conflict.

Just as a country cannot extensively contravene the logic of accumulation, currently, every corporation must function according to the national interest of at least one nation. Corporations continue to require a geographic ground and the state of sovereignty retains a monopoly on that. As such, the capitalist mode of power is unable to fully escape the sovereign mode of power.

IV. The Nationality of Capital

One of the consequences of the conjoining of the logics of accumulation and national interest is that the nationality of capital remains relevant (Starrs 2014). The nationality of capital

was important in the history of De Beers, even as a company formed as a transnational entity. Ernest Oppenheimer was able to acquire a sizeable share of the diamond trade when he bought out mining concerns operating in Southwest Africa from the German owners worried about expropriation by the British. On both sides of the transaction, the nationality of the owners was relevant. Later, Oppenheimer was able to secure his position as the head of De Beers by virtue of being, at least in part, South African, since the board wanted to appease the South African government. South Africa remained both an important source of stones and the obligatory passage point between Africa and Europe, which was vital to the diamond trade. The company could not afford the ill will of the South African government.

The company's nationality was seemingly subsumed by, first, the transnational capital merged together by British jewellers and bankers with British-South African mine owners to form a British-South African company. Second, the company's cartel position was collapsed and resurrected by a British-South African capitalist, backed by American bankers. Operating in sub-Saharan Africa, its financiers in Britain, its consumer base largely in the U.S., and important mediators in Belgium, De Beers and the diamond trade was a progenitor of the contemporary transnational corporation. However, none of this rendered nationality irrelevant. Neither can its relevance be considered an anachronistic remnant of a pre-capitalist mode of power. Capitalists maintain and leverage nationality and institutions of government in service of accumulation. That service, however, must also align with the sovereign state's logic of national interest. The multinational quality of the diamond trade allowed De Beers to transcend nationality in certain ways, but in other important ways it has instead multiplied the nationalistic concerns the company has had to contend with. South Africa, Belgium, the United States, and the United

Kingdom were only the most important countries whose nationalistic concerns De Beers had to manage as part of its pursuit of gain.

The nationality of capital affects the relationships capitalists will have with governments. There will be a primacy to the relationship with its home government. This is perhaps the most important differential in the relations between governments and particular capitals. Although generalized national favouritism has been under attack during the decades labelled neoliberalism, it continues to operate. For example, it has been given renewed vigour with recent ‘Buy American’ campaigns, but it was never fully eliminated. During WWII, capitalist enterprises had a patriotic duty to serve the war effort. Corporations touted their nationalist bona fides and popular opinion turned on the perception that corporations were acting in the interest of the country-at-war.

Governments also acknowledge the differential reality of the nationality of capital, although to varying degrees. The U.K. unabashedly supported De Beers as a British company. When S.W. Hofman, a representative of the U.S. War Production Board, visited the U.K. to assess the industrial diamond situation, British officials reportedly suspected that he was there “to effect increased [U.S.] dealer profits.”¹ The British took it as a given that a U.S. government official was adopting a position advantageous to U.S. capital interests.

The contemporary intersection and alignment of the logic of accumulation and the logic of national interest is perhaps best illustrated by the use of differential comparisons of national growth. For example, coming out of the the 2007-8 global financial crisis the Canadian government cited Canada’s OECD leading growth as evidence that its policies best served the

¹ Anonymous. October 1944. “Summary and Analysis of Industrial Diamond Intelligence.” Office of Strategic Services. 46-49:108-115. Washington, DC: U.S. National Archive.

interests of Canadians. It is simply taken for granted that this gain was in the national interest, while the meagreness of the gain was undercut by the differential comparison.

For my purposes, and given the timeframe of my analysis, the assumed national interest of all the sovereign states considered was victory in the war. This did not mean there was an unwaveringly clear vision on what courses of action should be taken. Far from it. Even in the relatively remote corners of the U.S. and U.K. governments whose archived documents I have examined there were conflicts among departments and officials, while there is no reason to doubt that all involved had a sincere drive to win the war.

For the British Ministry of Economic Warfare, as well as U.S. State Department commercial attaché Don Bliss, the best course of action was to allow De Beers to continue to function in its role as controller of diamond flows. For the DoJ, on the other hand, breaking De Beers' trust and subjecting industrial diamonds to competitive markets was considered the best way to serve the war effort. That service was synonymous with serving the interests of the users of industrial stones, as described above. Although it is never explicitly declared, it is not difficult to imagine that if De Beers had been an American, rather than a British, company, the relative perspectives of the U.S. and U.K. governments would have been different.

From the corporate side of matters, although De Beers had to pursue accumulation as its ultimate goal, that does not mean other goals could not be pursued, as long as they were deemed non-negative to the accumulatory interest. Additionally, given the various timeframes for assessing accumulatory success, certain courses of action might be considered to be in the long-term interest, while negative in the short-term. Within this complex of multiple timeframes, courses of action aimed at goals other than gain may be vigorously pursued and defended as in the long-term interest of the company. Loyalty to the Allied cause is one such course of action.

Among the reasons for believing De Beers was loyal to the Allies beyond its long-term accumulatory interests, is the fact that Ernest Oppenheimer's son Harry served on the front lines. Family loyalty — which will be considered in the next chapter — was among the reasons Ernest would have chosen to support the Allies, even if it undermined potential profits for De Beers. Additionally, Ernest appeared to have strong, if conflicted, feelings for Britain. As a German-born Jew, who settled in Britain before seeking his fortune in South Africa, he espoused loyalty to the Kingdom. This included criticism of the South African government that initially remained neutral during WWII and included members that expressed support for the Axis.

The same confounding and conflicting perspectives that operated within government also existed within capitalist enterprises. For example, in the late-1940s when De Beers was renegotiating supply contracts with cartel members, Otto Oppenheimer thought one member should be given improved terms relative to other members, in response to their demands. Ernest, on the other hand, insisted that there could be no capitulation on terms. Rather, he contended, the company's officials needed to be convinced on the importance of remaining united in a single channel of selling. These sorts of debates could emerge with every decision, even within a singular logic. The logic does not necessitate a course of action when the outcome of any course of action is indeterminate. At such junctures other logics can come into consideration to make the decision and national interest is one such logic.

V. Other Logics

The logic of accumulation and the logic of national interest are not the only logics that had to be fit together. For example, although the officials involved in the DoJ's mounting antitrust case believed breaking De Beers' control over the industrial diamond trade would

benefit the war effort, they could not do so at all costs. The officials had to adhere to the law of the land, which forms its own logic.¹ The DoJ noted that a major task in advancing the case was “acquiring jurisdiction over defendants”, which included De Beers, other participants in the cartel, and officials with various participants that resided in the U.S.² The foundation for claiming jurisdiction was that the the company’s activities in the U.S. constituted “doing business.” If they could prove that De Beers was doing business in the U.S. then they could proceed with the lawsuit. Establishing that fact required documenting activities performed on De Beers behalf by others and then connecting those activities with case law that has deemed such activities as “doing business.” To this end, the DoJ subpoenaed the records of De Beers’ advertising agency N.W. Ayer and detailed everything the advertising agency did on De Beers’ behalf.³ They intended to show that Ayer was performing activities that effectively constituted doing business as the agent of De Beers.

De Beers was acutely aware that its practices ran afoul of U.S. antitrust legislation and the company took care to avoid directly doing business in the U.S. Ernest Oppenheimer tried to navigate the logics of U.S. law and national interest in 1940 when he reached out to DoJ officials. The purpose of the meeting was to query if De Beers would be prosecuted under antitrust if it should move its headquarters to the U.S. The DoJ officials who wrote about this encounter were incredulous at Oppenheimer’s brazenness and chalked it up to national differences, suggesting that the De Beers’ CEO did not understand the American way of doing

¹ This is not meant to imply that government officials never break the law. Indeed they do. However, the law remains as a potent guiding logic, circumscribing their action. Although government officials routinely contravene the law, transgressions are also routinely punished.

² Stimson, Edward S. January 6, 1944. “Legal Problems Involved in a Suit Against the Diamond Cartel.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

³ Stimson, Edward S. June 14, 1946. “Summary of Material from the files of N.W. Ayer & Son, Inc.” Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

business.¹ While the case for the U.S. national interest being served by De Beers' headquartering in the country could quite easily be made, documents from the DoJ reveal no consideration of those concerns. The logic of the law was all they were concerned with. The officials reported that they affirmed his suspicions.

Also aware of the risks of antitrust, Ayer implored employees to refrain from certain activities that might be construed as doing business on De Beers' behalf. However, Ayer also recognized that because De Beers could not have officials working in the U.S. the agency might be called on to undertake various tasks for the company. The DoJ cataloguing of Ayer activities was intended to demonstrate to a judge, operating according to the logic of the law, those activities constituted doing business. To make their argument, the DoJ made connections between certain De Beers' activities and the body of case law that is a foundational component of the U.S. legal system. The DoJ wished to demonstrate that in previous cases, where businesses were engaged in similar activities, judges had ruled that these activities constituted 'doing business' and subjected those businesses to U.S. laws.

The activities the DoJ documented ranged from renting safety deposit boxes, to making office space available when De Beers' officials visited the U.S., to sending news clippings about diamonds to De Beers' offices in London and Kimberley. As noted above, to establish their justification, in accordance with the logic of law, the DoJ wrangled what it considered relevant case law. In the process, certain activities were dismissed as earlier cases had found such activities do not constitute doing business, such as "mere solicitation" or "occasional purchases." Although the DoJ officials were fully convinced that they had 'made the case' — meaning they had definitely established that De Beers was doing business in the U.S. via Ayer — they

¹ Isseks, Samuel S. and Ewing C. Sadler. March 20, 1942. "Re: Investigation of Diamond Industry." Department of Justice. 60-143-13. Washington, DC: U.S. National Archive.

explicitly stated, in deference to the mechanisms that were fundamental to the logic of the law, that the decision would be up to the courts.

The logic of the law is just one of the other logics that De Beers, and all accumulatory entities must deal with. In *Empiricism and Subjectivity*, Gilles Deleuze's reading of David Hume's philosophy, Deleuze repudiates the conception of *homo oeconomicus* — the purely self-interested and self-serving individual. Although he is hardly unique in doing so, he is unique in leveraging Hume in the course of his argument. Deleuze (1991) asserted that “[o]ne of Hume's simplest but most important ideas is [that] human beings are much less egoistic than they are *partial*” (p. 38; emphasis in original). *Homo oeconomicus* provides a very simple, and universal, logic — people act in their own interest, period — that is essential to neoclassical theory and its mathematical instrumentation. The *oeconomicus* conception informs the Benthamite rejection of society as anything other than the linear aggregation of individual self-interest. This is the conception of the individual that Veblen derided as “isolated human datum.”

In contrast, the partiality of interests means the boundaries of each individual's interests do not end with him or herself. Rather, they are complex, overlapping, intertwined and potentially contradictory. Although this conception does not lend itself to the abstract mathematical infrastructure of neoclassical theory, it is capable of accounting for not just nationalism, but an array of interests, such as communal fealty, family loyalty, ethnocentrism and other commitments that individuals pursue beyond self-service. To explain away these seemingly obvious multiple interests, neoclassical theory has to reduce them to selfishness, including such acts as soldiers sacrificing their lives for their country and parents sacrificing their lives for their children.

In pursuit of such complex interests, individuals employ a plethora of logics. As with the logic of national interest, these others must often be made to conjoin with the ascendant, pervasive and malleable logic of accumulation. Logics conjoined to interests other than national are found in the struggles over the diamond cutting industry after the occupation of Belgium. With Antwerp lost as the centre for cutting the majority of the world's diamonds, others began to lobby to host a new centre. The primary candidates were British Mandate Palestine and South Africa. The latter's claim was based in its indispensable role in the history of the global diamond assemblage and the pre-existing importance of diamonds for the country. Its interests can be considered national, as it was independent of the U.K., although relatively newly. As such, it needed means and mechanisms to reinforce its identity, which was bound up with diamonds. These interests were also financial, as the cutting industry would bring more foreign earnings. The lobbying from British Mandate Palestine, meanwhile, were based largely in the existing and growing Jewish community of the region, particularly those invested in Zionism.¹

Relocating the diamond cutting industry to Palestine could help to entice more Jewish diamond merchants to the region, helping to increase the Jewish population. The lobbying effort was aimed at three distinct entities: De Beers, the British government and the Jewish diamond merchants, themselves. The diamond merchants had to be prepared to move their operations to the region. It was expected they would be willing, in part because of the growing interest in a Jewish homeland and, in part because of the relative portability of diamond industries.

De Beers and the British government conferred over where to move the industry, exercising their particular, though conjoined, controls over the global diamond assemblage. De Beers needed a resurrected cutting industry to ensure their rough stones had an outlet. As noted

¹ The information on the establishment of the diamond cutting industry in British Mandate Palestine largely comes from David De Vries *Diamonds and War: State, Capital, and Labor in British-Ruled Palestine*.

above, the U.K. also had financial interests in the continued sale of diamonds as a means of earning foreign currency. However, it also wanted to ensure that diamonds did not find their way to its enemies. Again, we can see the active aligning of the accumulatory and the national interest.

Lobbying on behalf of British Mandate Palestine involved several different Jewish organizations, including the Zionist Organization in London, the Jewish Agency in Palestine and the Histadrut, the largest labour union in Palestine. One particular individual, Oved Ben-Ami, an entrepreneur who sought to develop the urban plantation of Netanya into an industrial centre, proved to be an important voice (De Vries 2010, pp.21-6). This multifaceted, informal negotiating entity contrasted sharply with the official hierarchy and channels of negotiation that organize the system of international sovereignty. Although, as I noted above, there are intra-governmental struggles, the mechanisms by which governments negotiate with each other, and with corporations, are well established. Those representing Jewish interests in British Mandate Palestine lacked the ordering capabilities of nation-states, although they aspired to them.

While all of the groups shared in the desire to bring the diamond cutting industry to Palestine, they also had their own, particular interests, and operated according to their own logics, which will only be considered here briefly. Both the Zionist Organization in London and the Jewish Agency in Palestine had a proto-nationalist interest in populating the region with Jews. To that end, they appealed to the Jewish diamond cutters to make their homes in a welcoming place; an appealing plea when many had fled persecution on the European continent and hardly found the U.K. entirely welcoming. The Histadrut wanted the diamond cutting industry as a relatively labour intensive undertaking that required highly skilled workers. More workers, especially highly skilled workers, were expected to bolster the strength of the labour

movement relative to capital. At the same time, the Histadrut helped to protect certain industries for Jews. As an industry with deep historical and structural connections to the Jewish people, the diamond cutting industry was considered to be more readily reserved for Jewish workers, to the exclusion of the Palestinian people.

De Vries noted that British Mandate Palestine was regarded at the time as being coordinated by a “triangular thread” alliance of: 1) Zionist institutions, led by the Jewish Agency; 2) Jewish capitalists, organized by the Palestine Manufacturers’ Association; and, 3) the labour movement, dominated by the Histadrut (De Vries 2010, pp.89-94). The three shared in the goal of building a Jewish state, while they also had significant divergences, as one would expect of a group that includes both capitalists and workers. Yet, De Vries described tensions between the capitalists and the Zionist organizations, the latter of which often felt the former’s pursuit of profit was contrary to the goal of state building.

It was against this very powerful tripartite entity that Oved Ben-Ami pursued his own interests. Ben-Ami’s interests, in as much as he worked to attract the diamond cutting industry, were pursued in accordance with both an accumulatory and Zionist logic. However, these were conjoined to a logic of local development. Ben-Ami was not just trying to bring diamond cutters to British Mandate Palestine. He specifically wanted them to settle in Netanya. This was part of trying to construct an industrial centre to rival Tel Aviv, where the ‘triangular thread’ was centred. According to De Vries, Ben-Ami specifically objected to the inclusion of the Histadrut in the Zionist coalition. He had a specific vision of “the establishment of a Jewish state in Palestine on private capital and individual initiative” (De Vries 2010, p.24). Ben-Aim operated according to a principled liberal logic that wished to exclude the influence of labour unions, but

also according to a logic of municipal loyalty focused on the development of Netanya. Within Ben-Ami we can see the *partiality* of interests that Deleuze-Hume identified.

De Beers and the British government eventually acceded to the lobbying for the move to British Mandate Palestine. Further, they accepted the plan presented by Ben-Ami, which promised much more oversight to the British and appealed to the enduring monopolistic control of De Beers. Part of this acceptance hinged on the Zionist character of the lobbying. The strong opposition of the Jewish groups in Palestine to Nazi Germany was considered a safeguard to prevent diamonds from escaping the intended pipeline to the enemy. The ethnic-economic relations shared by the diamond trade's Jewish membership were considered a mechanism to police possible defectors who may be tempted by the profits to be gained from selling to German agents. This aspect of the diamond assemblage were be considered more fully in the next chapter on the relationship between De Beers, diamonds and family.

Against the expansive designs of the Zionist lobby, which wanted to quickly erect a widespread, intensive cutting industry, De Beers and the British government only agreed to a limited expansion. This was largely to assuage the Belgian government-in-exile, which was worried that after the war the cutters who moved to British Mandate Palestine would not move back to Antwerp. De Beers actually shared in this concern as it wished to create a certain amount of competition among the cutting centres and intended the revival of Antwerp after the war.

The intended revival of Antwerp as a cutting centre would remain a concern of the Belgian government-in-exile, De Beers and the British throughout the war. While the Belgian and British governments both had a national interest in that revival, and De Beers had an accumulatory interest, there were others who shared in the concern but operated according to other logics. Specifically, documents from U.S. State Department commercial attaché Don Bliss,

relayed the appeals from Antwerp city officials. They wanted to resurrect the cutting industry because the jobs it brought paid decent wages, which they hoped would help revive the city. Their concern was less the national interest of Belgium in general and more focused on Antwerp in accordance with a logic of municipal loyalty.

As capitalists act, they necessarily encounter entities operating according to logics other than their own. These logics have to be accounted for and the logic of accumulation must be made to align with them. If De Beers wished for a return of the Antwerp cutting industry it had to work with the British government, the Belgian government, the Antwerp city officials, the cutting industry capitalists and workers. Although the company would have to accede to these other logics, this could never be at the expense of the logic of accumulation. Indeed, the malleability of the logic of accumulation to align with other logics has contributed to its durability and expansion.

VI. The State of Sovereignty and Differential Accumulation

CasP provides insights into the role of government and other institutions as avenues for the accumulatory struggle. In the wake of Nitzan and Bichler's new conception of value theory, the entities typically agglomerated into 'the state' must also be reconceptualized. In place of Nitzan and Bichler melding of governmental and corporate institutions into a single analytical block, I am redistributing government entities first in terms of the role they play in legitimizing and propagating capitalization, and secondly as powerful participants in the differential struggle among capitalists.

This theorization would suggest we need to locate: 1) components of the sovereign state which are wed to the infrastructure of capital and capitalization; 2) differential institutions and

policies that have evolved as the outcome of intra-capitalist struggle; and, 3) countervailing components that emerged from victories by the masses against the interests of owners, both in general and in specific. The development of these three features of the sovereign state are not strictly isolated from each other. Specific capitalists may target state institutions and policies that others believe are necessary to sustain the system of capitalism itself. For example, some may regard the U.S. Security and Exchange Commission as necessary to lend the system legitimacy, while others believe it is undermining their accumulatory interests. Some capitalists may prefer the strict enforcement of anti-bribery legislation as needed to level the playing field. Others may regard that enforcement as a restriction on their ability to pursue profits. Additionally, as long as policies serving the interests of the masses do not challenge capital itself, they will necessarily serve the differential interests of some group of owners. For example, if environmental groups succeed in getting policies challenging climate change passed, corporations that make 'green' energy technologies will gain.

One of the most important roles for the sovereign state is enforcement of the rights of ownership. Although ownership, and the sovereign state's role in protecting ownership, are recognized as key institutions in the Marxist approach to political economy, we can derive important differences in how CasP and Marxist political economy theorize the sovereign state based on differences in how ownership is theorized. Marxist approaches treat ownership as axiomatic. Alternatively, CasP gives ownership an analytical role. Marx identified the primary source of social dynamics in the struggle between the working class and the owning class. CasP considers the intra-class struggle among owners to be an indispensable aspect of the inter-class struggle. If we return to my 'modes of power' distinction between the forces and relations of power, then the inter-class struggle can be seen as a factor in the relations of capitalist power,

while the intra-class struggle among capitalists can be viewed as the engine of the forces of power.

Ownership constitutes a stratum of shared interest among the owners. More specifically, interest is shared in the existence of quantified, divisible, vendible ownership, ie. capital. This stratum should not be thought of in terms of the Marxian base. It is not strictly deterministic. In other words, we cannot examine the movements of capital to get a complete picture of capitalism. Rather, it is informative. Capital values expresses the on-going redistribution of power, as understood by the capitalists themselves. However, the accumulatory struggle has an indeterminate qualitative aspect that is irreducible to its quantities.

Entities and processes cannot threaten the institution of capital itself, but neither must they strictly serve it. Metaphorically, it is akin to the skeleton of a skyscraper. The design of the building cannot threaten the integrity of the skeleton. But, even proscribed in this way, the possibilities available to architects are myriad and those available to the tenants greater still. The contents of the building are not determined by the skeleton and are certainly not reducible to it. Yet, they could not exist without it. Similarly, we cannot reduce the actions of capitalists to the institution of capital itself, although the institution itself is irreplaceable. Girded by capital, owners engage in a struggle of differential gain, pursuing innumerable avenues to that endless end. The accounting that culminates in capitalization provides the means to express their successes and failures – and to some extent guide their action – as they creorder the relations of power. But it does not fully determine their actions and eventual outcomes.

Neither ownership nor its quantification via capitalization can be taken for granted. Rather, both must be continually reinforced and reconstituted. Capitalist governments and various entities typically enrolled into the sovereign state serve important functions justifying,

supporting and backstopping ownership and capitalization. Regulations of various sorts are the primary mechanism for doing so. Central banks, securities agencies, finance departments and trade bodies are some of the government entities that intervene to regulate the forces of capitalist power, while their activities will also have consequences for the relations of power as well. The U.S. DoJ was enforcing the country's antitrust regulations when it took up its lawsuit against De Beers. This enforcement served not only the particular differential interests of industrial diamond users but also to justify the U.S. ideal of free market capitalism.

Although the standard free market talking point is 'deregulation,' it has been well acknowledged since Karl Polanyi that markets do not function without a significant regulatory network (Polanyi 2001). Deregulation always involves reregulation (Vogel 1996). The sovereign state's regulatory function is essential for capitalist functioning. In fact, despite both critical and supportive rhetoric of neoliberal deregulation, there is generalized agreement that regulation is necessary for accumulation. Disagreements arise primarily over the degree, type and role of regulation capitalism requires (for example see Pierre 2000). So far, calls for greater business initiated regulation, in the form of voluntary codes of conduct, have failed to fill the vacuum created by a lack of international regulation originating with sovereign states (Sethi 2011). The self-regulation that has developed is a hodgepodge of corporate codes and external monitoring that lacks the authority of governmental regulation (Haufler 2013). Among the reasons self-regulation has failed is the intra-class suspicion that certain owners will use the regulations to their benefits. For example, when some U.S. corporations adopted the Sullivan Principles as a condition for continuing to do business in Apartheid South Africa, other corporations refused, claiming the largest corporations were using the principles to their own advantage (Cochrane & Monaghan 2013). Far from a matter of 'civil society' vs. 'corporations,' Apartheid had

differential consequences for the accumulatory pursuits of corporations in South Africa. As will be described in Chapter Eight, the Oppenheimer family was an early opponent of the system of racial discrimination. This opposition was partially based in its accumulatory interests, as the racial laws pertaining to labour markets increased the cost of mining labour.

Despite the winnowing and transformation of sovereign regulatory apparatuses, governments of sovereign states continue to be the dominant mechanism by which civil society can demand regulatory change, and capitalists are not universally opposed to the regulatory function of entities outside the market. Additionally, the multilateral organizations explicitly devoted to global trade and finance, often considered the locus of transnational corporate freedom from the sovereign state, such as the International Monetary Fund and the World Trade Organization, derive their legitimacy from the state of sovereignty and negotiations among governments. Even if certain member governments are stronger, and considered more corporate-friendly, the governments remain an indispensable component of the transnational regulatory system.

Within the global diamond assemblage, there are examples of government regulations that both served and undermined the accumulatory interests of De Beers. I have already noted how De Beers' considered its interests to be served by a U.S. regulation taxing jewellery. The tax served to place downward pressure on prices of jewellery, which the jewellers may otherwise be tempted to increase. De Beers' policy of supply control was intended not to maximize but to stabilize prices and the tax aligned with that purpose, even if that was never the intent of the tax. Additionally, the British requirement during the war that 85 percent of diamonds imported be exported ensured an on-going flow of diamonds from De Beers' buyers. While the company worked at the consumer level to ensure adequate final buyer demand, it wanted to prevent any

stockpiling that might result in price increases outside those they initiated. The most obvious example of a negative set of regulations were U.S. antitrust laws. These laws kept De Beers from establishing an office in the country where most of its diamonds ended up. This made doing business with Americans much more complicated. It had to remain vigilant against falling under U.S. jurisdiction, despite intense interest in the U.S. market.

The relationship between capitalist entities and regulation is much more complex than simply being for or against capitalist interests. Part of that complexity is owing to the differential nature of intra-capitalist relationships. From a differential viewpoint, regulations that benefit one group of capitalists are contrary to the interests of another, by definition. In the case of the jewellery tax, the jewellers themselves, much smaller scale capitalists than De Beers, considered the tax as contrary to their interests. As well, the sight holders that complained they could not find buyers for all the diamonds that De Beers was selling, and which they had to take in series, rather than picking and choosing, as described in the introduction, would have had to accept lower prices for those stones as they were prevented from holding onto them. Also, among many of these diamond buyers, there was an interest in the stones as value stores. As refugees from the Continent, they had used diamonds as a means to smuggle wealth. Fearful of having to flee once again, many wished to salt away additional diamonds. The British regulation made that more difficult.

The on-going importance of regulation for capitalist undertakings is evidenced by the money and personnel that business devotes to lobbying and elections. It is now taken for granted that businessmen will be significant backers of politicians, if not standing for political office themselves. From its founding, De Beers has been deeply implicated in the politics of South Africa. The country's identity is wrapped up with diamonds and De Beers.

Key figures in De Beers' history were explicitly involved with governments. Cecil Rhodes, the founder of De Beers, participated in lobbying to change regulations that restricted the size of diamond mining plots, which made possible the company's total control. Part of the rise of Ernest Oppenheimer to prominence in South Africa was his time in office, first as the mayor of Kimberley and then as a member of Parliament for the Kimberley district. He was able to use this political position to see the passage of legislation favourable to the South African mining sector. However, we cannot reduce the activities of businessmen in the political domain to an unwavering adherence to the logic of accumulation. In part, such a reduction presumes there is one necessary course of action that flows from the logic of accumulation. As noted above, the historical contingency of any situation means that choices have to be made and contrary choices may both be motivated by equally sincere desires for greater gain. More importantly, the business people who actually engage in the political sphere, in as much as they do so as individuals, rather than representatives of their business, are *partial* and have other interests they pursue. There is no indication that, when he was mayor, Ernest Oppenheimer ever undertook policies for the city of Kimberley that were contrary to the city's interests. Rather, he appeared to be sincerely committed to both the city and the company and likely believed that what was good for De Beers was good for Kimberley and vice versa.

Later, Ernest's son Harry, who followed him as CEO of De Beers, became a member of the South African Parliament. After serving with the United Front Party, Harry founded and, for a time, served as the sole representative of the Progressive Party. He would bankroll the party for years. Opposition to Apartheid was the party's *raison d'être*. As an MP, Harry Oppenheimer was a leading voice against Apartheid.

The anti-Apartheid position was presented as both principled and pragmatic: as in the interest of the black citizenry and the nation. The pragmatic virtues touted by Harry Oppenheimer espoused a logic of national interest. Apartheid, he argued, would dissuade foreign investment, harming all South Africans. However, there were also accumulatory interests involved. In addition to the higher wages in the mining sector caused by Apartheid, noted above, the racial laws made it more difficult for De Beers to coordinate the cartel.

In the post-colonial era De Beers required the participation of newly liberated African countries in the cartel to preserve its supply control. However, many of the governments of those countries very publicly severed ties with the South African Apartheid government. This delinking made negotiations much more difficult. The South African identity of De Beers became a hindrance due to Apartheid. At the same time, South Africa remained an important source of diamonds and the company could not completely abandon the country. It was also the Oppenheimers' home and the family seemed legitimately concerned for South Africa and acted from a place of national interests, as well as accumulatory interest. From the other side, although the Nationalist government vilified the Oppenheimer family for their public opposition to Apartheid, they could not afford to completely alienate the wealthiest family in the country, which controlled many important South African products, including gold. South Africa remained an exceedingly friendly country for mining, with a regulatory regime favourable to the accumulatory interests of De Beers and other mining companies.

VII. Conclusion

Just as value theory has conceived of capital in general, with capitals in specific mere exemplars, rather than performative constituents, state theory has conceived of 'the state' in

general. In this chapter, I highlighted the importance of the differential accumulatory struggle in constructing important differences in sovereign state institutions and policies. While Nitzan and Bichler's analysis emphasizes the capitalist mode of power as constituting a single broad historical state of society — its *nomos*, I argued that when we zoom in on a more localized time and space we find multiple states existing in a complex conjunction. Government, I argued, exists primarily as part of the state of sovereignty. Multiple states are capable of co-existence as the boundaries between them are continually renegotiated when they come into conflict. The resolution of those conflicts generate new policies, institutions and practices. Each state has its own operating logic. While the state of capital has a logic of accumulation, the state of sovereignty has a logic of national interest. Capitalists must frequently contend with this logic and, although they cannot contravene the logic of accumulation, the two logics are made to align via the aforementioned negotiations. This negotiation between the two logics was used to explain the relationships that De Beers had with multiple governments. Its accumulatory success was vitally dependent on successfully aligning its accumulatory interests with the national interest of several countries.

Although I primarily focused on government, the state of sovereignty and the logic of national interest, I also argued that capitalists must contend with other logics, such as logics of the law, ethnic solidarity, and municipal loyalty. In the next chapter, I will argue that within the diamond assemblage, including within De Beers, the logic of family was an important force that shaped the diamond's history. As with the conflicts that emerge between the logic of accumulation and the logic of national interest, capitalists must negotiate at the boundaries where other logics come into conflict.

I also asserted that the logic of accumulation does not necessitate any determined course of action. While a course of action must be expected to result in greater returns, the qualitative composition of that course of action is not contained within the logic. Instead, there are frequent debates between those adhering to the accumulatory logic of the best course of action. At those moments, other logics can become operative. If De Beers had to choose between two courses, then a course that served accumulation and the national interest would be chosen. Similarly, De Beers may be inclined to choose courses of action that serve the interests of the city of Kimberley, *as long as* that action is not contrary to the logic of accumulation.

Through consideration of other logics operating in the space of accumulatory struggle we may be able to better explain the course of action chosen as well as discern bounds on capitalist action. For example, what led Ernest Oppenheimer to personally meet with DoJ officials? Did he hold a commitment to his own intelligence and rational command of the issue? Why did he refrain from hiring thugs to intimidate those same officials? Was he committed to a civil, lawful society? Why have other corporations engaged in clearly unlawful activities in pursuit of accumulation? Can we discern specific operational logics beyond the abstraction of ‘corporate culture’? What leads different corporations, each broadly committed to accumulation, to have such different ‘cultures’?

In the case of the logic of national interest, however, sovereign states remain powerful enough that they can necessitate corporate action that contravenes the corporation’s accumulatory interest. For example, during wartime, capitalists are prohibited from trading with the enemy, despite the fact that they could likely make greater profits doing so. This can be considered an important distinction between the state of capital, the state of sovereignty and the

other logics. These states are powerful enough that their logics trump the others as a matter of routine.

Logics besides those of accumulation and national interest also function within government. Government officials will try to serve other interests besides the national. Indeed, within the archival documents, government officials regularly tried to identify such other interests being served by others. For example, the DoJ officials were critical of U.S. State Department official Don Bliss, suggesting that he had become overly friendly and enamoured with the De Beers officials. Although they never questioned his loyalty to the national interest of the U.S. they assumed that he had an interest in pleasing his perceived social betters. While we cannot know for certain that such psychological assessment by outsiders was accurate, Bliss certainly had a personal relationship with members of De Beers, including Otto Oppenheimer, a member of the family at the centre of the cartel. It is difficult to believe the corporation would not have tried to exploit that relationship in pursuit of their interests.

Perhaps the most important difference between the state of capital and the state of sovereignty is the quantitative aspect of the accumulatory logic. That quantification means that other logics will much more quickly be discovered and upended if they are working against greater profits. This metric allows for constant assessment of the application of the accumulatory logic, while there is no similar metric for assessing the national interest logic.¹ For example, a corporate division could have been set up by the company's founders as a passion project, but if it cannot prove it is contributing to the company's profitability, or even if it is, if it is failing to meet growth benchmarks, then it can be dismantled. This quantifying aspect, and the capacity to

¹ Jonathan Nitzan has pointed out that the increased domination of the state of capital is evidenced by uses of the logic of accumulation to assess the national interest. For example, he noted a RAND Corporation study that valued different peace/war scenarios for Israel and the Palestinians (Prusher 2015).

prove one's contributions to the bottom line is one reason the logic of accumulation is increasingly being folded into government agencies.

The various internal logics that guide government decisions will generate important differences between and within governments. These will then affect the different relationships that governments have with corporations. What decisions resulted in the U.S. government being more hostile to the trust than the U.K. government? How were those decisions made?

When we are inside government, where the logic of national interest is the dominant one, then the logic of capital and accumulation is an interloper. I argue that we cannot take this as a wholesale abandonment of the logic of national interest, although the intervention serves to strengthen the state of capital. When a capitalist speaks to a government official, if the latter shares a belief in the accounting efficacy of capitalization, the capitalist will have a much easier time appealing to them on the basis of their shared logic. That said, and as noted above, there are not clear-cut courses of action necessitated by an adherence to a logic of capital and accumulation. Both strident opposition and laissez-faire attitudes toward trusts can be justified by the logic of accumulation. At some point, other logics are employed to decide on a course of action. For instance, strong adherence to the logic of law vs. acquiescence to a logic of tradition may differentiate the courses of action, with the former generating opposition to trusts, while the latter results in a less confrontational perspective. This can be the case even if both trajectories emerge from within both the logic of accumulation and the logic of national interest.

The conjunction of these two logics requires the constant negotiation of the boundaries of the two modes of power, which will continue to come into conflict. That negotiation, taking place between capitalist and government entities around the world, will ensure the on-going evolution of both the state of capital and the state of sovereignty. While within the scale of

Nitzan and Bichler's analysis the former is definitely dominant, I contend that within the time frame of my analysis, the sovereign mode of power remained a vital political economic reality with which De Beers had to struggle. Additionally, I would caution that the longer-term perspective of Nitzan and Bichler's analysis should not be taken to dismiss the relevance and importance of other logics. I go further and argue that these other logics can define a state and that multiple states can function within a single time and space. Such operations can include the decision-making of powerful individuals whose interests are always partial

For De Beers, the different relationships that it had with governments were vital to its success, specifically the relative support it received from the British government gave it the ability to manage the company as it did. If De Beers had been an American corporation, or had to relocate to the U.S. during the war, it is probably, and even likely, that its accumulatory fortunes would have been markedly different. What exactly those differences might have been is open to speculation. However, if we adopt the CasP definition of power as 'confidence in obedience,' then it is reasonable to assume that De Beers could have less confidence in the obedience of U.S. government officials relative to U.K. government officials.

Subject to U.S. antitrust laws, De Beers would have had to abandon its core policy of supply control. If the company could no longer determine the price of rough stones, then most of the diamond producers that sold their stones through the cartel would have had little reason to continue the practice. While de facto price fixing practices may have remained in place without a centralized authority, these smaller mining concerns, thrown into competition with each other, would have been tempted to lower prices as a result. Judging from the post-South African discovery, pre-De Beers diamond years, the result would have been the sort of price fluctuation that concerned De Beers, and was its reason for implementing supply control. De Beers itself

would have been just one more diamond producer among others. With its increasing role of coordinator eliminated, the source of an increasing share of its profits would have been gone (see Figure 11). What profits it did realize would have been even more volatile than its diamond earnings already were. In other words, the company's power would have been significantly lessened and, therefore, rather than the wartime differential gain, its accumulatory fortunes would have continued their long-term decline.

Chapter 8: The Intersections of Family and Diamonds

I. Introduction

Despite economics drawing its name from family management — *oikos nomos* — family is largely absent from political economy. Families have no role to play in either utility or labour value theories. They have been squeezed out by the duelling focuses on individual desire or class structure. This has left ‘the family’ as a non-economic entity from the perspective of most political economy. James Caporaso and David Levine (1992), in explaining ‘the economy’ as a separate domain, capable of being theorized on its own terms, distinguished it from both family and political life. However, this annihilation in the theoretical abstractions is decidedly at odds with the actuality of families’ myriad connections with the entities and processes typically considered to be political economic, including, I argue, accumulation. The question of the relationship between family and accumulation was raised in the course of my research as families proved relevant to the diamond trade, and the profits of De Beers, through at least three dimensions: 1) the masses’ ownership of diamonds; 2) diamond traders use of family as a basis for trust in their transactions; and, 3) the 80-plus years of Oppenheimer family ownership and management of the company.

The role of family among the masses has already come up in the context of De Beers’ advertising campaign. The act of engagement is a promise that a new family will be formed. The advertising leveraged this event to dissuade people from selling their ancestors’ diamond engagement rings. De Beers needed to prevent the emergence of a sizeable second-hand market for diamonds, which would risk the company’s supply control. In this sense, De Beers’ accumulation depended on the maintenance of a family’s relationship with these stones.

Historically, the oldest role of family was in the diamond trading networks. These networks relied on trust and that trust was built on inter-family and intra-ethnic ties, specifically the connections between Jewish families. Although the relationship between Jewish people and diamonds emerged for many reasons, one of the reasons is the trust built into relationships established on the basis of shared ethnicity and, even more so, family ties. Even today, as Dina Siegel noted, diamond traders will hand over packets of stones worth thousands upon thousands of dollars merely on the basis of a promise (Siegel 2009). Family ties play an important role in enabling that trust. The movement of diamonds through the layer of diamond traders is essential for De Beers as the trade ultimately depends on the spending of the masses. It is this portion of the trade — made up of tens of thousands of traders worldwide — over which De Beers has exerted the least amount of control. However, in as much as family facilitated the continued flow of stones, it served De Beers interests.

Ernest Oppenheimer took over the chairmanship of De Beers in 1929. However, the Oppenheimer family's connection with diamonds began earlier than Ernest Oppenheimer's entry into the trade. His older brothers Bernard and Louis entered the trade before him and his relationships with them were essential to his eventual ascension to the chairmanship. He had also depended on a cousin, Fritz Hirschhorn, who was already well established in the trade in Kimberley when Ernest arrived in the diamond town. Later, two subsequent generations of the family would also hold the chairmanship of De Beers. Ernest was followed by his son Harry, who was followed by his son Nicky. This multi-generational succession was partially the result of Ernest's explicit intentions to sustain his wealth for his descendants. Part of maintaining that wealth was grooming his son to manage his corporate empire according to the same principles he used.

In 2001-2, when De Beers was taken private, the Oppenheimer family took a 45 percent stake. Anglo American, a mining corporation, which was also founded by Ernest Oppenheimer, and remained connected to his descendants, although not directly controlled by them, took another 40 percent. I argue that, in part, the family took this ownership stake in an effort to protect their family's legacy, which is almost synonymous with diamonds and De Beers. The family legacy part of the argument will be dealt with in the dissertation's conclusion, which deals with De Beers in recent years.

Caporaso and Levine (1992) used Karl Polanyi's concept of 'embeddedness' to argue that the economy remains a distinct entity, although it is embedded in, and interdependent with, the non-economic. They argued that, for Polanyi, the economic is defined by "the prevalence of the institution of contract," which links independent owners through property exchange. Caporaso and Levine asserted, "So long as family and polity are not formed by links of exchange and pursuit of self-interest, they are not part of the economy" (p. 30). However, family relations are not so easily defined as free of quantified exchange relations. Viviana Zelizer argued that anthropological research has found intimate relationships, including those that comprise the family, are a mix of exchange and non-exchange relations (Zelizer 2010). The intergenerational transfer of ownership via inheritance is an example of such a mixed transaction.

The institution of ownership is firmly rooted in family relationships. The rights of intra-family inheritance are taken for granted in capitalist societies and are an important component of accumulation. Since even most capitalists likely recognize that "you can't take it with you," the right to leave their accumulated wealth to their descendants is fundamental to the pursuit of gain. Further, as I will argue, using the Oppenheimer family as an example, powerful owners not only seek to pass along the wealth they accumulate, they pass along the knowledge and skills they

considered instrumental in achieving their accumulatory success. Owners strive for accumulation beyond their own power aspirations. Orwell noted, “A ruling group is a ruling group so long as it can nominate its successors” (quoted in Nitzan & Bichler 2009, p.316). Family remains a vital mechanism by which owners bequeath power and ensure class continuity.

Perhaps the corner of value theory where families appear most prominently is among Marxist feminists, who have theorized and debated the role of women and family in social reproduction (J. Mitchell 1966; James & Dalla Costa 1972; Benston 1969). Although Frederick Engels famously wrote an entire work on the family, he located the family under capitalism outside the domain of value creation. Within the labour theory of value, the value that workers generate is divided into the subsistence portion that maintains the worker and the surplus that gets accumulated by the capitalist. The maintenance of the worker is also a maintenance of the worker’s family, since this is the necessary engine for reproducing the working class. However, from a theoretical point of view, the flow of value from and to the worker is unaffected by whether or not the worker has a family. Family has no effect on the deterministic components of the theory and its fundamental concepts or Marx’s derivative claims such as the law of the falling rate of profit. The argument has been made by some that women’s labour in the home raising the family is value-creating. However, that argument has been marginalized in efforts to quantify labour-value. Additionally, since Marxist political economy largely adopted the ‘real’ quantifications of mainstream statistical sources, which systematically exclude women’s labour (see Waring 1999), the practical effect of Marxist value analysis has been to exclude families.

Family poses an even more vexing problem for neoclassical theory, which reduces value to individual desires. The source of desire creation is theorized to be ‘psychological’ in origin

and therefore outside the economic domain.¹ The mutual influence of family members on individual desires, as well as demand as a family matter, is anathema to neoclassicism. When family relations have been considered by mainstream economists, those relations get reduced to the same kind of utility maximizing transactions theorized for the market (Becker 1974; Becker 1973). For the neoclassical theorists, family, like society, is simply the sum of its parts.

Contrary to the economists, however, families are important motors in the production and circulation of desire, which is something that marketers have recognized. Importantly, and *pace* the fundamental assumption of the dominant value theories, desire production and circulation is not distinct from consumption. Children will tend to consume as their parents consumed.² The habits of consumption, and the disruptions to that consumption, get passed among extended family members: you have to try this; oh, where'd you get that?; have you seen that new ad? Much marketing activity is devoted to understanding the family dynamic since it is relevant to generating new sales and ensuring product loyalty.³ Diamond engagement rings can be considered an intergenerational habit, with younger women citing the diamond rings of their mothers and grandmothers as a motivation in their own desire (Falls 2005). The rings of sisters and other family members also likely influence diamond desire.

¹ This distinction was made very early in Irving Fisher's foundational formalization of neoclassical theory (Fisher 2007).

² The circulation of desire is not just a matter of older generations informing the consumption habits of younger generations. Children can also be important drivers of family consumption that become new habits (Berey & Pollay 1968). This has been recognized by marketers when they package and advertise products aimed at children. For example, Michel Callon described research by Cécile Méadel and Vololona Rabeharisoa on marketing by an orange juice company (Callon et al. 2005, pp.37-40). To revive flagging sales, the company decided to focus on customers with children by appealing to the sensibilities of the children. The intention was to attract the attention of the child who would then make an appeal to the parent who would actualize the purchase. The influence of children on family spending is an area of consumer behaviour research (John 1999).

³ The research on this is beyond extensive (see for example Moschis 1985; Commuri & Gentry 2000; Cotte & S. L. Wood 2004; Curasi et al. 2004; Jayasinghe & Ritson 2013; Epp et al. 2014; Yang et al. 2010; Kim & H. Lee 2007; Su et al. 2003).

Business history has given some consideration to the role of the family in business. It has typically been in the context of the ‘family firm,’ which are defined as companies owned and managed by a particular family. Other family-business relationships are overlooked. Family firms are considered an intermediary type of firm, essentially destined to be replaced by other ownership and management structures. Family management is treated as a way station between the entrepreneurial undertaking to found a firm and its rationalization into a managerial hierarchy (Chandler 1977; Chandler 1990; Chandler 2006). Other business historians, however, have noted that intra-family succession served as a means of transferring managerial skills prior to the professionalization of management (Hannah 1976).

The Oppenheimer family has only recently ended its association with De Beers. The family’s sale of its 40 percent ownership stake came after over a century since the family’s patriarch, Ernest, first entered the diamond world, and over 80 years since he gained control over the company and the diamond cartel. Over that time, there were three generations of Oppenheimers at the helm of De Beers — and a fourth that served in upper management — and the family became the wealthiest in Africa. Ernest gained control of De Beers through a combination of family support and complex financial maneuvers that hid the amalgamation of ownership. The enduring legacy of these maneuvers means the family may still own a large stake of De Beers through clandestine ownership of Anglo American. However, even if this is true, the very public declaration that the family’s close relationship with De Beers has come to an end is meaningful. The family’s name has been nearly synonymous with De Beers and diamonds and, I argue, the logic of family has been relevant to the family’s accumulation.

The family has served important political economic functions. However, family has a logic of its own that need not align with the logic of capital and accumulation. Perhaps the most

important fact of 20th century political economy has been the unrelenting advance of the logic of accumulation. I argued in the previous chapter that it is not necessarily clear that the logic of accumulation has triumphed over the logic of national interest, and I pointed to the rapid submission of the state of capital to the state of sovereignty during the 20th century's global wars. However, despite these challenges, I said, the logic of capital and accumulation continued to advance.

Meanwhile, the logic of family has a much longer history than the logic of either national interest or accumulation. Although anthropology has taught us that families can take many different forms besides the nuclear version taken for granted in the west, some sort of organization built around consanguine relation remains culturally widespread (see for example Carsten 2004; Therborn 2004). Some Enlightenment thinkers thought the family form was, or ought to be, doomed by the rational organization of society (Beccaria 1986; Edmiston 1985). Marx and Engels thought the end of capitalism would also bring the end of the family, which they regarded as a form of property relation (Marx & Engels 1948; Marx & Engels 1998; Engels 1972). Yet, the family endures. It endures even as capital has advanced. As such, we need to consider how family connects with the accumulatory struggle.

I argued in the previous chapter that the logics of national interest and accumulation are continually brought into alignment. Such alignment requires constant negotiation at the boundaries. In this chapter, I argue that the same is true with the logics of family and accumulation. For my purposes, I focus on how the logic of accumulation leverages the logic of family. However, this should not be taken to suggest that the logic of family only endures as a practical means necessarily serving accumulatory ends. Instead, family has become a contingent obligation that capitalists cannot outright ignore or bypass. Particularly for corporations that

market to consumers, the onus to be ‘family friendly’ is strong. This impetus made it difficult for corporations to navigate the issue of same-sex marriage, with those on both side of the issue laying claim to the logic of family.

How is family leveraged for accumulatory purposes? And, how might family contradict the logic of accumulation? In this chapter, I am using the particularities of family as it has intersected the global diamond assemblage to consider how family affects cultural and political economy more generally. However, these considerations will be largely impressionistic as my specific example is limited. Nonetheless, as I researched De Beers’ accumulation, tracing the relations of concern to the company, family kept appearing. Keeping with the dissertation’s overall purpose to perform accumulation studies, and its focus on De Beers, my primary concern will be on how family has been impactful for the company’s accumulation. That said, while the connection between De Beers’ advertising campaign and the use of industrial diamonds during WWII are relatively easy to connect with its differential success, the links connecting the company’s capital value and family are much more difficult to illustrate. Nonetheless, I attempt to articulate how family intersects with the diamond assemblage in ways that are irreducible and, I argue, ultimately accounted for by its capitalization.

Owing to the more tenuous connections between De Beers’ accumulation and the logic of family, consideration will first be given the general relationship between family and power. As I noted in the previous chapter, with any social process there are multiple interests at stake in addition to accumulation. Capitalists, in their pursuit of gain, must contend with those interests, bringing the various logics involved into alignment as decisions are made. The relationship between capitalists and family takes place on two planes. The first is a horizontal plane where owners have relationships with their own families. This plane might also include the families of

other wealthy people. The second is a vertical plane where owners must contend with the families of those below them in the social order. In this chapter, I consider both the horizontal and the vertical relationship with family.

The Oppenheimer family dominated De Beers' for decades, with three successive generations serving as Chairman. I will consider how the logic of family functioned within the Oppenheimers and how that affected the ownership and management of De Beers. Contending with other people's families was a different matter. As introduced in Chapter Six, family was a component of the relationship of the masses with diamonds. De Beers' marketing campaign leveraged the family in its construction of diamond meaning. Additionally, family played — and continues to play — an important role in the diamond trade between De Beers' and the sale to consumers. There, family is an important component of trust as diamonds quickly change hands based solely on a promise of payment. In all three facets, on both planes, family had an effect on the diamond assemblage. Further, I argue, it was relevant for De Beers' accumulation.

The logic of family is relatively clandestine, since much of its actualization happens outside the public domain. Further, it leaves behind fewer material traces than government or business. Few families have archives and when they have few researchers enter to perform political economic analysis. Access to the wealthy for research of inter-personal relationships is also highly restricted, leaving the sources of information limited. My generalizations on the relevance of family to accumulation draw on a fairly narrow set of sources that have had some access to the wealthy (for example Bronfman 1987; Donaldson & Poynting 2007; Ostrander 1984) as well as speculation derived from the limited consideration of family within political economy.

Below, I describe the knowledge-sharing between Ernest Oppenheimer and his son, Harry. The evidence for this comes from letters the pair exchanged during the war.¹ Among the knowledge Ernest shared was how he thought the diamond business ought to be run. Of course, the purpose of all this knowledge was the future accumulation of De Beers. These letters provided a rare glimpse into the reproduction of the capitalist mindset. This glimpse, conjoined with my claims about the general importance of family for power, as well as capitalists' obligation — and desire — to contend with family, provides a portion of the evidence that the logic of family played an important role in the accumulation of De Beers.

Family was an indispensable tool in the rise of the Oppenheimer patriarch, Ernest. Further, the manner in which Ernest organized his wealth suggests that he considered the logic of family and the logic of accumulation to be synonymous. This means that the actions which served the bottom line of De Beers were, necessarily, in the interest of the Oppenheimer family, in as much as the family's interests are served by growing wealthier. However, I will argue in the dissertation's conclusion that the family retained its close ties with De Beers and the diamond trade for much longer than they otherwise would have because they were adhering to a logic of family. At no point did they abandon the logic of accumulation. However, for the Oppenheimers, accumulation was pursued as a means to maintain the family's legacy, which was the primary concern, which the family considered synonymous with De Beers and diamonds.

¹ Unfortunately, I had to access the letters second-hand through (Hocking 1973) and (Gregory 1977).

II. Theorizing the Family and Accumulation

Political economy's engagement with 'the family' as an abstract entity has primarily occurred at its theoretical edges. If 'the economy' is, as Caporaso & Levine (1992) claimed, distinct from politics and family, then it makes sense that political economy, as the theoretical domain concerned with the intersection of economics and politics, would have left the family on the outside. Yet, the importance of family as a mechanism of social order makes it almost impossible to ignore. Both of the theories built around the dominant value theories, Marxism and neoclassicism, have practitioners who have taken up the issue of the family.

i. Family and Marxist Value Theory

Frederick Engels (1972) gave considerable attention to the family in *The Origin of the Family, Private Property and the State*. This work developed an assertion made in *The Communist Manifesto* (Marx & Engels 1948) that the foundation of the family under capitalism is "on capital, on private gain" (p. 26). This would put family into the social 'superstructure' built upon the economic 'base.' However, exemplifying their dialectical method, Marx and Engels also asserted that both private property and the division of labour, originated in the family, "where wife and children are the slaves of the husband" (Marx & Engels 1998, pp.51-2).

Although Marx and Engels give family a prominent role in capitalist society, and in the history of capital, this role is completely separated from value-creation and accumulation. As noted above, subsistence wages went to reproduce the household, as a necessary component of reproducing labour. However, the flow of value within the family unit was black boxed by Marx as unnecessary to understanding prices, profits and capitalist dynamics. This means that the family, as a difference-making social mechanism, has no place within Marxist value theory.

Engels (1972) suggested that the liberation of women was predicated on the elimination of the monogamous family unit so that women could enter the domain of “public industry” (Ch. 2). In other words, according to Engels, the work that takes place within the family ought to be commodified in order to actualize its value. However, because the labour of women within the family unit was not waged, they — and the family — remained outside value-based analyses, with its attendant concepts of alienation, exploitation, surplus and accumulation.

It was Marxist feminists who explicitly made the link between the work women were doing in the home and value-creation. Juliet Mitchell (1966) argued that women’s position under capitalism is, ultimately, determined by the economic relations. However, Margaret Benston (1969) criticized Mitchell for keeping women’s household work entirely within the ‘superstructure.’ Benston asserted that although household work, including child care, is not typically considered ‘real work’ since it is not commodity production, the division of labour structurally assigns this pre-market work to women. This, she argued, frees men, as a group, to participate in commodity production, i.e. value creation. In other words, Benston argued, women’s “unpaid labour in the home is necessary if the entire system is to function” (p. 24).

Selma James and Mariarosa Della Costa (1972) made an argument similar to Benston’s, claiming that women’s work raising the family is the labour of labour production. With respect to Marxist value theory, James and Della Costa went further and argued that women’s work within the home was productive of surplus value. They claimed the work women perform in the home provides a necessary service to capitalists and the wages paid to men are “enough for a woman to reproduce him as labour power” (p. 17). In other words, the surplus value of commodity production is contingent not only on the labour power of the men who directly provide the labour, but also the labour power of the women whose labour reproduces the labour

power of men. Against the argument that women's labour is not waged, the pair's argument suggested that men's wages contain the value of the women's work in the household. James and Della Costa even suggest that children, when they go to school, are involved in the labour of developing their own labour capacity. The family, in their argument, is indispensable to capitalist accumulation.

Despite the theoretical developments of Marxist feminists, connecting women's labour within the family to capitalist production and profit, the family nonetheless remains largely outside Marxist value theory. For example, Anwar Shaikh and Ahmet Tonak, in their impressive attempt to create a Marxist national accounting, reverted to the original argument about the place of family and the generation of value. Shaikh and Tonak argued that because work in the household is not commodified and does not create surplus value, it does not factor into their calculation of market activity (Shaikh & Tonak 1994, pp.34-5).

ii. Family and Neoclassical Value Theory

The basic unit of neoclassical theory is the "isolated human datum" mocked by Veblen. The existence of this 'datum' is a necessary, though not sufficient, assumption for the equilibrium theory of prices that constitutes neoclassicists' central claim. The individual in this theory is eternally calculative. All choices are made to the end of selfishly maximizing his or her utility. However, the theory's original thinkers did not intend to completely subsume human behaviour under this assumption. In the preface to Marshall's foundational text of neoclassical thought, he suggested that economists will have to deal with ethical concerns, including the altruism that people display toward their families (Marshall 1997 p. xii).

Marshall took it for granted that a significant component of human behaviour is non-selfish and thought the economic models would have to adjust to account for this feature. The problem, according to Marshall, was the difficulty inherent in trying to measure people's motives. However, he believed that because economists "are concerned with individuals chiefly as members of the social organism," they would eagerly pursue new means and methods of "measuring motives whose action it had seemed impossible to reduce to any sort of law" (p. 25). Historically, however, the opposite would prove true. The theorists became increasingly enamoured of mathematized abstraction. With the formalizations of Paul Samuelson (1947), gone were the concerns of Marshall over how economists would account for the obvious complication that society is more than the sum of self-centred individuals.

Marshall (1997) was certain that economists wished to "deal with man as he is." That included such obviously non-self-interested behaviour as "sacrificing himself for the good of his family" (p. 27). However, once the powerful formal models of Samuelson and the new generation of neoclassicists were in place, economists sought to marginalize, if not outright ignore, the role of these behaviours. Non-calculative interaction among individuals would confound the models and the free-market normative positions supported by those models. Gary Becker was at the forefront of taking the totalized individualist conception and applying it outside the standard domain of economic theory. To that end, he applied utility maximization to marriage.

Becker (1973) theorized that because "men and women compete as they seek mates, a *market* in marriages can be presumed to exist" (p. 814; emphasis in original). Among the calculations that single people are presumed to perform is how much the traits of potential partners will reduce the uncertainty about the "quality" of possible children (p. 834).

Interactions among the family members are also theorized as subject to market-like calculation. According to Becker, the distribution of tasks between the members of a couple will have the same competitive trade-off that one would find in any market transaction. For example, if the husband is the higher wage earner, then the wife's utility will be maximized if she stays home and performs non-market production, supporting her husband. This goes beyond the assumed exchange between monetary and non-monetary activities. All family interactions are given a competitive, calculative basis. For example, Becker argued that "the amount of 'love' required in a family is economized: sufficient 'love' by one member leads all other members by 'an invisible hand' to act as if they too loved everyone" (Becker 1974). Becker's theorization effectively subsumes families under the universal calculative logic that neoclassicists assume orders all social interactions. While Marshall had rejected Bentham's assumption that society was merely the sum of its utilitarian parts, Becker took Bentham's assumption into the domain that Marshall most considered to exemplify consequential non-self-interested behaviour. Family, in Becker's theorization, is just one more mechanism of egoistic and hedonistic utility maximization.

iii. Family and Theories of Business History

While political economists have largely ignored the family from the perspective of value theory, historians have tended to downplay the empirical importance of family for business. First, business studies, at least since Alfred Chandler, have overwhelmingly focused on management. As such, family is connected to business almost entirely in the guise of the 'family firm.' The standard perspective treats family business as a matter of convenience and sentiment that operates at odds with the economic rationales of business. The family members who are

given a role in the firm on the basis of their consanguine relations with the founder(s) are considered typically to be lesser lights lacking the technical or financial acumen that made their ancestor(s) capable and deserving of success. Family firms are considered to be more conservative and constrained by the boundaries of the family's wealth. Eventually, according to this narrative, found most notably in Chandler's work (Chandler 1977; Chandler 1990; Chandler 2006), successful firms will replace hereditary succession with a merit-based system.

This account of family firms as inherently stagnant compared to managerial firms has been much criticized. There is a converse account that suggests family firms offer stability through a stewardship component of intergenerational continuity (Gómez-Mejía et al. 2007; J. H. Davis et al. 1997; Arregle et al. 2007). The stewardship scholars have argued that family owned and controlled firms can make a commitment to their customers and workers, as well as the communities in which they operate (Gómez-Mejía et al. 2007). This claim bolsters my suggestion that other logics besides accumulation are more readily applied within a family run firm. Research supports the stewardship thesis for relatively small firms (Danny Miller et al. 2008), while it is inconclusive for larger firms. In fact, it appears that there are few regularities that can be identified with family firms in general. Roy Church contended that "even in very large firms it would be unwarranted to infer either strengths or weaknesses in performance from the mere fact of family ownership or management" (Church 1986, p.177).

When it comes to understanding the qualities of accumulation, the Chandlerian account, in as much as it deals with the role of family in the upper echelons of power, is problematic for at least two reasons. The first is that families continue to play an important role beyond their equation with a single firm. Beyond the most visible relationships between families and businesses, such as when a family continues to manage a business that may bear its name,

families that gained their wealth through a particular firm will often remain powerful owners. The intergenerational durability of the family composition of the vested interests is a historical fact that expresses the family's role in the distribution of capital. Rockefellers, Fords, Du Ponts and Mellons remain powerful figures even if they are no longer directly linked with either the ownership or management of the corporations that generated their family's wealth.

Many of the descendants of very powerful figures hold prominent management roles and remain inordinately wealthy. Although they may not hold wealth within the narrow slice of the contemporary über-über-wealthy, such as those named in *Forbes* lists, they do continue to control incredible amounts of wealth. The mobilization of that wealth can be used to entice and discipline corporate management. The degree to which a family might close ranks and work jointly, *as family*, needs to be better understood. Perhaps three and four generations after John D., the interests of the Rockefellers are as widely distributed as those of any other group of capitalists and the family lineage means nothing. Or, perhaps those who bear the name, or take pride in their ancestry, will make choices contrary to accumulatory interests in the service of family interest. Such an analysis is, unfortunately, outside the scope of this work.

Secondly, and more importantly for my purposes, families remain an important aspect of many powerful corporations. The largest privately held corporation, Cargill, has been almost entirely owned and managed by its namesake family since the firm's inception. Wal-Mart, one of the most powerful corporations in the world, has made several members of the Walton family into some of the richest people in the world. In the case of Cargill, the logic of family may have a larger role in the corporation's organization, which is perhaps why the company remains private. Conversely, Wal-Mart seems to have eschewed any family logic, although members of the Waltons remain on the board of directors. In and of itself, the fact that companies tend to

progressively move away from particular families, as ownership and management diversifies, is not a sufficient reason to overlook the importance of family, and the effect of family, in the qualitative undertakings of a corporation as it pursues differential gain. At the very least, the power theory of value also tells us that analysis ought to consider the differential role of family in particular corporations as part of their pursuit of differential accumulation. Even more strongly, if family affects the power underpinnings of accumulation, then it becomes crucial for any study of accumulation.

Although Chandlerian business history downplayed the importance of family ownership in business, and gave no consideration to family otherwise, the lesser known, but much respected, business historian Thomas C. Cochran did give family some additional consideration. Family had a role to play for Cochran primarily because he situated business within the broader culture. Cochran located the family-business relationship within various dimensions that challenge the ‘strategy and structure’ rationalism of Chandler. For example, to explain, in part, the greater prominence of managerial, rather than family, firms in the U.S., Cochran (with William Miller) cited the relative permissiveness of American parents (Cochran & William Miller 1961). American children, according to Cochran, were given greater latitude to pursue their own goals and, as such, tended to drift away from family founded firms.

The relationship between family and business identified by Cochran (1972) is of relevance to my analysis is the role of family in “preserving and transmitting traditions and customs” (p. 28), as well as skills and knowledge of business practices. Along with the wealth that capitalists bequeath to their descendants, they also pass along the accumulatory mindset.¹ Cochran acknowledged that there are few detailed accounts of training within the home.

¹ In the language of Veblen, we might say that the vested interests inculcate in their descendants the *sportsmanship* associated with sabotage and absentee ownership (Veblen 1904; Veblen 1914; Veblen 1923).

However, he noted that early American families emphasized the virtue of work and parents began to instill this virtue early (p. 29-30). Cochran argued that parents emphasized both the moral and economic value of the general qualities they sought to pass onto their children. According to these lessons, being honest, frugal and industrious were not only the right thing to do, they were also financially sound practices. If we accept the Protestant ethic thesis of Max Weber (2005), then these parents are teaching their children that accumulation is evidence of their moral virtue.

In the case of the Oppenheimer family and De Beers, there is evidence beyond these general lessons that Cochran described. In fact, Ernest Oppenheimer considered the diamond trade to be uniquely unique and to have peculiar qualities that necessitated unique management. As will be discussed below, he worked to teach his son Harry about the trade so he would understand how it needed to be managed. That education included requiring Harry to spend time at the diamond sorting tables to learn how the stones were graded and priced. Although Harry would also spend considerable time working at Anglo-American, where Ernest was also the Chairman, his father did not offer the same intensive and particular advice on the gold company. In addition to Harry learning Ernest's views on the diamond trade, the continued management of the Oppenheimer family wealth via an ownership vehicle established by Ernest, also suggests Harry adopted Ernest's beliefs in the importance of preserving wealth as a family matter.

iv. Family Among the Powerful

The intergenerational maintenance of the classes is a fairly well established fact (Corak 2004; Corak 2006; Clark 2014). While much concern is directed at the meaning of income inequality and income immobility (Wilkinson & Pickett 2009), little attention has been given to

the role of intra-class dynamics in maintaining and worsening inequality and immobility.

Understanding how family functions among the wealthy would help us to understand this class stability. Yet, the meaning of family among the powerful, including in the accumulation that is necessary to the maintenance of a family's class position, has been largely neglected by political economy. The boundaries of the established value theories are partially to blame for this neglect.

Neither Marxist nor neoclassical theory explicitly deal with the role of family among the wealthy, powerful members of society. In the case of the Marxist analysis, society's dynamics are conceived as the result of inter-class struggle over the value created by labour. Within such a framework, family dynamics among the capitalist class are inconsequential relative to the basic fact of capital's domination over labour. Neoclassicism did away with classes altogether so there are no powerful vested interests about which to theorize. When examining a sea of individuals there is no basis for considering society, let alone social power. The abstract family of Becker's theorization would be as applicable to the poor as it is to the wealthy.

Although Becker (with Tomes) wrote about intergenerational mobility (Becker & Tomes 1979; Becker & Tomes 1994), the theory employed his individualist methodology awkwardly. Becker acknowledged that endowments from previous generations factor into the mobility of subsequent generations, but he did not deal with the utilitarian justification for such endowments. The functional assumption of Becker and Tomes in this work was that "each family maximizes a utility function spanning several generations." The pair suggested that the parents' utility is a function not just of their consumption, but also of the "quantity and quality of the children" (Becker & Tomes 1979, p.1181). In other words, according to Becker, children enter into their parent's consumption function.

For Becker, parents' outlays would be determined by the marginal utility achieved by spending on consumables or spending on their children. Within this theory, parents invest in the improvement of the 'quality' of their children because it generates a utility return. To be clear, this is not a matter of parents expecting an actual material reward. Rather, within Becker's accounts, there is a 'psychic' consumption of the virtues of one's children. In order to avoid the difficult question of why utility maximizing parents would leave any endowment to their children after their passing, Becker ascribed inheritance to "luck," making it a random outcome. Within this theorization, the individual has no particular concern for the endurance of one's descendants in the dominant class, nor is there concern for the legacy of one's ancestors.

While political economists, by virtue of the prevailing value theories, have not concerned themselves with the relationship between family and power, sociologists had their own reasons for overlooking the relationship. C. Wright Mill, in *The Power Elite*, diminished the family component. He asserted that the continuity of the contemporary elite is less dependent on family and more on the relationships established through employment, schooling and social circles (Mills 1999). In some ways, Mill's position parallels that of Cochran, although the latter considered the shift away from family a particularly American change. Mill may be correct in the aggregate — and, even that is questionable — at the level of the particular, I argue, family remains relevant to power. However, because of the abstractions of both political economy and sociology, the family's relevance for capital, power and accumulation have been neglected.

It is worth noting that Mill analyzed power more broadly than CasP, which is focused on capital as an expression and mechanism of capitalist power. In this chapter I have raised the issue of wealth held by families and suggested a family role in capitalist power. Family-held wealth is not wholly synonymous with capital, since wealth can be held in other forms. It is unexamined

and untheorized if those other forms of wealth constitute power. However, in as much as capital is *the* mechanism of accumulation, and if we assume that the wealthy generally want greater wealth, and thereby, greater power, then most of their wealth will be held in some form of capital.

Unfortunately, the other social science disciplines have proven no more capable, or interested, than political economy in generating a theory of family and power among the wealthy. Partially, this is due to the problem of access. Donaldson and Poynting (2007) noted that the few who have studied the wealthy generally have some form of privileged access, such as being wealthy themselves. However, beyond a lack of access, when social scientists have examined power and society, they have generally adopted theoretical perspectives that occlude the role of the family.

For example, the Marxist conception of class dynamics, rooted in the labour theory of value, has been widely adopted even if those theorizing in terms of class have not adopted Marxist value theory in its totality. Anthony Giddens (1984) noted that Marxist concepts were incorporated into sociological work, even when the theorists were not Marxists. Sociologists have given extensive consideration to family as a historical mechanism of power. For example, Max Weber (Weber 1978) articulated how the communal ties of family played a role in authoritarian social orders. However, his historical analysis diminished the role of family within capitalist society as he argued that family ought to be distinguished from business because decisions made in the interests of family are 'irrational' from the perspective of business (Weber 1978, pp.98-9). Similarly, Michel Foucault's power/knowledge approach gives a historical role to family as a power mechanism (Foucault 1978; Foucault 1980). However, analytical use of

Foucault's framework has generally placed the focus on contemporary, formal institutions like the school and the prison.

All of these thinkers' theories could contribute to developing a theory of family, wealth and power. However, as of now, as with Marxist political economy, the other social sciences have not given analytical attention to the role of family in forming and transforming the dominant class. Nonetheless, there have been piecemeal analyses that have examined the wealthy and have provided glimpses of the family dimension (Bronfman 1987; Conniff 2002; W. Davis 2006; Donaldson & Poynting 2007; Gilding 1999; Gilding 2005; Ostrander 1984). One theme that emerges from these works, which draw from myriad sources, including biographies, autobiographies, interviews and ethnographic study, is that family is important to the wealthy and it informs their actions.

The wealthy appear to be heavily occupied with the retention of wealth for and by their descendants. There is a proliferation of popular books devoted to the topic of protecting one's wealth for — and from — the family-to-come (Hughes 2004; Hughes et al. 2013; J. Lee & Li 2009; Martel 2006). Built into these texts is the assumption that the wealthy are intent on dynasty-building. Further, it is assumed that the wealthy must actively work to ensure that dynasty comes to fruition. Simply becoming rich is not enough. Instead, the wealthy must structure their wealth, its management, systems of succession and inheritance to allow members of the prospective dynasty to remain wealthy. The actual steps taken by the wealthy in this regard — whether or not they succeed — are consequential to understanding capitalist power. From the perspective of CasP, the actions of owners creorder society. If significant actions are undertaken for the purpose of establishing and maintaining a dynasty, there will be wide-ranging transformative effects.

The importance of family among the wealthy is relevant to the patterns of ownership and accumulation. Michael Gilding argued that lists of the wealthiest people tend to focus too heavily on individuals, at the expense of “kinship groups.” He noted that many ownership mechanisms, such as holding companies and trusts, serve to preserve family cohesion (Gilding 1999). Gilding argued that these ownership vehicles are coherent agglomerations of wealth that should be regarded as a singular wealth-holding unit, although in the service of a family, rather than an individual. Typically, the family members are distinct from the managers and their control is primarily financial.

While such absentee ownership may lend itself to claims that control has become separated from ownership, *a la* Berle and Means (1991), it also supports CasP’s position that returns are of greater importance than any other goal, including formal, day-to-day control. In general, the ownership vehicle’s mandate would be to “beat the average.” As such, the management of the corporations owned and/or controlled by a family holding company would be beholden to differential accumulation as their performance will be continually judged in terms of the returns they are generating for the family.

Social immobility might have played a role in the ascendance of capital as the modern mode of power. One of Nitzan and Bichler’s strongest claims is that the logic of capital and accumulation has become the dominant social logic, such that capital now comprises *the state*. In the previous chapter, I argued that we should not take this position to mean accumulation has become the singularly determinant force shaping the social order. Rather, I argued, there are other logics, operating on the basis of other interests, that capitalists must contend with, in particular the logic of national interest. In this chapter, I’m suggesting that not only do other logics pose a problem for capitalists, but capitalists may themselves function according to other

logics in pursuit of other interests. In particular, I argue that they operate according to a logic of family. However, as with the logic of national interest, this conflicting logic is brought into alignment with the logic of accumulation: what's good for the country is good for my family is good for the bottom line.

It is possible that the newly wealthy are more likely to prioritize interests other than accumulation, such as technological innovation, serviceability to the community or partisan political goals, and that they are more capable of doing so if they exercise direct control over undivided wealth. If the wealthy were continually rising up from the masses and then sinking back without using their wealth to entrench their descendants among the vested interests, the pursuit of accumulation may always be mediated by these other interests and their attendant logics. The descendants of the newly wealthy, however, conjoined through an ownership vehicle, are less capable of pursuing pet interests. First, ownership is typically divided and the family members may have conflicting interests. Second, as the standard trajectory is for family members to move away from management roles (Landes 2006), the day-to-day management is left to others. In such cases, I argue, the logic of accumulation becomes absolutely dominant. Although other logics undoubtedly inform management decisions, those decisions cannot conflict with accumulation, at least over longer time frames. As such, as wealth gets increasingly monopolized by the descendants of the inventors, innovators and entrepreneurs who became elevated above the masses, there may be an increased drive toward absentee ownership and an emphasis on differential accumulation above all else.

However, an important exception to this argument may arise when family members coalesce *as family* and demand certain courses of action in accordance with other logics. In particular, I suggest that families may enforce decisions that serve the interest of the family

beyond differential returns. I am unable to make general claims about when this may occur, or what its effects on the broader capitalist structures might be. However, I am claiming that precisely such an undertaking occurred with the maintenance of the Oppenheimer family's almost century long dominion over De Beers and the global diamond trade.

III. Diamonds and Family

I have suggested that family transects the diamond assemblage at many junctures. The three intersections that I will consider are: 1) with the masses through the diamond engagement ring; 2) with traders through interlocking trust networks, and; 3) within the Oppenheimer family itself.

The first intersection will be considered only briefly, as the matter has already been discussed in Chapter Six on diamond advertising. The analysis in that chapter described the use of nostalgia within families as a means to stave off a possible second hand market in diamonds. However, here I will give more consideration to the family aspect. Within North American wedding traditions, the diamond engagement ring serves to signify the intention to form a new family. Diamonds, given and worn in a particular manner, have been made an important component of family-formation. Over a longer term, however, maintaining the meaning of a diamond for subsequent generations has been important for De Beers accumulation. First, these diamonds become carriers of the tradition that informs the diamond engagement tradition. Second, these diamonds could pose a significant threat to De Beers position in the trade if a substantial second hand market emerged.

The second intersection involves the movement of diamonds among the merchants who occupy the trade between De Beers and the retail market. This level of trade depends on mutual

trust (L. Bernstein 1992; Richman 2006). Whether in New York, Antwerp, or Tel Aviv, traders will exchange thousands of dollars in stones with only a handshake. Family, especially inter-family marriage, figures prominently as an indispensable, and invaluable component of this trust, which has been built up over generations. In one sense, inter-family relations are invaluable precisely because they are outside the domain of exchange. There is no amount of money that could buy someone a position of trust in these networks. Yet, these inter-family relations have been valued in the capitalization of De Beers. If this system of trust were to breakdown, it could hamper the flow of diamonds, causing a redistribution of power within the trade. While the inter-family trust aspect of the trade has not likely been directly evaluated in the pricing decision of market assayers, it is nonetheless a factor in those calculations. Family, for the traders, is paradoxically irreducibly valued. While this facet of the trade is not strictly under the control of De Beers, the company still concerns itself with the trade, as its accumulation depends on a relatively smooth flow of diamonds to the masses.

Finally, the third intersection attempts to understand how family factored into the accumulatory efforts of the Oppenheims. The relationship between the logic of family and the logic of accumulation may be ambiguous and hard to pin down, but, as I shall demonstrate, this relationship is both real and important. Unfortunately, the sources of information on internal family decision-making are few and far between. I have relied on an assortment of books that tend to tell the same tales about the Oppenheims. The texts, which are mostly popular in their tone, tend toward either aggrandizing the family as superhuman geniuses or denigrating them as evil masterminds. My analysis will begin from the position that the Oppenheims were: 1) undeniably powerful and, 2) driven to maintain and expand that power. Family, I will argue, has

facilitated and contradicted the Oppenheimer's accumulatory interests as it is both a mechanism of accumulation and an interest in and of itself.

Family, for my purposes, does not transcend family members' acknowledgements of it. Genes and family names are not sufficient to define a family. Rather, what defines a family is the maintenance of relations considered by the members themselves to be family relations. Richard Conniff (2002) wrote, "Family is, in a sense, a voluntary relationship." As such, the wealthy "sustain themselves by supplementing blood connections with a looser, almost trial sense of identity, a collective loyalty to family legend" (p. 283). Consider, for example, that Harry Oppenheimer included in his inner circle both his son, Nicky Oppenheimer, and his son-in-law, Gordon Waddell. Waddell remained a confidant of Harry's even after he divorced Harry's daughter. The closeness of the relationship, and the general favouring of family members, suggests Harry continued to regard Gordon as a member of the family, even if the vernacular sentiment is that divorce severs such ties. It appears that Gordon qualified by virtue of 'loyalty to family legend.' Additionally, his qualification to be a family member may have been augmented by his role in the business.

Families transcend the 'household' category that both Marxist and mainstream theorists — as well as marketing researchers — have generally given economic consideration, partially for reasons of statistical simplicity. Families are multi-generational and will usually exist across multiple, shifting households. Children move out, they marry, they have their own children. This dynamic is an essential component of dynasty building. Additionally, people who are not blood relations may get family status as 'aunts' and 'uncles' or as Godparents. Children and parents get disowned. Cousins and great-relations lose touch. The process of demarcating the boundaries of a family are complex, with both material and expressive components that enroll many other

institutions. This process will be of particular significance when I consider the role of intra- and inter-family relations among diamond traders. For many of the traders, family relations are intimately connected with their Jewish ethnicity.

Family has its own logic. As I argued in the previous chapter, the ascendance of the logic of capital and accumulation has been, in part, due to its malleability. The qualitative undertakings in pursuit of gain are able to leverage, conjoin and align themselves with other logics, as long as those logics are not directly contrary to accumulation itself. Those qualities, and the differences they make, operate at every scale, including the very granular and detailed. Family is no exception. The ways in which family has contradicted and buoyed the logic of accumulation, including at the scale of intra-family, inter-personal interactions, are relevant to understanding the maintenance of the capitalist hierarchy and the endurance of the capitalist mode of power.

i. Family and the Masses

In the United States and Canada, diamonds are an almost indispensable component of family formation.¹ The standard trajectory of a heteronormative couple is to become engaged as a signal of their intention to form a new family. A diamond engagement ring remains the norm. The indispensability moves in both directions. As noted in Chapter Five, jewellers considered diamond engagement rings their “bread and butter.” The tight association between diamonds and family formation extended back before the origins of De Beers. Cecil Rhodes reputedly thought

¹ Although De Beers took its advertising to overseas markets, it was much less successful in entrenching the diamond engagement tradition in those markets, except for Japan. Modernizing Japan, in the post-war era, embraced diamonds as a symbol of the West. From an almost non-existent practice in 1967 when the marketing in Japan began, by 1981 diamonds were given in almost 60 percent of Japanese engagements (Epstein 1982b).

supply quantities should be determined by the number of American engagements each year (Jessup 1979, p.10).

In response to waning American demand for diamonds, De Beers inserted itself more directly in the relationship between diamonds and family formation. Through its advertising De Beers sought to amplify the meaning of a diamond to a new couple. It needed the final demand of the masses as the ultimate source of profit. In Chapter Six, I primarily focused on the advertising's connection between diamonds and romance. However, the advertising spoke to the issue of family beyond the immediate formation of a new family. The text of the advertisements spoke to men's aspirations for a dynasty. As one advertisement suggested (see Image 4.1), the diamond "institutes a new dynasty which will bear his name beyond his generation." Because of the diamond's imperishability, the engagement ring would be the bearer of the family's beginnings. This was part of encouraging men to buy the most expensive gem they could afford. The diamond had to be suited to the task of representing the man's aspirations, including those for a family dynasty.

I have argued that De Beers, with its advertising agency N.W. Ayer, was successful in its efforts to entice diamond purchases. What is less clear is how those sales connect to the meaning formation and transformation suggested in the advertisements. Susan Falls (2008) noted, "A diamond in an advert is under a different interpretive regime than that on the hand, or ear or neck, and consumer interpretations of both adverts and diamonds vary considerably" (p. 449-50). Did diamond buyers actually intend the stones they bought and gave to serve as representatives of their aspirations? Did they imagine their descendants would view the diamond engagement ring as a remainder of the family's formation? Although the resale value of diamonds is notoriously poor (see Epstein 1982a), even a few thousand dollars can be enough enticement for

some. As a diamond ring is an indivisible form of wealth, and it has been noted that “wealth tends to separate everybody” (Peter White quoted in Conniff 2002, p.285), the stone could serve as a source of intra-family contention.

Falls (2005), in her dissertation on the relationships people form with diamonds, related a personal story of being given a diamond ring by her grandmother (p. 1-2). The ring had been given to her grandmother by her grandfather in the 1920s, a few years after her grandparents married. Falls stated that the ring connects her to her grandparents, but also “to my greater family, and an entire lifetime of both memories of the past and ideas about the future that my grandmother and I have shared” (p. 2). The diamond Falls wears was bought before De Beers began advertising stones. We have no idea what the meaning of the stone was to her grandfather when he bought it. However, the connections Falls and perhaps others like her make with the stone cannot be dissociated from the intergenerational meaning that the advertisements constructed.

The argument by Falls is that consumers’ relationships with commodities cannot be strictly understood in terms of the intentions of the capitalists as expressed through advertisements and elsewhere. Rather, consumers are “creative, idiosyncratic, and even playful” in their engagements with things. In the case of diamonds, she wrote that “adverts’ impact on meaning-making most forcefully works on imagined or generic stones, or those of social others, and less on diamond consumption itself, which is largely about one’s own gems” (Falls 2008, p.463). However, these two indexes — the generic and the particular — cannot be strictly dissociated. Consider that advertisements are generally based on market research that attempts to discern regularities among the contingent particularities of consumer interpretations. Those

regularities then inform the advertising campaign that becomes fodder for more creative particularization.

Undoubtedly, Falls' feelings about the ring and how it connects her to her family are sincere. They are neither reducible to, nor independent of, the meaning-making that De Beers' advertisements participated in. The meaning of diamonds as an intergenerational connector was exemplified when her grandmother gave her the ring while she was alive, so there was "'still time for us to enjoy it,' to see it together on [Falls] hand instead of on [the grandmother's], rather than 'wait until it was too late'" (Falls 2005, p.2).

Falls' (2005) personal story of her grandmother's diamond is augmented by others she interviewed for her dissertation. She noted that family diamonds were, for some of her interviewees, "markers of kinship" (p. 192), which is essentially the meaning that De Beers' advertising sought to construct and/or amplify. In some sense, the intergenerational meaning of diamonds could be thought to undermine De Beers' accumulation. Some of those interviewed by Falls noted they had been given the rings of ancestors when they got engaged. However, most of the women wearing an ancestor's ring also suggested they would not otherwise wear a diamond. As one interviewee stated, "I am not really that into diamonds" (p. 86). Such diamond wearing served the general meaning-making of the diamond, even if De Beers could not directly profit from sales to these particular women.

These diamond-wearers, despite not being 'that into diamonds,' still serve as conduits of the meaning of diamonds. This meaning-making is almost as important as direct sales, since it keeps diamonds an obligation of engagement and an object of intergenerational meaning. These diamond-wearers are also another example of how the very particular are nonetheless matters of concern to De Beers. These women aren't personally known to De Beers. However, their

diamond decisions will be impactful for its future profitability. As such, although these women are not directly translated into the company's valuation, they get encapsulated within calculations that attempt to ascertain the future of the diamond market.

I have repeatedly asserted that De Beers did not invent the connections between diamonds, romance and engagement. However, they appear to have invented the intergenerational meaning of diamonds. This is not to suggest the attachment that people have to their ancestors' diamonds is entirely the product of De Beers. Falls' point is well made: consumers have a creative role in the meaning of commodities. But, that creation has advertisements as both ingredients and context.

In Chapter Six, I noted that De Beers was motivated to encourage intergenerational attachment to prevent the emergence of a second-hand market. It appears to have succeeded. However, I also suggested that because we are only two generations removed from the first generation subject to De Beers advertising, and because the current generation had personal contact with that first generation, it is too early to judge. But, as the stones pass down, if they are imbued with new remembrances, the intergenerational meaning can be renewed.

ii. Family and the Traders

As diamonds move from De Beers to consumers they pass through a complex layer of numerous, widely dispersed diamond traders, cutters and jewellers. De Beers gained some understanding of the jewellers through the initial survey conducted by N.W. Ayer, as examined in Chapter Five. In order to gain and maintain an understanding of the other participants, De Beers had Ayer gather and share intelligence, such as the wages paid to diamond cutters in New York City. The company wanted to be knowledgeable about the conditions of the trade.

De Beers actually retained some control beyond its initial sale by virtue of its selling structure, as described in the introduction. The company granted rights to a limited number of sight holders who were awarded take-it-or-leave-it boxes of stones. De Beers “actively monitors the decisions and activities of sight holders” (L. Bernstein 1992, p.118) and those who contravened its rules, such as reselling uncut stones without permission, lose their access (Epstein 1982b, pp.57-65). Once the stones have been sold by the sight holders, however, they effectively disappear from De Beers’ view into the complex global network of interconnected traders.¹

The traders have a conflicted, love-hate relationship with De Beers. One trader stated this clearly:

I hate De Beers. ... But if they were not in business ... then you can have this whole office and everything in it. ... Because if they are gone, it is worth nothing. The whole place, all the goods — nothing! (quoted in Hart 2002, p.114).

Documents from the DoJ antitrust investigation also reveal the conflicted feelings of traders toward De Beers. Officials noted that the traders were largely hostile to DoJ inquiries. As such, the DoJ valued highly those from the world of diamonds who expressed their discontent with the cartel and offered to help expose possible illegal activities. While De Beers’ control was despised, the reason for its control — maintenance of stable prices and supply responding to demand — was generally accepted. De Beers was considered a necessary evil.

The make-up of this middle layer of the diamond trade — between De Beers and the retail market, particularly in the years of my focus, was quite homogeneous.² The traders were

¹ Theoretically, because De Beers’ contract with sight holders stipulates that the former can examine the latter’s records, they can track the stones one sale beyond the sight holders. However, they hold no such leverage beyond the next layer of buyers.

² Much of the material in this section comes from Dina Siegel’s excellent ethnography of diamond traders, *The Mazzel Ritual* (2009).

largely of European descent and were overwhelmingly Jewish. Many of the traders had deep family roots in the diamond trade. As briefly noted in the previous chapter, the Jewish connection to the diamond trade emerged, in part, as a response to pervasive European anti-Semitism. The connection was initially made when Jewish traders carried the limited quantities of diamonds exported from India to Europe. Such long distance trade of valuable cargo was made possible by the interconnections among the Jewish diaspora that extended across Eurasia. This network existed, in part, from having fled persecution. The trust relationships between disparate communities were founded on family bonds and shared ethnicity (Tilly 2005).

The initial relationship of Jewish traders and diamonds was solidified and intensified by European restrictions on the occupations available to Jews (Richman 2006). Additionally, as noted in Chapter Seven, diamonds were a compact form of wealth. When faced with persecution, members of Jewish communities could flee more easily with diamonds than with other kinds of wealth. It was the movements of Jewish peoples that established the diamond trading and cutting centres in Antwerp, London, New York and Tel Aviv.

Jewish traders were also among the early immigrants to Kimberley, South Africa for the diamond boom. Established London jewellers sent representatives to buy the extracted stones. As will be described in the next section, three members of the Oppenheimer family, including Ernest, went to Kimberley to work in the diamond trade. Their positions were capacitated by ethnic and family relations that would be integral to Ernest's eventual ascendance to domination of the global diamond assemblage.

Although there are structural reasons why Jews were drawn toward the diamond trade, Barak D. Richman noted that these do not explain why the Jewish traders succeeded, and continue to succeed, against non-Jewish traders (Richman 2006, p.387). In her study of the

diamond trade, Dina Siegel found that “trust has always been, and still is, the basis of the diamond trade” and the “origin of this trust lies in close family ties” (Siegel 2009, p.1). Richmond, as well as Lisa Bernstein (1992), argued that this trust enables lower transaction costs. Those lower costs can improve the margins of the traders, which was a concern for De Beers. Despite its nearly absolute domination of rough stone sales, De Beers had to leave some profit for the other participants in the trade. It was in De Beers accumulatory interest when the traders were able to lower their costs.

For many reasons, the liquidity of diamond traders fluctuates greatly (Richman 2006). This fluctuation requires ready access to credit to facilitate deals when traders do not have cash reserves. Credit is such a vital part of the diamond trade that it has been suggested the trade is an “implicit capital market” (L. Bernstein 1992). Extending credit is a source of risk and, as Siegel argued, “One of the safest ways of reducing risk has always been and still is doing ‘family business’” (Siegel 2009, p.65).

Richman (2006) noted that the diamond transactions among many of the New York diamond traders violate the simple game theory model of trust where both parties have to know that the present value of future transactions exceeds the one-time gain from cheating (p. 393). Because the margins to traders are small, and the value of stones being traded on credit without any form of contract are very large, there are significant financial incentives for deception. Therefore, it is not individual utility maximization that keeps the diamond traders trustworthy, he argued. Rather, it is because of their embeddedness in their communities and families that the system of trust endures. Families’ reputations depend on their members’ behavior. A good reputation allows them to participate in handshake deals. A family’s reputation is “built over time and passes to descendants” (Siegel 2009, p.66). One dealer is willing to extend credit to

another because the former knows even if the debt is not repaid by the debtor there are family members who can and will make the repayment. According to Siegel, this family trust structure is formalized in Israel, where a new member of the Diamond Exchange needs a guarantee that his father will take responsibility for his obligations (p. 66).

Although Jewish traders have dominated the trade for several centuries, recent decades have seen Mumbai become a major diamond trading centre. In large part, this is due to the availability of relatively cheap skilled labour for cutting stones. As such, Indian traders have become prominent in the global diamond assemblage. Yet, Siegel noted that they also rely on family connections as a basis for trust. As with the Jewish traders, reputation is paramount for the Indian traders if they are to be able to access the credit necessary to conduct trade. Part of that reputation is one's background and the make-up of one's family.

The entities that operate in this layer of the global diamond assemblage range from multinational corporations to individual operators. However, for all of the traders, my simple assumption is that they are operating according to the logic of capital and accumulation. The trades are intended to make them gains. Such intermediaries would be dismissed by traditional Marxist value theory as simply 'buying dear and selling high' without adding any value to the diamond. However, the movements of the stones among the traders is a sorting process as traders use information they have compiled to meet known and anticipated demands. This is not as simple as matching the grades desired with the stones available. As was noted in Chapter Four, there are numerous categories of stones beyond the popular 4Cs. Although the cut stones have a desirable homogeneity, which made them suitable for engagement rings (Proctor 2001) — a stone for every income — they are actually highly differentiated. This is only more true for the rough stones. Finding a stone of the shape (for rough), cut, clarity and size desired depends on

the distributed knowledge of the traders who can quickly align qualitatively differentiated desire with the stones changing hands.

Recall that De Beers distributes stones in ‘series.’ That means they provide sight holders with a box containing a range of qualities in proportion to those they have in stock. It is then up to the sight holders to distribute these to cutters and traders based on what the latter are looking for: “Dealers continue to resell the rough and polished diamonds, in increasingly smaller bundles, until they reach a jewellery manufacturer for commercial sale” (Richman 2006, pp.390-1). The packets of stones will be mixed and matched as the traders assess the qualities in pursuit of certain stones. Traders have to quickly grade the stones to anticipate the prices they expect to receive before they offer a price.

The mainstream assessment of this process would focus on the ‘human capital’ that is supposedly being remunerated for its marginal contributions to the increasing value of the stone as it makes its way toward the final consumer. However, as we noted, being able to make these trades depends on more than one’s individual knowledge of diamonds. The traders benefit from, and depend on, their community and family relationships. Traders deal with each other on a trust basis. A good reputation is required to even being to employ their knowledge. The role of the traders’ families in making their reputations, which they require to be able to make trades, brings the logic of accumulation and the logic of family into total alignment. A trader's family must be maintained as a condition to accumulation.

I am arguing that the family relations on which traders base their reputations are an indispensable component of the value of the diamonds, which end up containing the profits the traders accrue through their mark-ups. From the perspective of CasP, this is a function of their power over the broader social structure. While, to my knowledge, no CasP analysis has been

applied at such a scale, the framework remains applicable. The small scale diamond traders control next to nothing compared to De Beers. But, the entities and processes they do control — influence may be a better word — including their reputations, functions in determining the profits they can gain. If one were to capitalize a trader, it would be impossible to overlook the role of their reputation in the ability to generate gains. Further, their families are an irreducible component of the qualities of their accumulation as they pertain to their reputations and their ability to gain credit and make trades.

iii. De Beers and the Oppenheimer Family

The role of family in the Oppenheimers' relationship with De Beers and the diamond trade can be considered in relation to three temporal phases. The first phase is the ascendance of Ernest to the zenith of the global diamond assemblage. Although undoubtedly a highly capable individual, Ernest is far from the celebrated 'self-made man.' He made extraordinary use of family connections to achieve his success. In particular, various cousins in the diamond trade in both London and Kimberley, plus his brothers, two of whom preceded him in the trade, were instrumental.

The second phase is after Ernest attained control of De Beers. The chairmanship of the company then passed through two more generations of Oppenheimers. The focus will be on Ernest's relationship with his son Harry, who was groomed to take up dominance of the trade following his father. In the process, the Oppenheimers became — and remain — the richest family in Africa.

The third phase begins with the 2001 end of De Beers' policy of supply control and its subsequent privatization in a joint venture of the Botswana government, Anglo American and the

Oppenheimer family and ends with the Oppenheims' sale of their stake in 2011. I will consider this phase in the conclusion of the dissertation, when I deal with the contemporary era. Briefly, the act of privatization can be viewed, in part, a matter of legacy preservation. The Oppenheims have an extraordinary attachment to diamonds and De Beers, owing to the company's importance in their rise to prominence. Although the family likely believed they were making a smart financial move when they acquired a 45 percent stake with the 2001 privatization, it was also incredibly risky tying so much of their fortune to a single venture. Taking on that risk, I argue, was in accordance with the logic of family interest beyond the logic of accumulation.

a. Ernest's Rise

As noted above, the Oppenheimer family's relationship with diamonds began via their relatives who were already in the trade. Exemplifying the hypothesis of the 'strength of weak ties' (Granovetter 1973), the family took advantage of the fact that several generations of inter-marriage among leading Jewish families meant even geographically distant families "were to all intents and purposes members of one very large family" (Jessup 1979, p.13). Born in Germany, five Oppenheimer brothers all moved to London, where four of them entered the diamond trade. Their point of entry to the diamond trade was Anton Dunkelsbuhler, a London diamond dealer who first worked in Kimberley as a diamond buyer for another jeweller. While in Southern Africa, Dunkelsbuhler bought a stock of diamond that he used to establish himself as a dealer back in London. He was also a distant cousin of the Oppenheims (Jessup 1979). Although we do not know why he hired a succession of brothers, given their lack of experience in the diamond trade, ethnic and family connection had to be a factor.

Bernard, the oldest Oppenheimer brother, was the first to work for Dunkelsbuhler. He became Dunkelsbuhler's representative in Kimberley and when Dunkelsbuhler became one of the original members of the Syndicate, the agreement was signed on his behalf by Bernard. After Bernard moved on to another firm, still in the diamond trade, he was succeeded in his position at Dunkelsbuhler by the second oldest brother, Louis.

In 1886, at 16, Ernest first went to work for Dunkelsbuhler as a sorter in London. Then, in 1902, he travelled to Kimberley, at the behest of Louis, who had become the chief evaluator for the Syndicate. Ernest became the third Oppenheimer to serve as Dunkelsbuhler's representative in the Southern African diamond town. Only 22, he replaced a non-family relation who had lost the confidence of both Louis and Dunkelsbuhler (Hocking 1973, p.21). The family relation carried with it trust that was augmented by the sorting skill Ernest had reportedly displayed.

When Ernest first arrived in Kimberley he stayed with another cousin, Fritz Hirschhorn. Hirschhorn was a representative of Wernher, Beit & Co., the largest shareholder in De Beers, and the most powerful member of the Syndicate. He occasionally sat in on De Beers board meetings and was highly regarded among the diamond elite of Kimberley. Through Hirschhorn, Oppenheimer was able to move among the wealthy and powerful of Kimberley and the diamond trade. He was even able to witness a board meeting of De Beers. By virtue of his relations, Ernest arrived in Kimberley with a respectable reputation (Jessup 1979). Despite the importance of Hirschhorn for Ernest's entry into the diamond trade, they would eventually be on opposite sides of the struggle for control of De Beers.

After the brothers used 'weak ties' to enter the diamond assemblage, they used 'strong ties' among themselves to increase their power. One of the first serious challenges to De Beers'

control over the diamond trade was the discovery of a new diamond pipe in the Transvaal region. Previously, the diggings in the region had been small and posed little threat to De Beers' control of production. However, the new pipe was larger than all the Kimberley pipes combined.

All of the Syndicate's representatives in Kimberley travelled to view the new source, including Ernest. It was his brother, Bernard, in his position with another company, outside the Syndicate, who signed with the new mine, Premier, to purchase its output. Ernest and Louis advised Dunkelsbuhler to invest in the mine, which he did, while other Syndicate members "were lukewarm at best and in several cases downright scornful" (Hocking 1973, p.33). Although the mine, and its decision to market the stones outside the Syndicate, threatened the monopoly position of De Beers and the Syndicate, the stake served the financial interests of Dunkelsbuhler. When the mine proved highly profitable, it also served to improve Ernest's standing in the firm. However, the stake had been taken at the expense of the other Syndicate members and was part of the developing friction between Ernest and his cousin, Fritz Hirschhorn.

The death of Dunkelsbuhler in 1911 saw the promotion of Louis to the position of managing director. Edward Jessup (1979) wrote that "it appeared that the firm of A. Dunkelsbuhler became the Oppenheimer family concern" (p. 60). The Oppenheimer family's power within the diamond assemblage expanded further the following year when Louis became a director on the board of Consolidated Mines Selection (CMS). The position had been gained through financial maneuvering by Louis and Walter Dunkels, the nephew of Anton Dunkelsbuhler. That maneuvering gained the Dunkelsbuhler firm a large stake in CMS in exchange for Dunkelsbuhler's mining interests in Southern Africa. This would prove consequential in Ernest's eventual collapse of the Syndicate and De Beers' monopoly.

CMS was partially owned by German capitalists. During WWI, CMS came under fire for that ownership and the participation of Germans on the company's board (Hocking 1973; Jessup 1979). At the company's behest, Ernest took on the task of figuring out how CMS might resolve the situation. Part of the outcome of that efforts was the acquisition of a 50 percent stake in CMS's Southern African mining properties by Ernest. This acquisition was made possible by support on the CMS board from his brother, Louis. However, Louis also provided Ernest with financial backing through Dunkelsbuhler. Those properties proved valuable when gold was discovered. In 1917, Ernest put up his interest in the CMS properties to back his stake in the newly formed Anglo American, of which he became the chairman. Jessup noted that despite the strained relations between Ernest and Fritz Hirschhorn, his cousin was one of the first public shareholders in Anglo American. Jessup (1979) wrote, "Family traditions died hard in the closely-knit tribe of Oppenheimer" (p. 99).

However, "the final disenchantment" in Hirschhorn's relationship with Ernest came two years later (Jessup 1979, p.112). Through Anglo American, Ernest gained control of diamond properties in South West Africa that had been owned by German interests before the war. In doing so, he thwarted the efforts of Hirschhorn and the De Beers directors who tried to make the same acquisition. These properties were organized under a new corporation, Consolidated Diamond Mines and Ernest was named the CEO. Anglo American also negotiated to handle the output of West African diamond fields being developed by African Selection Trust (AST). Diamonds from both sources were then sold to the Syndicate.

Ernest made use of intricate, and complex, financial arrangements to slowly augment his control over the diamond trade. In doing so, he leveraged his family connections, as well as

political connections made during years spent as the mayor of Kimberley. Eventually, Ernest controlled enough of the global diamond output that he was able to directly challenge the cartel.

Ernest faced much opposition from the De Beers insiders, in particular from his cousin, who was a representative of L. Breitmeyer, which, together with Barnato Bros., effectively controlled De Beers. They also had the largest stakes in the Syndicate. In the struggle to augment his position in the diamond trade, Ernest leveraged one more family connection. Although he was alienated from Hirshhorn and Breitmeyer, he appealed to yet another cousin, Gustav Imroth, who was in charge of Barnato's diamond interests (Hocking 1973, p.116). Eventually, Barnato Bros. joined with Ernest, which precipitated the collapse of the existing Syndicate and the emergence of a new Syndicate under Ernest's control. He was appointed chairman of De Beers in 1929.

Ernest reorganized the cartel by selling to De Beers the diamond properties he controlled in exchange for shares. He then created a diamond marketing company, the Diamond Corporation, of which he was the chairman. De Beers owned 50 percent of the new marketing company and previous Syndicate members owned the other 50 percent. L. Breitmeyer, however, was excluded from ownership in the Diamond Corporation. That meant Ernest was excluding his own cousin. Hirschhorn stepped down from the board of De Beers before the first meeting with Ernest as the chairman.

Family connection alone does not explain Ernest's growing dominance. Neither his brothers nor his cousins were able to reach the pinnacle of the global diamond assemblage. Yet, these connections cannot be dismissed. The weak ties with cousins had allowed certain maneuvers while the strong ties with his brothers had facilitated others. In the process, he became the most powerful man in the diamond trade. The logics of family and accumulation

were fully conjoined, although his relationship with his cousin Fritz seems to have been a sacrifice to the logic of accumulation.

b. From Ernest to Harry

Exemplifying Thomas Cochran's point that family serves as a conduit for knowledge and traditions, Ernest explicitly worked to bring his son Harry to his position on the central importance of supply control. Anthony Hocking (1973) wrote that Ernest was known to discuss business with both his sons even when they were very young. Later, when Harry went to war, Ernest regularly wrote him letters. The letters' contents mixed family and business concerns. Among the business topics was the importance of maintaining supply control. Ernest's educational efforts were a means to maintain the organizing principle of the entire diamond trade. Supply control had been the central principle since De Beers and the Syndicate had consolidated production and marketing. Ernest's struggle to gain control of the cartel was motivated, in part, by a conviction that De Beers was not aggressive enough in maintaining its strategy of single channel selling.

Through his son, Ernest intended to perpetuate the practices associated with supply control beyond his direct management. The period of Harry's integration into the management of the Oppenheimer family concerns coincided with the era of my analysis. He began working as a diamond sorter in 1930 and quickly rose into an executive position at Anglo American by the mid-1930s. Although Harry was at war when the 1940 inflection in De Beers differential accumulation occurred (see Figures 1 and 0.3) he was subject to Ernest's lessons before, during and after this period.

Ernest's consolidation of control over De Beers concentrated much of his wealth in the company. This meant that protection of the diamond trade's profitability was synonymous with protecting his own wealth. Ernest intended his growing wealth to sustain future generations of his family. After the death of his first wife in 1934, and of his son Frank in 1935, Ernest set up a private holding company, E. Oppenheimer & Sons. Hocking (1973) wrote that the firm was created to "protect the family interests," which were, he claims, "the crux of the matter" (p. 166). However, demonstrating the conjugation of the logics of family and accumulation, Jessup noted that the private company "was destined to play an important role in the financing of the Anglo American Corporation group of companies, including its diamond interests" (Jessup 1979, p.211). Although the Oppenheimer family recently divested its shares of De Beers, which also ended the succession of Oppenheimers at the helm of the diamond firm with Ernest's grandson, Nicky Oppenheimer, the family continues to manage its wealth through E. Oppenheimer & Son. This continuation will be discussed further in the conclusion.

Ernest's interest in diamonds, according to his various biographers, was a passion project (Gregory 1977; Hocking 1973; Jessup 1979). He was reportedly enamoured with the stones, which contributed to his skill as a sorter. Conversely, Harry is said to have had no such attraction to diamonds. Nonetheless, his father felt it necessary that Harry be knowledgeable about the grading and evaluation process. Ernest considered "the diamond industry as Anglo [American]'s corner stone, and wanted his son to feel the same way about it" (Hocking 1973, p.149). So, in 1930, shortly after his father had finalized his control over De Beers, one of Harry's first jobs in the family business was sorting diamonds; the same as his father's had been.

Later, Harry moved onto Anglo American where he was working under an uncle, Leslie Pollak, his mother's brother. However, according to Hocking, Harry was "soon monopolized by

Ernest” (Hocking 1973, p.150). He was surrounded by family, but it was the strong tie with his father that was the most consequential, as the latter intended to educate Harry, his heir, in the family business.

I noted above the deaths of Ernest’s first wife, Harry’s mother, and of Ernest’s younger son in 1934-5. Between the two, in June 1934, was the death of Pollack, who had been at the helm of Anglo American while Ernest was mourning his wife’s loss. Pollack’s death left Harry, who was only 25, as one of the senior managers of the company. Family connections had allowed him to move from the diamond sorting tables to the upper echelons of a major mining company in just four years. Now, he was effectively in control. Pollak’s death also resulted in Harry’s appointment to the board of De Beers.

Leslie Hannah (1976) argued that intra-family succession was a general means to provide competent managers in lieu of the still to come professionalization of management (p. 25). The stability of intra-family succession that comes from intergenerational loyalty, which is part of the logic of family, can reduce uncertainty and generate confidence among creditors and investors. Although the professionalization of management was occurring concurrently with Harry’s rise, he had received no management training other than the informal teachings of his father. Today, the appointment of a board chairman’s 25-year-old son might generate a lot of negative commentary, and a lot of share trading activity. There were no commentaries on the appointment of Harry Oppenheimer, so we cannot know exactly how investors responded. However, it is worth noting that from Pollack’s death on Jun 29 until the end of July, De Beers’ shares lost 12.5 percent, compared to a two percent decline for London Stock Exchange, where De Beers was traded.

Of course, there are many factors accounted for by the capitalization of every company. However, the possibility Ernest was more interested in a personal fiefdom than in the general profitability of the company, and therefore the returns to the investors, may have spooked market assayers. If it did, however, the fear was short-lived. Keeping with the extreme fluctuations of De Beers, by the beginning of 1935, the company's valuation was 17 percent above where it had been at the time of Pollak's death, compared to a four percent gain for the stock exchange as a whole.

Despite being groomed to take over for Ernest, Harry went against the wishes of his father and joined the South African military in 1940. As a member of the British Commonwealth, South Africa was fighting with the Allies, although there was hardly universal support from the populace. The issue had divided the unity government and led to the replacement of Prime Minister J.B.M. Hertzog by Jan Smuts. Ernest staunchly support the Commonwealth. As De Beers was a British-South African company, this was certainly in his accumulatory interests. However, having left Germany to pursue opportunities in London, he also had strong personal regard for the United Kingdom.

Harry explicitly sought service on the front lines and was involved in combat. I argue that this fact, combined with the affection that Ernest felt for the U.K. supports his claims that he wished to support the war effort. In letters Ernest sent Harry during the war, he complained, "Our action in selling industrial diamonds at pre-war rates is not appreciated in the smallest way" (Hocking 1973, p.205). However, Ernest's loyalty to the Empire was not entirely at the expense of accumulation. Rather, like the notion of 'reasonable returns' that I argued in Chapter Seven placed a limit on capitalists, Ernest had adopted a mindset that subordinated, but did not abandon, accumulation. As Hocking put it,

He was working for his shareholders, certainly: but in the greater context of an Empire at war.

Helping the war effort would help his shareholders, and there he saw his duty. There were great profits to be made both in diamonds and copper, he quickly realized: but his responsibility was to keep prices to a minimum, and thereby assist the allied cause (Hocking 1973, p.201).

In sharing his concerns with Harry, Ernest was also maintaining the education discourse that was intended to groom Harry for succession. His perspective on wealth and accumulation was longer term rather than simply satisfying shareholders with the next quarterly report.

Despite his loyalty and sense of duty toward the Allied effort, Ernest did not want his son involved directly in the war effort. Prime Minister Smuts was reportedly also concerned by Harry's direct participation in the war. His concern pertained to Harry's position as the intended successor to Ernest at the helm of Anglo American, De Beers and other sizeable South African firms. According to Hocking, Smuts pressured Ernest to convince his son to return to the businesses and considered it "a matter of crucial importance to South Africa's future" (Hocking 1973, p.192). Smut's perspective expresses the triple alignment of the logics of national interest, family and accumulation.

Ernest had his own desires that conjoined the national, family and accumulatory interests. He wanted Harry to go into politics, as he had. In one of the wartime letters that Ernest wrote to Harry, he sent material in Afrikaans, because he thought it was important his son learn the language, especially if Harry was to enter politics (Hocking 1973, p.199). As was noted in the previous chapter, after the war, Harry did go into politics. In 1948, he became a Member of Parliament for the Kimberley area, just as his father had.

Ernest's letters on the diamond industry were not just to inform his son of the events in his life, but also for Harry's edification. That these discussions were considered, by Ernest, to be educational, is expressed in some of the language. For example, writing to Harry about some

proposed legislation he considered objectionable to the diamond trade, he began: “Let us just examine what can happen if....” (quoted in Hocking 1973, p.2016). He was using the events as a lesson for his intended successor, whom he wished to model after himself. That it was his son was undoubtedly important to him. However, every indication is that Ernest considered himself the best steward of the diamond trade. He was, to his mind, the man best suited to keep the trade profitable. His commentary on the challenges posed to the trade by other capitalists, or by government officials and politicians lacks any sense of conciliation. He dismissed any challenge to his perspective as wrong-headed and misguided. As such, it was important that his son think about the problems that faced the trade in the same manner he did.

One of the lessons he shared with Harry, of particular relevance to De Beers accumulation, was the importance of using wartime demand to draw down the diamond stocks held by the Diamond Corporation. Prior to the war, when demand was low, De Beers had to continue to buy up the output of its cartel partners. Wartime demand was the company’s opportunity to reduce its liabilities. Doing so would be easier if it could shut down its own mines, which the war made possible.

Given the importance of the diamond trade for South Africa, the government leveraged its participation in the cartel, to which it sold stones produced from alluvial diggings, to have a say in the closure of De Beers mines. The company wished to do so when demand was low and it was obliged to continue to buy stones from outside producers. The governments generally objected on the grounds that it would create unemployment. With the war, however, the mine workers were needed elsewhere. So, closing the De Beers mines appeared to be in the national and accumulatory interest. And, Ernest explained all of this to Harry.

After the war, Harry was made managing director of Anglo American. He continued to sit as a director on the board of De Beers. The end of the war brought some difficulties to the cartel. They were dealing with the U.S. antitrust lawsuit. Additionally, some of the cartel's outside producers were beginning to agitate for better terms. Given the U.S. desire to directly access industrial stone supplies without the intervention of De Beers, Ernest considered this a grave threat to the trade. Together, Ernest and Harry proposed a reorganization of the trade that would completely separate the marketing of gem and industrial stones. Ernest incorporated a new marketing firm, Industrial Distributors Ltd., with his brother, Otto, as the chairman. Although reenlisting the outside producers was considered uncertain, a drop in demand for industrial stones after the war (see Figure 6) served as a reminder of the role De Beers played in smoothing out demand fluctuations. As such, Ernest was able to secure new contracts with the cartel's members.

When Harry entered Parliament he did as his father had done and spoke for the accumulatory interests of his companies. His very first speech in the House was against a special levy on diamond mines (Hocking 1973, pp.238-9). However, having adopted his father's lessons, Harry was likely sincere in his explanation that aligned the national interest with the accumulatory interests of De Beers. Namely, he spoke about the importance of protecting the diamond trade from the vicissitudes of demand, and claimed that times of large profit were necessary as a buffer for times of poor sales if the trade was to survive and put funds in the national coffers.

Through the first decade after the war, Harry and Ernest effectively exercised joint control over De Beers and the global diamond assemblage. It was a tumultuous period. In 1933, Ernest had signed an agreement with John Williamson, the owner of a rich mine in East Africa.

Williamson would join the cartel and De Beers would market all of his stones. However, Williamson decided the terms of the agreement were not favourable and began to stockpile his own stones with the intention of marketing them outside the cartel when the agreement expired in 1951. Now, that date was approaching. Much effort by De Beers officials failed to re-enrol Williamson in the cartel.

Eventually, the British Colonial Secretary convinced Williamson to meet with someone from De Beers (Hocking 1973). As the diamond trade was important for South Africa, so too was it important for the U.K. The negotiation team was led by Harry, who convinced Williamson to rejoin the cartel. Harry had succeeded in preserving the supply control his father believed vital to the profitability of the diamond trade.

Ernest Oppenheimer died in November, 1957. Within days, Harry was named as the new chairman of both Anglo American and De Beers. Hocking (1973) noted that “Harry controlled [almost] 40 per cent of South Africa’s gold, 80 per cent of the world’s diamonds, half of Southern Africa’s coal, almost a sixth of the world’s copper” (p. 337). Harry retained Ernest’s insistence on supply control, and he managed to maintain agreements with other producers to market their stones. He also reached an agreement with the Soviet Union when stones were found in Siberia. This was a substantial feat, since the Soviets were vocally boycotting South Africa.

In the early 1980s, De Beers failed to gain control of substantial new sources in Australia. The company’s control over the global flow of diamonds waned. In 1984, Harry stepped down as chairman of De Beers. Unlike the succession with Ernest, the next generation — Harry’s son Nicky — did not take over the chairmanship of De Beers until 1988. However, Nicky would oversee some dramatic changes in the company’s operations. Most notably, for the discussion in

this chapter, was the end of the principle of supply control. The change came in 2001, a year after the death of Harry. One cannot help but wonder if the change had to wait until the passing of the last vestige of Ernest's insistence on the vital importance of the principle, embodied in Harry.

IV. Conclusion.

Family remains a potent, widespread organizing mechanism of the social order. Because the standard political economic perspective on accumulation focuses on production, family gets overlooked. In contrast, CasP frames accumulation as dependent on the qualitatively diverse social order. This diversity means family is likely to intersect with the mechanisms of accumulation. In this chapter, I examined multiple ways family is relevant to the global diamond assemblage and the accumulation of De Beers.

First, engagements mark the beginning of the family and, in North America, the diamond has become the universalized symbol of that event. As such, engagements are an engine of demand, a fact recognized by Rhodes at De Beers' founding and reaffirmed by the company's decision to market directly to the masses. De Beers' interest in the relationship between diamonds and families among the masses extended beyond the sale to a man intending to propose.

As such, De Beers has an accumulatory interest in diamond engagement rings remaining meaningful to members of subsequent generations. The durability of the stones means they retain commodity potential and therefore a threat to new sales. The marketing campaign accounted for this threat and contemporary women cite the diamond tradition, which was contained in the diamonds of their mothers and grandmothers, as a motivation in their own desire for a diamond

engagement ring. Although De Beers did not invent the symbolism of romance associated with the diamond, they did invent the intergenerational significance of diamonds.

The second political economic intersection of family and diamonds I considered was among diamond traders. The traders constitute a layer between De Beers, which sells rough stones, and the masses that buy cut stones mounted in jewellery. In some sense, the political economy of the traders is almost diametrically opposed to that of De Beers. Power is widely distributed among numerous firms whereas with De Beers it is tightly concentrated in one organization. However, family relations connect many of the traders, which is the basis for the trust on which the trade depends. This family-based trust allows the traders' network to incur lower transaction costs and therefore endows them with power unavailable to a collection of independent dealers.

De Beers' selling structure makes use of the distributed system of traders to match the mix of stones pushed onto the market to the demands of the jewellers. The system requires quick and numerous trades. The intra- and inter-family trust allows those trades to occur without the onerous costs of formal contracts.

Although De Beers' was by far the most powerful entity in the global diamond trade, its power was not all encompassing. De Beers effectively stabilized prices through its policy of supply control, and in so doing it determined the costs of rough stones; but it could not capture the entire profits of the trade. There had to be gains for the other diamond firms. The lower the transaction costs of the traders, the less profit De Beers had to give up elsewhere. As such, maintenance of the system of family trust was in their accumulatory interests.

The third intersection I considered was between diamonds and the Oppenheimer family. As a family firm, De Beers had its own unique features. The Oppenheims had not founded the

firm. Rather, Ernest Oppenheimer had managed to enter the trade on the same inter-family trust that continues to function among traders. From his modest entry point, he managed to climb to the trade's pinnacle as chairman of De Beers. In the process, he consolidated production and marketing and helped the cartel regain near unanimous control of the trade. However, Ernest's achievements were not simply the results of a motivated undertaking by an isolated, driven individual. Rather, he depended on family connections throughout his ascent. He had cousins who employed him and facilitated connections with powerful figures in the trade. His brothers supported him logistically and financially. Given the central role played by these family members, it is doubtful that Ernest could have achieved the vast fortune he did without them. Further, and this claim is more tenuous, had he lacked that family support, the future of De Beers would have been in doubt.

Ernest Oppenheimer effectively concentrated decision-making over the firm — decision-making that previously had been split between De Beers, which had a near monopoly over extraction, and the Syndicate, which bought and marketed the stones. Although there were many powerful figures who sat on both sides, there remained fundamental conflicts between them, which, in turn, preventing them from securing control of some important diamond sources. This conflictual structure made it both possible and necessary for Ernest to intervene. While De Beers would continue to struggle to maintain control of the global diamond supply, the elimination of dissension at the top of the hierarchy removed a source of instability.

Once he had gained control of the diamond trade, Ernest worked to retain control within his family. His brothers continued to play important roles in the cartel. However, it was his son Harry, groomed by Ernest to succeed him, who was the most important component of that continuity. Prior to the professionalization of management, the appointment of Ernest's son was

one means to assure continuity and provide confidence to investors. Harry quickly rose through the ranks becoming a director of De Beers with the unexpected passing of his uncle.

Preserving his wealth for future family generations also motivated Ernest to found a private holding company, E. Oppenheimer & Son. He did so in the wake of losing his wife and a son within a single year. The company remains the vehicle for the Oppenheimer family wealth and the current managing director is Jonathan Oppenheimer, the great-grandson of Ernest. It was E. Oppenheimer & Son that owned the 45 percent stake in De Beers when it was taken private in 2001-2. When the family divested that stake in 2012, it ended over a century of Oppenheimer involvement in the diamond trade. Or rather, it mostly ended their direct involvement. The family reportedly still owns almost two percent of the widely held Anglo American, which in turn controls 85 percent of De Beers. Nonetheless, the tight association between the Oppenheimer family and De Beers has been severed.

Chapter 9: Conclusion: Diamonds & De Beers Between Then & Now

I. Introduction

This dissertation was motivated by a graph expressing a clear accumulatory inflection point for De Beers (Figure 1). After a long-term accumulatory decline from the beginning of the 20th century until 1940, the diamond company's fortunes decisively improved. I have tried to account for some of the qualitatively diverse relationships that De Beers had to maintain and/or transform in pursuit of differential gain in general and this reversal in particular. The success of these efforts is implied by De Beers' differential accumulatory gain.

CasP posits capitalization, and more specifically differential capitalization, as an expression of the distribution of power as understood by the powerful themselves. Therefore, differential accumulation is a measure of the changes in the distribution of power. The 1940 inflection point in De Beers' accumulation expressed a regaining of power that had been dwindling for decades. Because capital *is* power, and since capital is finance, *and only finance*, we could be misled to believe that power is strictly quantitative. However, Nitzan and Bichler have stressed that capitalization is a translation of quality into quantity (Nitzan & Bichler 2009, p.124). Power becomes meaningful when it is quantified. First, there must be qualities to quantify. Second, quantification requires measurement. Against the standard value theories of both mainstream and critical political economy, CasP rejects the dual quantity conception that posits nominal financial quantities as representations of underlying real quanta.

I argued that, within the capitalist social order, capitalization is the obligatory passage point of metrological chains that incessantly quantify the world. Those quantifications simplify the interpenetrating complexity of reality, parsing it into commensurable units. However, while

the calculations pull entities apart and then add them back together, the entities themselves, by virtue of being qualitative, will always defy the boundaries of quantification. This is an important part of the on-going recalculation: new products fail to sell, new technologies become cost effective, supply chains are disrupted, contracts are broken, formerly trendy goods become undesirable, substitutions are invented.... The *ex ante* calculations could not contain every relationship and every effect these entities would have within the world. Corporate annual reports are filled with excuses for why sales and profits failed to meet expectations.

This understanding that financial quantities are a simplifying translation of the turbulent complexity of the world's innumerable qualities is the conceptual bedrock of my analysis of De Beers. I moved against the metrological chains that generated the capitalization of De Beers, starting from the quantitative results and tracing them back to key qualitative processes contained within the qualities. My account is not – nor could it be – definitive. It is reductive as a matter of practice, not as a matter of ontology. Trying to tell a truly non-reductive account would result in a tome as ponderous and tedious as the poem described in Jorge Luis Borges' *The Aleph*.¹ It would also be an exercise in futility, since understanding means simplification, not reproduction. Instead, I necessarily selected certain relationships that De Beers' established, maintained and transformed, and that I considered important, and set aside others.

Largely ignoring production, I focused on De Beers' relationship with diamonds, the masses, governments and families, especially the Oppenheimer family. All of these relationships were deemed vital for De Beers' accumulation and, I argued, were matters of concern for De

¹ The protagonist of Borges' story meets a man who reads him several stanzas of a poem he has written. After each one, the reader declares what a magnificent piece of work it is. The protagonist, however, described the selections as "laborious passages" that were "long, formless." Later, the protagonist learns the man has located an Aleph, which is "one of the points in space that contain all points" (280). The weariness of the man's poem is because he is using the Aleph and cataloguing every point contained therein.

Beers. Although De Beers was treated as a powerful entity in these relationships, it could never simply impose its will on others. Power is precarious, as Machiavelli realized. There is no safe, stable equilibrium to be reached. Disequilibrium is the rule and reordering to maintain and augment power is constant. Particular reordering efforts face challenges both from alternative capitalist drives, and emerging from the masses, who sometimes offer organized resistance, as well as indifference and hostility.

In 1889, De Beers had domain over almost every diamond mine on Earth: 90 to 95 percent of the world's diamonds came under the company's control. But, diamonds kept turning up elsewhere and those who had located them sometimes refused to comply with De Beers, threatening the company's operating principle of supply control. As well, the group of owners who exercised control over De Beers, and who were the primary beneficiaries of supply control, failed to aggressively pursue that control. There was strife between the owners of De Beers and the members of The Syndicate, which marketed the stones, despite significant overlap between the two groups. In the context of this tumult among the holders of power, Ernest Oppenheimer conjoined financial acumen with family connections to seize control of De Beers. He leveraged the mines that were outside De Beers and re-established some of the company's lost control, only to have demand for diamonds plummet with the Great Depression. While one qualitative change – the consolidation of control over diamond sales – worked in favour of De Beers' differential accumulation, another – the onset of the Great Depression – worked against it.

Meanwhile, subtle changes in the American diamond engagement ring tradition were passing among the masses. There was a movement away from the engagement ring tradition to include very small diamonds in the wedding band itself. These changes were contrary to the interests of De Beers. Although De Beers saw some recovery of its profits in the middle part of

the 1930s, the growth was short-lived and it resumed its long-term, and volatile, decline (Figure 0.3). Conversely, American use of industrial diamonds was slowly increasing. Nineteen thirty-nine brought two momentous events for De Beers and diamonds. The first was the launch of the company's advertising campaign aimed at the masses. The second was the outbreak of WWII, which proved decisive for both the diamond engagement ring tradition and the industrial use of diamonds.

De Beers, through its advertising agency N.W. Ayer, had undertaken a study of the state of diamond desire among the American masses. The company's advertising campaign was based on what Ayer learned from that research. However, the effectiveness of the campaign was not realized until the end of the war when the return of soldiers sent the U.S. marriage rate to record levels. This spike in marriages, I argued, was a catalyst to the modern diamond engagement ring tradition, and an important determinant of De Beers' maintenance of its reversal of fortune after the war. Although the diamond engagement tradition was not born with De Beers, the company's advertising campaign to reverse its dwindling fortunes made it instrumental to the singularization of the diamond as *the* symbol of engagement.

The ramp up of U.S. wartime production saw a dramatic increase in the sale of industrial stones. Although the increase came with the need for fast, precise production, which diamonds facilitated, an earlier modest increase had already spread the use of industrial diamonds. That spread made possible the almost 900 percent increase in industrial diamond use during the war compared to before the war (Figure 7). However, the increased dependence of U.S. manufacturers on industrial diamonds made the input much more visible to war planners, and that visibility contributed to the DoJ antitrust lawsuit against the company.

Eventually, the DoJ dropped the lawsuit, because it did not have the necessary jurisdiction over De Beers. That outcome was not for lack of trying. Much investigative energy was expended trying to prove that De Beers was ‘doing business’ in the United States, and therefore acting within the DoJ’s jurisdiction. The activities of N.W. Ayer, which was largely responsible for the successful advertising campaign, were a focus of the DoJ investigation, as the department tried to prove the advertising agency was effectively a conduit by which De Beers was doing business.

Throughout the company’s wartime ups-and-downs, the Oppenheimer family was solidifying its position of dominance over the company. The war played a role in the existence of documents of Oppenheimer intra-family knowledge sharing. I argued that such family sharing of knowledge is a component of capital accumulation in general, and in the accumulation of De Beers in particular. Because Harry Oppenheimer was serving in the military, and was not by his father’s side, Ernest Oppenheimer had to write letters to convey his lessons on how the company ought to be run. Those letters left behind documentation for the biographers of the Oppenheimers to draw on. The contents of the letters reinforced that, from the establishment of the cartel by Cecil Rhodes and the members of The Syndicate in the late 19th century, through the mid-20th century period of my analysis, supply control was *the key strategy* guiding De Beers’ actions.

Supply control was considered indispensable for maintaining the diamond’s desirability. It was also what brought De Beers’ under the scrutiny of the DoJ. Supply control would remain the operating principle for more than a half century after the DoJ’s failure to prosecute the company. However, it has since been abandoned leaving the diamond market in a state of ‘mutually assured destruction.’ As new diamond sources have been exploited and marketed outside De Beers’ control the company effectively provided price support for all producers. With

the 2000 declaration that it would liquidate its famous stockpile of stones, De Beers' ended its core strategy of more than a century.

In the remainder of the conclusion I will bring my quantitative analysis of De Beers' accumulation into the 21st century. I will also examine some of the lessons and questions that De Beers' raises for our understanding of capital and accumulation. Specifically, I will suggest that the analysis of De Beers provides openings into marginalized areas of political economy: the political economy of things, the political economy of purchase and use, and the political economy of the elite. Finally, I will extoll further on the development of accumulation studies as an analytical field.

II. Political Economy and the Constructions of Accounting

Before examining De Beers' more recent history, I will detail one of the more important – though tangential – lessons that I've taken from this exercise in accumulation studies. Namely, my analysis forced me to confront the neglected importance of accounting as a political economic practice. Relatively simple concepts often become anything but simple at the level of practice. Calculating profit should be easy: income minus costs. However, accountants know that the actual task is far from simple. It took millennia of merchants tracking their transactions for the contemporary standard known as double entry accounting to finally emerge in the latter part of the feudal era. The double entry method is intuitive, but tricky. The method's power was a revelation to its early supporters, but it still took centuries to become widely adopted (Gleeson-White 2011). The growth and spread of transnational corporations has made accounting practices more complicated and more important, and they remain far from settled.

One of the insights that can be drawn from the power perspective on value is that we do not need to consider financial calculations as an unfettered truth, distorted or otherwise. They are constructions, subject to interpretation and intervention by humans, all-too-human humans. This observation does not mean the quantities that emerge from those constructions are meaningless. Far from it. For capitalists, financial values, emerging from the practices of calculation, are the most meaningful thing there is. As such, financial evaluation does not imply ‘anything goes.’ The powerful are utterly dependent on that valuation and need to trust in these calculations.

Although there are not inherent quantities within the objects being evaluated in accounts, those objects still have an irreducible role to play in reliable calculation. The Enron scandal showed us what happens when capitalists are too free in their accounting manipulations. Eventually, the objects being evaluated in the calculations will defy their quantifications and demand a re-accounting. Events like the collapse of Enron are chilling beyond the immediate losses, which affected a relatively small subset of market assayers. The greater concern is the doubt such events sow about calculative practices themselves. Capitalists depend on valuations that can serve as a reliable basis for their speculations. Confidence in accurate calculations is vital for all assayers, from the smallest trader buying a stock to the highest paid CEO launching a new product line.

In order to establish reliable accounting, there are efforts to bring about global convergence on the International Financial Reporting Standards, which is an international standardization of the jurisdictional variant Generally Accepted Accounting Principles (GAAP). However, GAAP is far from set in stone. Rather, there is continual tinkering. Although the tinkering takes place at the margins, sometimes the resolution of a marginal problem has ramifications for common practices. Peter Miller (1998) noted that today’s taken-for-granted

calculation was yesterday's resolution to a then newly posed problem. For example, while cost-profit calculations are now "central to contemporary management accounting," these practices tools were only developed in the 1920s, based on developing economic theory (p. 178).

This on-going development of accounting tools makes the construction of long-term financial series difficult, but not impossible. I have tried to examine De Beers' profits from 1889 through to 2001. However, changes in accounting practices often result in changes in financial reporting. It is not always clear how the values reported in one year relate to those of a previous. Although the changes are not always drastic, they will sometimes come with a change in labelling. Add to this the shifts in ownership and control, and the effects of those shifts on De Beers' accounting noted in the introduction, and the picture gets murky. From within a mix of categories that could be considered profits I have tried, as the accountants do, to construct a single meaningful time series.

For the series to be meaningful, it should offer insights into the actions of the capitalists whose activities are accounted for and motivated by those very financial values. To make the series meaningful within the CasP framework, I've made a differential comparison between the profits of De Beers and those of the S&P Composite Index. For the values of the S&P Index, I have had to trust the construction of Robert Shiller and his collaborators, who have produced a monthly series for price, earnings and dividends, dating back to 1871.¹ Shiller drew on quarterly data from Standard & Poor's, who in turn relied on a 1939 text to construct commensurable values prior to 1926. To take the series back further requires enlisting other sources, which bring their own problems that must be taken into account.

¹ Shiller continues to update the series, which is available at <http://www.econ.yale.edu/~shiller/data.htm>

Appendix A details my process of interpreting the financial reports of De Beers in order to construct a consistent series for the company's profits. Such lengthy series are difficult to come by, partly because investors rarely concern themselves with time frames that extend so far into the past. Therefore, capitalists see little need to produce and regularly update such lengthy time series. However, for political economists trying to understand the long-term changes in the distribution of power, or the changes that are buried deep in the past, but continue to resonate to the present, such time series are indispensable.

A friend once paid me a backhanded compliment after having seen the first graph of this dissertation (Figure 1) and having listened to me presenting its significance multiple times. He marvelled at the intellectual mileage I had gotten out of this one graph. Before the age of digital maps, the paper maps in my glove box became well worn from the frequency of my consultations. This initial graph was similarly consulted. Its expression of De Beers' accumulatory V-shape point offered a map for the qualitative exploration necessary to grasp how the company's accumulatory inflection point had been actualized. As expressed through this dissertation, there was no singular qualitative process that actualized the inflection point. Instead, the point was a simplified translation of myriad, interpenetrating, complex entities and processes that affected De Beers' differential profits (Figure 0.3) and thereby its differential accumulation. This kind of mapping is needed to gain a more nuanced understanding of the history of capitalism beyond sweeping catchall terms like ideology and neoliberalism.

III. The Quantities of De Beers' Accumulation: 1967-2001

Let's us now put the period examined in this thesis (1935-55) in some historical context by highlighting what happened to De Beers in subsequent years. There is a gap in the profit data

I was able to collect, which means I can review the development of De Beers' profitability only from 1967 onward. In the introduction I noted that De Beers' accumulatory pattern follows the dynamic of its differential profits. I also said that I am unable to analyze the decision-making of the market assayers whose buying and selling generated the capital values of the company. As such, it made sense to focus on the company's actions as they translated into profits. These same arguments guide my examination of the subsequent period, beginning with De Beers' differential profits plotted in Figure 17.

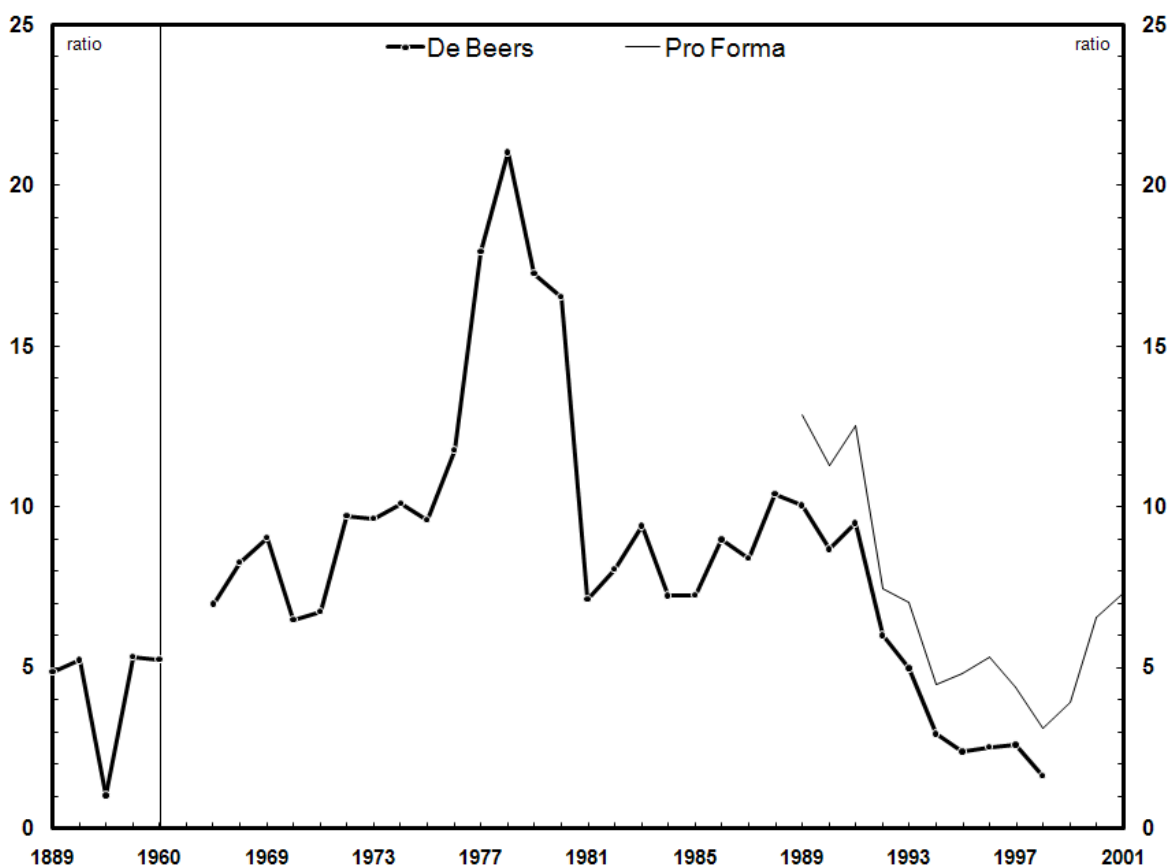


Figure 17: Gaining & Losing Power II: Differential Profits, De Beers vs. S&PComp, 1967-2001
 DATA: De Beers: 1889-1960: De Beers' annual reports (Guildhall City Archives); 1867-2001: Mergent Archives; S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm).
 NOTE: Series are the differential value of De Beer's profits with the S&P Composite index profits in the denominator (1939=1). Data points to the left of the vertical line at 1960 are for 1889, 1906, 1939, 1959-60. The primary series expresses the amalgamated profits of DBCM. The secondary series are the pro forma combined profits of DBCM and De Beers Centenary SA. De Beers' values for pre-1960 are adjusted for US-UK exchange rate. De Beers' values for 1967-89 adjusted for US-SA exchange rate.

De Beers' differential profits increased dramatically from the end of the earlier analysis — which is distilled in the figure to the left of the vertical line at 1960 — through the end of the 1970s. Differential profits in 1978 were 21 times their level in 1939. However, eventually this increase was reversed. By the early 1980s, differential profits were back to their level of the 1960s and early 1970s. In the 1990s, there was another sharp drop, with differential profits falling to levels comparable to where they were at the depth of the Great Depression.

Compiling this series was complicated by reorganization in 1989 that spun off the company's foreign holdings into a separate company, De Beers Centenary AG, which was registered as a Swiss company. However, shares in De Beers constituted a conjoined claim on both DBCM, the core company, and the new Swiss firm. De Beers' annual report, nominally for DBCM only, included financial statements for both the core company and consolidated pro forma statements for the combined company. The thick, black, dotted line is the values for DBCM, while the thin line is for the pro forma combined values. While the latter series is at a higher level (as it should be), the temporal dynamics, of both the trend and fluctuations, are the same.

By 1998, although the differential profits of De Beers were still well above their 1939 level, they were below their value in 1955, the endpoint of my focused analysis. In 1999, differential profits rose again, but only slowly, and in 2001 they were just slightly above their 1960 level. This trajectory suggests that, over the course of the forty-year period of 1960-2001, De Beers gained, and then lost, a large amount of power.

Because (expected) profit is only one of the 'elementary particles' of capitalization, differential profits are a subsidiary analytical tool for the broader category of capital, the primary focus of the CasP framework. To get a broader accumulation picture, I updated the market

capitalization of De Beers and compared it to the S&P Composite Index to see if their differential ratio had mimicked the trajectory of the company's differential profits in the 1967-2001 period as it had in the period of my primary analysis.

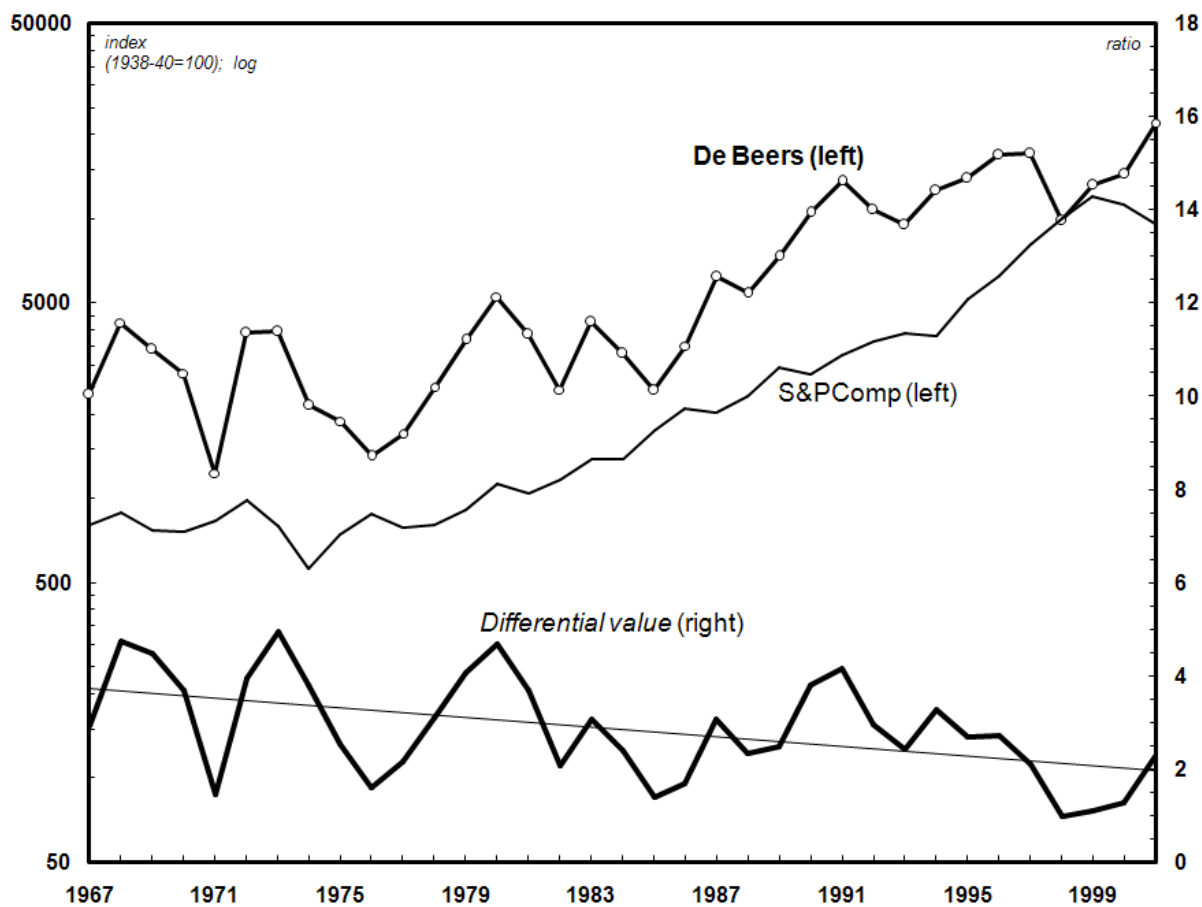


Figure 18: The Slow Decline Resumes: De Beers v. U.S., 1967-2001

DATA: De Beers: Outstanding shares: Centre for Research in Security Prices, De Beers annual reports (Mergent Archives); Share price: New York Times; S&PComp: Online Data Robert Shiller.

NOTE: Top series are the indexed value (1938-40 = 100) of the market value of De Beers and the S&P Composite index. Bottom series is the differential value with the S&P Composite in the denominator.

The thick black line in Figure 18 — the differential value of De Beers, relative to the S&P Index — when compared to Figure 17, shows there was no shared dynamic with the company's differential profits. The top two series are the separated market values of De Beers and the S&P Index. These series suggest, that while De Beers' value increased in absolute terms, the value of the S&P Index increased faster. The latter also had a more stable rise, compared to

the volatility of De Beers. From 1967 to 2001, De Beers' market capitalization had a CAGR of 6.8 percent, against the S&P's increase of 7.6 percent. From the perspective of the entire differential series, we find a long-term decline from 1896 to 1940 of -4.0 percent p.a. Then, over the next 33 years, during the 1940-73 period, De Beers differentially accumulated at an annualized rate of 5.4 percent. However, 1973 to 2001 saw a return of the long descent, with differential deaccumulation of -2.7 percent p.a.

The volatility of De Beers' differential accumulation makes it difficult to periodize the company's long-term trajectories. Although there are absolute maximums and minimums, these are not necessarily the most consequential points. Not least, the identity of these points can change depending on the benchmark chosen for differential comparison.¹ De Beers' absolute profit nadir was in 1930 (Figure 0.3). The company was able to climb out from that absolute bottom, but the climb did not lead to a take-off and was soon followed by another drop. My key argument in this dissertation has been that the profit-reversal, beginning in 1940, was driven by WWII, which provided catalysts for De Beers' longer-term gain. Specifically, the war transformed vital relationships that in turn helped to significantly increase sales of both gem and industrial diamonds. This has been articulated, fleshed, out and solidified by conjoining quantitative financial analysis with qualitative accounts. Likewise, further qualitative research is needed to identify meaningful inflection points of both the initial decline in the late-19th century and the more recent decline that began around 1973. That qualitative account will make

¹ Throughout the dissertation I've compared De Beers to the U.S., which has been its most important outlet for both gem and industrial stones. However, the U.K. would have also been a relevant comparison. The differential zenith for De Beers against the S&P index is 1896. Despite the reversal that De Beers achieved in 1939, it never topped 1896's differential value. However, when compared to the FTSE, 1973 becomes, by far, the greatest differential value. Neither benchmarks is truer than the other. Rather, they can offer different insights and lead the analysis in different directions.

meaningful the broadly articulated trend of decline-rise-decline and these pivot points can offer a map for the needed research and analysis.

IV. The Qualities of De Beers' Accumulation: 1967-2001

Two questions that emerge from the differential profit and accumulation figures are 1) why did greater differential profits in the 1970s not translate into greater accumulation? and, 2) why did De Beers accumulation return to a long-term decline? I have written an entire dissertation that only accounts for a portion of De Beers' reversal of its initial decline. Trying to account for either question could fill another. However, I will offer cursory suggestions here.

In the introductory chapter, I argued that assayers whose buying and selling establish capital values could be excluded from the account. The basic claim was that because, during the period of analysis (1935-55), the dynamic of De Beers' differential profits aligned with that of its differential capitalization, I could focus on the actions of De Beers, as they translated into the former, with the tacit understanding that they would in term have a proportionate effect the later. However, with the radical departure of differential capitalization from differential profits in the updated series, the decision-making of market assayers needs to be accounted for. In this conclusion, all I can offer only tentative suggestions with no decisive evidence situating these claims in the actual reasoning of assayers.

As a South African company, De Beers would have been susceptible to the growing global movement against Apartheid in the 1970s and 1980s. Although the Oppenheimers were visible and vocal opponents of the system of racial segregation, De Beers would still have been affected by the movement, which had divestment of South African companies as a central strategy. It is reasonable to assume the movement inside and outside South Africa against

Apartheid entered into the calculations of De Beers' capitalization via the risk coefficient, which is one of the 'elementary particles' of capitalization (Nitzan & Bichler 2009). Additionally, the movement may be factored into the 'normal rate of return,' which is another of the 'elementary particles,' if we consider South Africa as the source of the 'normal rate of return' against which De Beers would be compared.

Although De Beers' differential capitalization declined from the early to the mid-1970s, it increased again through the late 1970s and early 1980s, right when agitation within and against South Africa was growing strongest. This suggests that De Beers' fortunes were not tied too tightly to those of South Africa. That said, my basic analytical position that the quantities of capital cannot be wholly reduced to other deterministic quantities, precludes outright dismissing the relationship with South Africa, which was a qualitative matter of concern for De Beers. There are numerous complicating factors that could have countered the effect of De Beers' South African identity on its differential accumulation.

The rest of sub-Saharan Africa, where the majority of the diamonds that De Beers was marketing came from, was also in varying states of turmoil. Although the Oppenheims had successfully renegotiated cartel contracts with post-liberation governments, there was widespread uncertainty about the region. Insurgencies vocally threatened mining. In Angola, where the Diamang region produced diamonds for a Portuguese company partially owned by De Beers, insurgent activity hampered extraction and heightened uncertainty. Despite De Beers' inordinate profits, assayers may have feared the spread of disruption to diamond mining or even the outright appropriation of the mines and the loss of cartel contracts.

One lesser possibility for the market's apparent distrust of the soaring profits of De Beers during the 1970s may have been the impending retirement of Harry Oppenheimer. In 1977,

Harry had already been at the helm of De Beers for 20 years. He had been schooled in diamonds by Ernest and had offered capable continuity, as well as formidable political connections.

Harry's son, Nicky, had been appointed a director of the company in 1974 and was the heir apparent for the company's chairmanship. It is possible that there was uncertainty about the shift from Ernest's son to his grandson.

One of the central arguments of this dissertation has been that the qualities calculated into capital values range from the macroeconomic, such as national and regional matters, to the interpersonal, such as family succession among the leadership. It is possible, and even likely, that market assayers were paying attention to the future leadership of De Beers. As will be discussed more fully below, Nicky Oppenheimer's rise was considered something of an anachronism, owing to family connection rather than the typical rules of corporate governance. The spread of standardized rules of corporate governance has been important for accumulation, but incredibly uneven and its effects operate at the level of individual interactions. Perhaps Nicky's rise was recognized as anachronistic and his impending ascension to the dominant position was viewed askance by assayers.

One likely factor in the failure to translate rising differential profits into differential gain in market capitalization was a burst of diamond speculation during the late-1970s (Epstein 1982b Chs. 20-1). In the U.S., a cottage industry of call centre marketers emerged to tout 'certified' diamonds as an incredible investment opportunity. The purchases generated by these marketers drove up the price of diamonds as traders began to sell to speculators rather than jewellers. The price increase prompted media coverage about the 'diamond boom' that furthered speculation. The price increase also enticed Israeli diamond cutters to begin holding the supplies that normally flowed to dealers in the U.S., whose vital role was described in Chapter Eight. With

Israel's worsening exchange rate against the U.S. — losing 86 percent of its value between 1970-9 due to Israel's soaring inflation — the stable dollar value of diamonds made them an enticing store of wealth.

Israel's extreme inflation resulted in higher wages even when exchange rates are factored in. However, throughout the 1970s Israel's wage rate fell relative to wages in Belgium, allowing Israeli cutters to undercut those in Antwerp. The under-bidding by the Israeli cutters created strife in the cutting industry that De Beers did not want. Although it benefitted from the competition between the cutters in the two centres, the company still could not risk losing the participation of the Belgian diamond companies in the cartel. Flexing its control, De Beers' threatened to reduce the quota of stones sent to Israel. This threat prompted the cutters to seek out supply in anticipation of a possible reduction of access. The Israeli cutters were able to use the diamonds as collateral for loans from banks to acquire more stones.

De Beers benefitted from the large quantity of stones being purchased but feared the destabilizing potential of the stones bought on speculation. The long-standing policy of supply control was intended to maintain steady prices to avoid panicked or euphoric selling. Paradoxically, it is possible that assayers recognized that the shorter-term surge in profits spelled trouble for the longer-term fortunes of the diamond trade. Unless diamonds were being absorbed by the masses who intended to hold onto their stones, then the stones out of De Beers' control posed a threat. The large quantity of 'investment' diamonds were not intended to be held indefinitely. Eventually, their owners would seek a return. If their diamonds flooded the market, then prices could crater unless De Beers stepped in to buy them up. Either move threatened the company's interests. In the case of gem diamonds, De Beers' differential fortunes were

ultimately tied to demand by the masses, which brings us to De Beers' longer-term, slow decumulation.

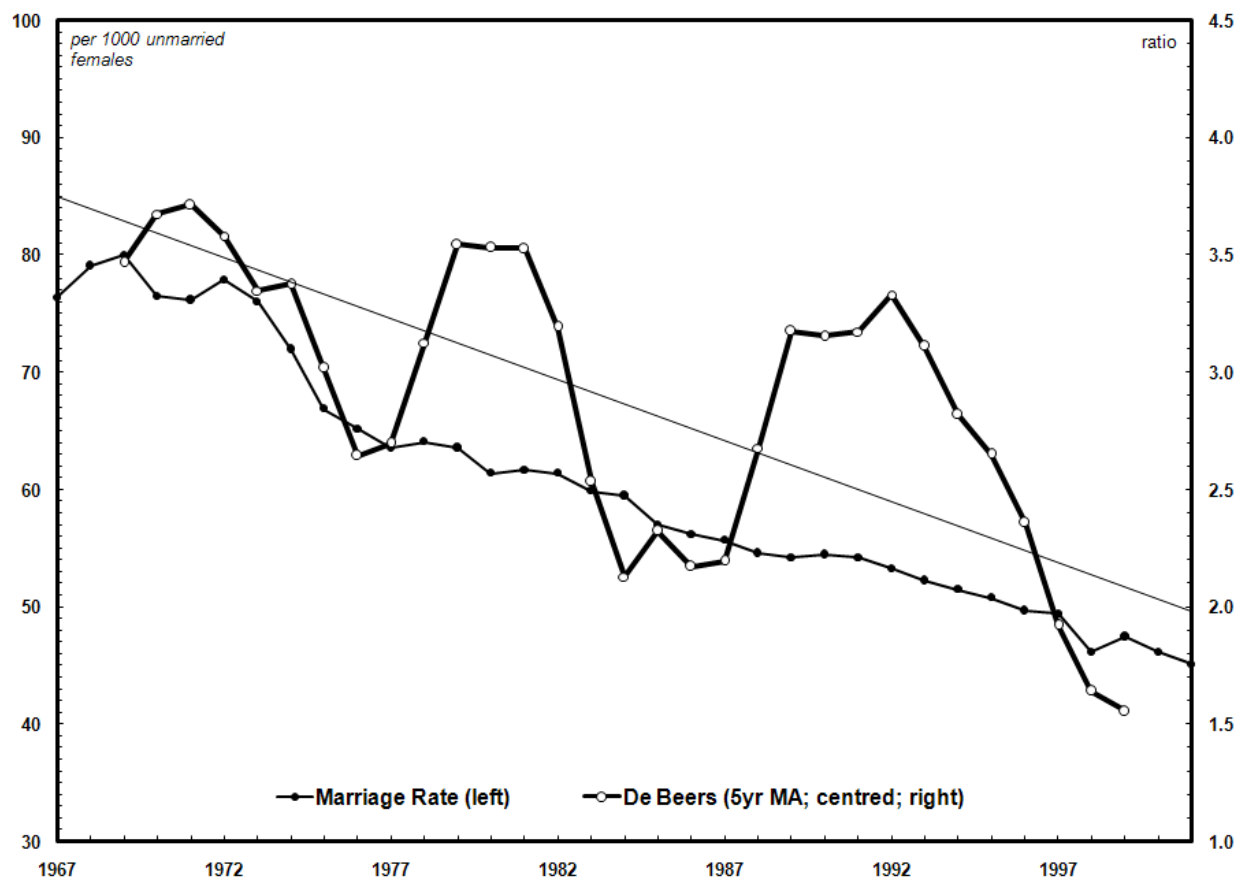


Figure 19: Marriage Matters: The Accumulation of De Beers and U.S. Marriage Rate, 1967-2001
 DATA: De Beers: Outstanding shares: Centre for Research in Security Prices, De Beers annual reports (Mergent Archives); Share price: New York Times; S&PComp: Online Data Robert Shiller (www.econ.yale.edu/~shiller/data.htm); Marriage rate: 1967-95: Historical Statistics of the United States; 1996-01: U.S. Census Bureau, National Centre for Health Statistics.

NOTE: De Beers is the differential value of De Beer's market capitalization with the S&P Composite index value in the denominator, both indexed for 1938-40 = 100. De Beers series expressed as a five year moving average. Marriage rate denotes the number of marriages per 1000 unmarried adult women. The De Beers' trend line is for the original series, not for the moving average.

My claim that De Beers' fortunes are tied to the masses is illustrated in Figure 19. The series in this chart indicates that the falling U.S. marriage rate has been an important factor in De Beer's decline. De Beers' differential capitalization is expressed as a five-year centred moving average, while the marriage rate expresses actual annual values. The correlation between the

year-over-year growth rates of the two series is 0.45. Although not overly strong, largely owing to the much higher volatility of differential capitalization, the long-term association is clear.

When De Beers began its advertising campaign in 1939, it pursued the engagement ring as the primary object to amplify and entice people's diamond desire. This was not an invention cut from whole cloth, but a cobbling together of existing traditions, embellished by the advertisements. The jewellery business recognized the importance of marriage for the trade. *Jewellers' Circular-Keystone* regularly published statistics on the issuance of marriage certificates across the U.S. As noted in Chapter Eight, De Beers founder Cecil Rhodes thought the annual number of U.S. engagements should determine supply. With the U.S. marriage rate falling, it is understandable that a diamond company would see its fortunes fall alongside it.

Of course, marriage does not tell the fully story of De Beers' decline. Although De Beers' differential capitalization appears to fall over the entire 1967-2001 period shown in Figure 18, the decline was hastened after 1980. In 1979, a significant diamond pipe — named Argyle — was discovered in Australia, coincidentally in the Kimberley region, which was named after the same man for whom the South African city is named. Extraction from this pipe began in 1983, first with alluvial diggings, then with an open pit mine. The mine was owned by mining giant Rio Tinto, which initially entered into an agreement for De Beers to market the stones. However, Rio Tinto left the cartel in the early 1990s. More important than the Argyle mine itself, however, was the invigorated search it provoked for new diamond sources in ever more remote and inhospitable places.

The Australian discovery was followed by the discovery of pipes in Northern Canada. New mines were being operated outside the cartel, as they had been before Ernest Oppenheimer's reconsolidation, with the same decline in control that had accompanied De

Beers' initial deaccumulation in the early 20th century. From control of about 90 percent of global diamond production, De Beers now produces around 40 percent and markets around 60 percent of the annual diamond supply. Given the monumental challenge to the company's supply control, it is surprising the accumulatory decline was as mild as it was.

V. De Beers: 2001 and Beyond

The quantitative analysis above ends in 2001 because of one of the most important changes in the company's structure: its privatization. In that year, after over 100 years as a publicly traded company, a partnership consisting of Anglo American, the Botswana government and the Oppenheimer family took De Beers private. This is a political economy defying partnership if ever there was one. After the deal, Anglo American owned 40 percent, the Botswana government owned 15 percent and the Oppenheimer family owned 45 percent. The selling price was \$19.7 billion (U.S.), making the Oppenheimer stake worth \$8.9 billion, which, at the time, was more than twice the family's estimated total wealth (*Forbes*).

The vehicle of the Oppenheimer stake in De Beers was the firm that Ernest had founded to manage the family fortune: E Oppenheimer & Son. In Chapter Eight, I suggested that the decision to take the company private, and to personally hold such a large stake, was a decision based at least as much on the logic of family as it was on the logic of accumulation. De Beers has been synonymous with the Oppenheimer family and the resurrection of the company's dominant role in the trade was considered a matter of family legacy. Speaking on the deal, Nicky Oppenheimer acknowledged the role of family legacy, and claimed that under the shifting ownership and management of De Beers, "family influence rapidly declined. We were cut off

from our homeland. This deal puts us back in the original position and it is very exciting for us” (Lamont & Innocenti 2001). The deal gave the Oppenheimer family management control.

At the time, Nicky and the other family members undoubtedly believed De Beers was undervalued. The fact that Anglo American also agreed on the deal offers evidence of that assessment. Although Ernest Oppenheimer had co-founded Anglo, the company was no longer controlled by the family and it would not have undertaken a family vanity project. Anglo had to expect a sufficient return on its investment, as the outlay could have gone elsewhere. It may have given Anglo confidence that the head of the family taking such a large stake was also going to be heading De Beers.

Nicky aggrandized his lineage, by imaging the perspective of his father and grandfather on the deal. He suggested that while his father Harry, as a more conservative leader, would not have pursued the deal, he believed his grandfather Ernest, as “a pioneer who saw risks as opportunities,” would have (Lamont & Innocenti 2001). It may be telling that the deal occurred the year after Harry’s death.

Nicky also spoke to the future of the Oppenheimer family and the potential role for his son Jonathan with De Beers. On this matter, Nicky spoke to the accumulatory aspect over the family aspect, declaring, “I am not a believer in dynastic succession. De Beers needs someone who can do the job” (Lamont & Innocenti 2001). However, he also expressed his hope that his son would be chairman one day. Of course, the very fact that Jonathan was being given the opportunities to prove he could “do the job” owed much to his family status. Jonathan would rise to the position of Managing Director before leaving De Beers in 2006.

Whatever the Oppenheimer family’s accumulatory expectations from De Beers’ privatization were, they were not satisfied. In 2011, the family agreed to sell its share of De

Beers to Anglo American. The family had earlier sold five percent, and were paid \$5.1 billion for the remaining 40 percent. This put De Beers' 2011 valuation at \$12.75 billion. This value was 35 percent lower than the buyout price, and it expressed a differential drop of 40 percent relative to the S&P Composite Index.

In making the deal, Nicky said it was "in the best interest of the family" (Anon 2011a). He claimed the family decision was made unanimously, but acknowledged the family's abiding connection with the diamond trade, saying it would be "an emotional thing for the Oppenheims not to be in the diamond industry" (England 2011). Some coverage of the deal suggested that the Oppenheimer family sold its stake because there was no obvious family successor to head the firm (for example Curtin 2011). The Oppenheims' relationship with De Beers has not come to a final end though, as they reportedly still own two percent of Anglo American, down from eight percent in 2000.

It is notable that the decision to sell came after Anglo refused to give a spot on its board to Jonathan. Coverage noted that this "closed what is usually the [Oppenheimer family] route to the De Beers chairmanship" (Anon 2011b). Nicky acknowledged the refusal to appoint Jonathan and commented, "They said I was an anachronism in a sense, and if proper corporate governance had been applied, I would not have got on to the board" (England 2011). Previously, the family connection was enough to trump internal regulatory mechanisms, now it no longer is.

Another momentous change for De Beers occurred the year prior to its privatization, when it effectively announced the end of its policy of supply control. In its 1999 annual report, issued in April 2000, the company stated that it would liquidate its famous stockpile of stones. As Nicky Oppenheimer described the matter: "The buffer stocks which [De Beers] held against market volatility became instead the burden of swollen inventories" (Anon 2000). This

announced to other diamond producers that De Beers would no longer work to stabilize prices. After almost two decades of non-De Beers' diamond producers being able to sell their stones freely while the cartel was providing price support, the company effectively declared the market for rough stones would enter a state of 'mutually assured destruction.' If over-supply cratered prices, thus destroying the diamond mystique, then the effect would harm all of them.

One of the reasons De Beers may have been able to make this declaration was that, contrary to popular claims 'debunking' diamonds, mined diamonds really are becoming scarcer. There has been no major discovery of a new pipe in many years. This is why mines have been built in much more inhospitable areas, like the Canadian North, where it is very costly to operate. At the same time, demand in China and India has increased dramatically. However, although this demand can help keep prices generally rising, it does not protect them from volatility, such as that which occurred during the speculation of the mid- to late-1970s. At that time, diamond traders were thankful for De Beers' intervention. Now, with De Beers' supply management having been withdrawn, the market is without a safety net. Anglo American clearly believes there remains great profit to be made in the trade. However, what their strategy will be moving forward is unclear.

One additional change for De Beers that came in 2001 was a decision to market diamonds under the company's name. As I noted in the chapter on advertising, De Beers' advertisements stood out for their lack of branding. While surrounding advertisements carried the names of the companies plying their products in extra-large fonts, De Beers' only mention by name was a small notification at the end of the text. De Beers was not advertising its own diamonds. It was advertising on behalf of all the jewellers who were selling diamonds, which, owing to De Beers' dominant position, were effectively the cartel's diamonds.

Despite a lack of ostentatious branding, De Beers became a household name. It leveraged that name in a 2001 deal with the luxury brand LVMH, which opened jewellery stores under the De Beers' mantle. The close association the masses have between diamonds and De Beers is intended to attract diamond buyers to the De Beers-branded stores. Nicky Oppenheimer said the entry into the jewellery business was intended to provoke overall demand, which would continue to be in the cartel's interests, since the majority of its rough stones would be sold outside the De Beers' chain of stores. The entry of the De Beers' name into the differentiated domain of jewellery stores was a visible dimension of the general reordering of the diamond trade that saw momentous change in De Beers' ownership structure and in its longstanding policy of supply control.

VI. Beyond Diamonds and De Beers: Lessons and Questions

Taken as a totality, De Beers is an utterly unique company. And, it is not unique in its uniqueness. Every company has its particularities. These particularities typically get lost in the abstractions of political economy. Even business history emphasizes universalized abstractions. Yet, those particularities are always consequential and sometimes very important, so they need to be better understood. The differential struggle for accumulation requires companies to make qualitative differences. Some of these reordering maneuvers will remain utterly unique. However, others will be adopted and adapted, travelling along what Gabriel Tarde called 'imitative rays' (Tarde:2000wa; see Latour & Lepinay 2010), becoming part of the generalized capitalist arsenal.

Just like the propagation of genetic material, the imitative process also results in mutations, creating varieties. One of the outcomes of this process of propagation and mutation is

the construction of collectives based on shared features. De Beers' uniqueness is based on its unique combination of features, most of which it shares with others.

Being a transnational company is not unique. Being a South African company is not unique. Being a (formerly) family owned company is not unique. Being a mining company is not unique. Being a diamond research company is not unique. Being a luxury brand is not unique. However, being a transnational, South African, family owned, mining, industrial diamond researching, luxury brand is utterly unique. And, those are just six facets of the company. Each facet puts the company into a different collective. This means that despite its absolute one-of-a-kindness there are general lessons that can be learned from De Beers' history. To conclude this dissertation, I will consider some of the lessons and questions raised by my analysis.

i. The Political Economy of Things

Part of De Beers' uniqueness is owing to the uniqueness of diamonds. Many minerals share the beginning of the diamond extraction process. However, that process quickly transforms to one singularly devised to locate a few carats of carbon crystal within tons of rock. The material uniqueness of the diamond extraction process exist at the conjunction of desire for diamonds, the struggle for accumulation, the materiality of diamonds and technological possibility.

One part of the diamond extraction process involves breaking up the rock removed from the mine. This also ends up cracking or breaking larger diamonds. The financial realities of the cost of extraction and the state of the market for different sizes of diamonds have made this a profitable method. As a compact commodity, requiring a highly skilled, labour-intensive cutting process, diamond cutting has been a very mobile and sought after industry. Owing to its

centralized place in the trade, De Beers actively participated in the movement of the industry. Diamond plays a role in the labour structure of the industry, as highly-skilled workers tend to command higher wages and be more militant (De Vries 2010). Diamond also affects the trade structure, since a trader can walk down the street conducting million dollar deals, with the goods literally on hand. That is something dealers in wheat, steel or crude oil cannot do.

As with De Beers, diamond is not unique in its uniqueness. Every commodity comes with specificities that must be grappled with by the capitalists (or his/her industrious delegates) whose accumulation depends on that commodity's extraction/production and distribution. While practitioners of political economy have been able to assume homogeneity among all commodities, the best capitalists have been able to do is construct some expressive and material standardizations. And, while the political economic assumptions are nearly costless, the capitalists' standardizations are only achieved at great cost.

Consider the now ubiquitous shipping container (M. Levinson 2006). It can hold cars, bananas, hand grenades or iron ore and has revolutionized global transportation. The standardization of the shipping container not only imposed a certain material homogeneity on transportation, it also contributed to standardizing the measurement of trade flows. The process of standardization, as a piecemeal proliferation, has been an important one in the emergence of powerful corporations, from Swift & Company to Ford to Wal-Mart. It was precisely because commodities are not inherently homogeneous that these companies were able to profit from homogenizing different processes in manufacturing, storage, measurement, tracking and distribution. As discussed in Chapter Four, much of De Beers' power was exercised through its standardizing grading of diamonds. This was also the focus of many of the complaints about its power.

So, how can political economy deal with the specificities that are as numerous as the inputs and outputs of production? Financial calculations have imposed their own homogenization. Arguably, within capitalism, they are the most important homogenizations. Therefore, taking those values seriously, rather than dismissing them as merely ‘nominal,’ should be the starting point. When mapping accumulation and profit, and then analyzing the qualities translated into financial quantities, we will always find *things* in the mix. Therefore, we must first acknowledge that those things are difference-making entities in the social order in general and for accumulation in particular. Then, we can try to discern the relative impact of different things on accumulation. Oil? Cement? The telephone? The Phillips head screw? The changes associated with these things are calculated into the quantities of differential accumulation, and their development and deployment has been driven by the drive for gain. Perhaps one of the most important questions is: how has capitalists’ pursuit of differential gain affected the qualitative development of products and their production? The quantities of accumulation express the distribution of capitalist power and an important component of that power is how it has transformed the things in our lives.

ii. The Political Economy of Purchase and Use

Things also turn up as the objects of desire and purchase by the masses. David Graeber (2007) argued that consumption is an inappropriate metaphor for this activity, since so much of what we ‘consume’ is not actually used up. The things we purchase often continue to fulfil the task or purpose they were purchased for, or become meaningful in new and unanticipated ways, which then affects further buying activities. As discussed in Chapter Six, the on-going existence of things beyond the moment of their ‘consumption’ has been very important for De Beers, since

the durability of diamond means the stones owned by the masses have the possibility of becoming a massive new source of supply. This possibility magnifies the point made by Arjun Appadurai (1988) that objects often retain the possibility of recommodification.

The flow of commodities is not a one-way movement from producers to consumers. Instead, things are continually recirculating, often breaking down the distinction between production and consumption. Marx theorized consumption as simply the mirror of production, so we could focus our analytical efforts on the latter. Ben Fine (2002), in a book about consumption, still reduced it to production. However, the activities that constitute 'consumption' have their own consequences, including on production, as capitalists have long recognized.

To try and stay the possibility of recommodification, De Beers' advertising worked to make diamonds a meaningful part of people's families. This effort appears to have been successful, as Susan Falls (2005) noted that people's desire for diamonds was connected to the diamonds of their ancestors. De Beers' did not come up with their advertising campaign as an automatic logical necessity of the accumulatory struggle or the materiality of diamonds. Rather, the campaign required the in-depth study and analysis of both the diamond market and diamond attitudes by the N.W. Ayer advertising agency.

Although the general fact of buying can be taken for granted, particular capitalists are not concerned with general buying any more than they are concerned with general accumulation. Instead, their concern is with differential buying. This is why market research and advertising have both exploded. Capitalists want to understand the masses in order to tailor and focus the sales effort. However, such differential understanding is at odds with the generalized focus of political economy. As such, the study of market research and advertising has taken place almost entirely within business schools.

While each product is its own thing, there are also collective material and expressive properties and capacities across products. These properties and capacities are, in part, the outcome of the relationships that people have with products as things. Collective attributes end up bringing products together in different ways that affect the way the masses engage with them. For example, there are not specialized stores dealing in the various kinds of gems and jewellery: there is no diamond ring store, emerald earring store, etc. If you are looking for a gold chain, a jewellery store is a safe bet for getting one. Even online, in a clearinghouse site like Amazon, a search for gold chains will guide you into categories for jewellery, and bring recommendations for 'related products' such as gold rings.

Product features do not wholly dictate the sorting process that brings certain products together. Running shoes can be found in sporting goods stores or in shoe stores or in department stores. Last seasons' running shoes can be found in a discount outlet. In response to the popularity of discount outlets with the masses, companies now make products never intended for their retail stores. In this sorting process, the masses are understood in terms of segments, partially based on their on-going relationships with things. Some people want the newest version; others are content with earlier models if they come at a bargain. These approaches to purchase depend in part on differential uses. How does the need to display a product affect the processes of selling? How is 'thrift' as a virtue leveraged to achieve the opposite and entice the 'thrifty' to spend? Which product collectives are susceptible to 'new and improved' marketing? Which are best marketed as a 'bargain'? How have the product collectives impacted desires, buying habits and trends?

How has the sorting of products into categories affected the way we use them? For example, while diamond remains the definitional symbol of engagement, there is a decisive trend

among couples to alternatives such as gold bands with a knot in place of the setting or double pearl settings. However, these alternatives generally remain in the domain of gems and precious metals. The expense, beauty, luxury and perceived rarity of these objects seem to be important for the intended symbolism of the engagement ring. The gem category creates a boundary within which those seeking an alternative to the diamond can explore.

The collective properties and capacities of things also end up drawing together the businesses that deal in them. De Beers' licensed its name to LVMH, a French company that specializes in luxury products. The initials stand for Louis Vuitton, a fashion label, Moët, a champagne brand, and Hennessy, a cognac brand. Formerly three companies, they were drawn together not because of the material similarity of their products, but because of their luxury expressiveness. De Beers' did not license its name to a jewellery specialist, but to a luxury goods specialist. LVMH were considered knowledgeable about the market segments that De Beers wanted to target with its branded jewellery.

Although Werner Sombart (1967) specifically examined the role of luxury products in the proliferation of capitalism, such items have generally been dismissed as inconsequential for political economy. For example, in her argument that the origins of capitalism are agrarian, Ellen Meiksins Wood dismissed as irrelevant the pre-mass market trade in luxury goods (E. M. Wood 2002). However, from the perspective of CasP, such trade has to be considered very consequential. The trade in luxury goods was being conducted by powerful entities which were discounting expected profits into the present. The early capital they owned capitalized their anticipated earnings from ships and warehouses dealing in goods — cloth, spices, jewels — destined to satisfy the wealthiest members of society.

Capitalists are not just über-hedonists, seeking to consume ever more, neither are their consumptive habits simply a heightened version of the average member of the masses. There are important qualitative differences in the way they consume. Veblen (1994) considered conspicuous consumption and pecuniary emulation an important component of capitalist society. Conspicuous consumption has played a role in the endurance of diamonds through the increases in supply of the late-19th and 20th century. With these observations in mind, we can ask: how has the purchase and use of luxury goods changed? What role does the pursuit of luxury goods play in driving debt? How does the potential for recommodification affect the purchase and use of luxury goods? How has the desire for luxury goods changed with the proliferation of counterfeit substitutes?

iii. The Political Economy of the Elite

I noted in the introductory chapter the fascination that people have with diamonds and De Beers. There are multiple books outlining the evils of De Beers and the wiliness of the Oppenheimer family. In part, this is conjoined to a general fascination and suspicion of the elite most associated with the wearing of diamonds. Such suspicion has grown alongside awareness of the issue of corporate power. From the Occupy Wall Street (OWS) movement to increasing agitation demanding climate change action, corporations are coming under greater scrutiny and criticism. This criticism comes along with criticism of the wealthiest members of society, as seen in the OWS slogan ‘We are the 99%.’ Additionally, the unexpected popularity of Thomas Piketty’s book on income distribution (Piketty 2014), suggests widespread concern. The two issues — corporate power and elite wealth — are obvious related, as recognized by OWS. However, they are not synonymous.

For almost a century, the wealth of the Oppenheimer family was synonymous with the power of De Beers. But, since 2011, the link between the Oppenheimers, who remain wealthy and powerful, and corporations, which are the dominant vehicle of capitalist power, is less clear. The family has a few high profile ventures. They retain a small, but valuable, interest in Anglo American. But, they also have wealth spread in ways that cannot be seen. This spread is hardly unique. The relationship between the differential distribution of wealth among the elite, and the differential qualities of the corporations that dominate society is complex and largely invisible. For one thing, most of the owners of corporations are absentee. It is these owners for whom returns are most likely to be the sole concern. Through fund managers, they are in constant pursuit of differential gain. However, there is a significant portion who are the executives, managers and directors making qualitatively important decisions. The Oppenheimers as absentee owners are a different entity than the Oppenheimers as the managers of De Beers. What is the relationship between these two types of groups? How do they relate to the masses?

For mainstream economics, rooted in utility value theory, there is no analytical place for a ‘1%,’ upper class, vested interest or whatever name we want to apply to the wealthiest members of society. Meanwhile, the corporation is treated as a rational vehicle of utility maximization. Critical political economy has devoted much intellectual energy to the distinction between the corporation and the — largely absentee — owners who are the financial beneficiaries of corporate earnings, largely via the ownership-control debates that originated with Adolf Berle and Gardiner Means (1991).¹ These debates have largely pertained to corporate power-in-general. Undoubtedly, there are shared interests among all corporations, particularly in

¹ Notably, other adherents to the power theory of value have made important contributions to dissembling the relationship between the owners of capital and the corporate vehicles of power. Sean Starrs has examined the nationality of capital and highlighted the on-going dominance of Americans (Starrs 2014). Tim Di Muzio (2015) has taken up the OWS slogan to provide greater detail on who the 1% actually is.

the maintenance of the capitalist system itself. This interest certainly pertains across the wealthiest members of society, hence Veblen's name for them — the vested interest.

Corporations are differential entities and they have differential connections with the wealthiest owners, the dominant members of society, who are themselves highly differentiated. Political economic analysis has focused on important similarities that run through the corporations and their owners. Many of the consequences of the differences, however, are uncertain, as they have been largely eschewed by the social sciences, although, as noted in Chapter Eight, this has partially been due to a lack of access to the wealthy. Instead of assuming homogeneity across the dominant class, disassembling the vested interests will reveal the broadly shared features as well as the differential qualities. Do ethnic or national differences among the elite affect their accumulatory undertakings? Does 'old money' vs. 'new money' remain a relevant distinction? Does the distinction affect the ways the elite engage with different corporations? Are there relevant differences among the elite on the basis of the industries on which their wealth depends? For example, is it important that JPMorgan Chase CEO Jamie Dimon's fortune is built on financial intermediation while Apple CEO Tim Cook's wealth comes from computing software and hardware? Are there shared features among the members of the elite that directly manage their ownership portfolios compared to those who use various types of management vehicles, such as hedge funds?

One of the overlooked differentials among the elite that came out in my analysis was the family. Analysis of the role of family within capitalism has tended to focus on family control of business. This lends itself to claims that families tend to lose power, since they eventually become separated from the corporations that made them wealthy (Landes 2006). Yet, inter-generational class mobility is low, so although the family members may no longer be equated

with a specific corporation, they remain powerful holders and directors of wealth. On the one hand, these family members may become just one more absentee owner, motivated strictly by differential returns. On the other hand, there may remain meaning in their family identity that affects how capitalism functions.

One of the Oppenheimer family's current projects is Tana Africa Capital, which is focused on investing in African businesses. The family has said this is not a charity project, and that it is motivated by the continent's history of high returns. However, the family has also espoused an abiding affection, and sense of responsibility, for Africa, perhaps in the vein of the 'White Man's Burden.' Either way, such qualitatively motivated action is distinct from purely absentee investment. The myriad differentiations among the wealthy, including how their family status affects the movement of their money, need much greater attention.

VII. Conclusion: The Need for Accumulation Studies

When people have asked me what I do, the shorthand answer I give is: accumulation studies. This is a field that does not really exist. Yet, it seems to be the best label for what I do. In some ways, I'm returning to the original concern of political economy: what is accumulation? When Marx said that accumulation is "Moses and the Prophets," he could just as well have been describing the motivation of political economists, as well as capitalists. Smith found the 'wealth of nations' in the accumulation of capitalists. Ricardo's innovative examinations of marginal lands and comparative advantage both had accumulation as their focus. Malthus argued that population growth dynamics meant accumulation was doomed. Eventually, accumulation fell from its place of priority, in part due to the detente that occurred after economists were unable to

resolve significant conflict over the question of ‘what is capital?’ It also has to do with the effective triumph of the neoclassicists in economics, where accumulation is a non-subject.

The power theory of value has reinvigorated the question of what constitutes accumulation. On the one hand, Nitzan and Bichler have answered decisively that it is a) financial, and b) differential. Both aspects of the answer dramatically change the object of analysis, putting the focus squarely on nominal financial values. On the other hand, by insisting on the focus on financial quantities, Nitzan and Bichler have left open the question of the qualities of accumulation. This is not a failing of the theory, but a strength. The calculations that generate the quantities of capital and accumulation reach anywhere and everywhere to identify qualities that bear on the elementary particles of capitalization. As a social scientist interested in accumulation, I too must be willing to go anywhere and everywhere.

The CasP framework emphasizes the nominal financial quantities of capital and accumulation. This raises questions about the construction of those values: what is being quantified? How is it being quantified? My dissertation focused on the former question in the specific context of De Beers’ accumulation. However, as I described above in this conclusion, I could not entirely neglect the latter, since the accounting involved in De Beers’ financial reports was a source of calculative confusion. To answer the question of what is being quantified will necessitate following the specific qualities that bear on the ‘elementary particles’ of capitalization. Although these qualities will include attributes of production, they will also include much beyond that, such as relations with governments, inter-personal relations among executives, the infrastructure of transportation.... the possible qualities to be considered are literally endless. The question of how financial values are constructed has been taken up by sociologists of finance and others working in the field of science and technology studies (for

example Knorr Cetina & Bruegger 2002; Knorr Cetina & Bruegger 2000; Lepinay 2011; MacKenzie 2008). However, this work needs to be connected to accumulation and situated along the metrological chains as: 1) those constructing financial quantities translate non-financial information into financial values and, 2) financial quantities are used to inform qualitative decisions.

Throughout this dissertation, I have emphasized the importance of particularities. However, I have offered some generalizations about capitalism and accumulation, though tentatively. Mapping the qualitative particularities of a diverse range of corporations will enable stronger generalizations as well as the boundaries to those generalizations. For example, can we discern if the accumulation of a particular category of corporation is more dependent on racial disparity? Is there a historical demarcation when vocal advocacy for same-sex marriage began to benefit a segment of U.S. capital? Can we identify businesses that are differentially harmed by increases in productivity? Are there identifiable segments among the elite that differentially benefit from periods of recession? Has the accumulatory importance of a businesses' national identity changed over time? From these bounded generalizations, applicable to various capitalist collectives, we could identify what appear to be vital aspects of capitalist society as a whole.

Within the CasP framework, the only necessity of capitalist society is the capitalization mechanism itself. That mechanism has certain requirements to function. Beyond that Nitzan and Bichler have neither confirmed nor denied any entity or process as an absolute requirement of capitalism. Mapping the qualities of accumulation both socially and historically could help identify such necessities. Is the nuclear family indispensable to capitalism? Does capitalism require gender disparity? Does the capitalist system need not just inequality of outcome but also inequality of opportunity? Perhaps the most pressing question of all: can capitalism function

without growth? The differential struggle at least raises the possibility that a system of production bounded by environmental limits could remain under the control of owners seeking gain relative to other owners. Would such a strictly redistributory form of accumulation remain capitalism?

In the performance of accumulation studies, there is no possibility of completely mimicking the global traverse of the capitalist calculative machine. In trying to understand the accumulation of De Beers, most of the metrological chains that culminated in the company's valuation have disappeared or are inaccessible. Tracking the actual buying and selling of the shares was impossible, let alone the reasons for the purchase and sale. Much of the decision-making of market assayers would have taken place in their heads, on the basis of conversations and rumours. Some followed strict guidelines, others worked on intuition. Some of De Beers' calculations that motivated their qualitative undertakings likely exist in company archives. However, these were not accessible to me. I was left scrambling for the extant materials that might give me insight into the global diamond assemblage, which contained the objects of concern for De Beers.

Narrowing my focus down to four relationships — diamonds, the masses, governments and family — I was able to provide some explanation for how De Beers was able to reverse its long decline. From a single inflection point — a quantitative blip — my analysis moved across scales to include such seemingly disparate entities as:

- The attitudes toward diamonds of American college students, as captured in a marketing survey
- The interpersonal relationship between Ernest and Harry Oppenheimer, as the latter taught the former the tenets of supply control

- The U.S. Department of Justice, as it tried to establish legal jurisdiction of De Beers
- The British Empire, which enrolled the company to help police the diamond trade
- The little pieces of crystallized carbon themselves, which made possible, but did not necessitate De Beers

Throughout the analysis, WWII returned again and again, not as a backdrop for accumulation, but as an entity that changed, and was changed by, the global diamond assemblage. De Beers' accumulatory success hinged on the demand that wartime use of industrial stones generated. But, its post-war profitability depended on the catalyst of returning soldiers actualizing the contemporary diamond engagement tradition. The U.S. Government took seriously the complaints of industrial diamond users about De Beers' pricing because of the indispensability of diamonds for the war machine. Diamonds were enrolled into the financial management of the British government, which needed a strong currency to fund the war effort. On the other side, the Axis powers sought illicit means of securing the stones for their own production. In response, the Allies used clandestine intelligence gathering to try and subvert diamond smuggling. The wartime reports of the agents involved have helped to fuel the contemporary animus toward De Beers, expressed in popular works about diamonds and the cartel. Those reports, available in U.S. and U.K. archives, have suggested De Beers was involved in smuggling. Meanwhile, the letters of Ernest Oppenheimer to his son, fighting in the war, provided fodder for understanding how the lessons of business are conveyed.

The war was a complex assemblage, with diamonds as an irreducible material and expressive component. Nonetheless, despite their qualitative irreducibility, diamonds' role was quantified and translated into the capitalization of De Beers. That translation meant De Beers' had to be aware and prepared to intervene wherever a matter of concern for diamonds existed.

Accumulation is largely taken for granted by social scientists. It is treated as an undifferentiated totality that can be assumed and need not be researched and analyzed. Capitalists, however, never take accumulation for granted. De Beers' accumulatory success was not — is not — certain. An incredible amount of work is needed to conceive, generate and actualized a differential gain, especially when every other capitalist is trying to realize the same thing. The qualitative means to actualize this quantitative end are vastly different from each other and enormously transformational. The constant struggle for differential gain is likely the most potent driver of social transformation today. Accumulation studies is vital if we wish to understand and — as necessary —intervene in the capitalist social order.

Constructing a Profit Series

The source of my profit figures was the financial reporting of De Beers.¹ I located those figures as published in *The Times* (London) and in the company's annual reports. Annual reports before 1968 were accessed at the Guildhall City Archive in London. My time accessing these materials was limited, so my coverage for the early years of De Beers' existence is not as comprehensive as I would have liked it to be.² In this appendix I detail my efforts to construct a standardized series of figures for De Beers' profits.

As surprising as it may seem, it was not always clear from De Beers' financial reports what the annual profits were. Consider the 1890 annual report, which pertains to the fiscal year ending March 31, 1890.³ In this report, one figure is labelled "Leaving a profit on the actual working of" that is equal to £1,209,780 2 2.⁴ Further in the report is the "Statement of Profit and Loss." There, we find the "Profit on year's operations" figure: £1,535,431 16 6. However, how this figure was arrived at from the preceding figures is less than obvious. Yet another line is labelled "Balance of profit" and reads £1,255,098 1 3. From among these various figures, I eventually settled the £1.5 million value for the series. This final selection came only after reading through all the annual reports as well as the financial reports published in *The Times*. By analysis of all the reports I was able to discern that my chosen figure was most similar to the

¹ Constructing the capitalization series was much more straightforward than the profit series. Outstanding shares are unambiguously listed in annual reports. Share prices were regularly listed in the *Times* (London). The one potentially complicating factor were De Beers' debentures, which are a component of a company's total capitalization. However, their size and the time periods of their issuance and clearance were not significant enough to substantially change the differential comparisons.

² Special thanks must be given here to Joe Francis. Joe initially accessed De Beers' annual reports when it was uncertain if I would be able to travel to London. Data for 1889, 1901 and 1959-60 come from the research Joe did on my behalf.

³ In my research, the profit from this report was assigned to the calendar year of 1889.

⁴ The values are reported in the pre-decimal £sd notation. The figures after the spaces are shillings and pence. There are 12 pence to a shilling and 20 shillings to a pound. These were all converted to contemporary decimal notation.

reported figures of later years that had the greatest continuity. However, this was far from immediately obvious and the early reports had to be revisited again and again.

Data prior to 1904 was sporadic as I had access to De Beers' financial reports for 1890, 1894-5, 1891 and 1902. I had uninterrupted data for 1904-55. In the 1904 financial statement, published in *The Times*, with a June 30 year-end, there is a line that reads "Leaving a profit of." Although similar to the 1890 report, this entity excludes the 'on the actual working.' Whether that difference expressed a substantive, practical change, or was an expressive, aesthetic change, only becomes clear from the subsequent section. The value on the line is £1,931,769 15 0. The 'Profit and Loss Account' adds to that value separate amounts for 'Dividends on Investments,' 'Interest on Consols,' 'Revenue from other sources' and more. With these additions, the total is £3,012,961 0 9. Again, from reading through later reports, I figured out that this latter amount was most comparable with the value I eventually chose for 1889/90.

The value from the 1904 report was adjusted with the value for 1905, which also reported on a June 30 year-end. The use of the mid-year fiscal year end meant the 1904 report expressed half of the first half of that year and the second half of 1903. The 1905 report contained the other half of 1904. Beginning with the 1934 annual report, De Beers moved to a December 31 year-end, so it was reasonable to adjust the earlier values that were reported for June 30 year ends.

In 1908, the reporting changed slightly, shifting the previous year's unspent profits — labelled 'Balance from last year' — from below the other earnings to above them. This change required a calculation to create a value commensurable with the other value in the profit series since those had always excluded the unspent profits. In 1909, there was a more substantial change that saw the annual profits buried within the profit & loss account. The profit and loss account details a standard double entry format of credits and debits. Profits in this account show

up as ‘To Balance being profit for the year, carried to Appropriation Account.’ Exemplifying the redundancy that is a key to the reliability of accounting, the same figure is displayed in the Appropriation Account as ‘By Balance transferred from Profit and Loss Account.’ Then, in 1910, the value listed in the profit & loss account is no longer identified as profit, but simply as ‘To Balance carried to Appropriation Account.’ This entry can be tracked until 1951. Then, in 1952, there is line labelled ‘Profit for the year,’ with the previous year reported at a value equal to that contained under the old label.

With over 40 years of consistent labelling and reporting, this value recorded twice under the ‘Profit and Loss Account’ and the ‘Appropriation Account’ became the anchor for the series. Although I described the confusing labelling for the earlier years first, it was only after locating this consistently reported figure that I was able to locate the similar figures in the earlier reports. It is also worth noting that although the levels for other reported ‘profit’ values were different — sometimes significantly so — the dynamics of the year-to-year change were very similar. Issues would only arise if I chose values from one year to the next that were not meaningfully comparable. For example, if I did not exclude the profit carried over from one year, but then included it the next, it could create the illusion that De Beers’ had an unusually profitable year.

A significant change occurred with the 1953 report. First, it was the last year De Beers published their financial statement in *The Times*. Second, as noted in the introductory chapter, the report was not just for De Beers’ Consolidated Mines (DBCM). Instead, they offered ‘Consolidated Accounts,’ which I renamed as ‘amalgamated’ to avoid confusion with De Beers *Consolidated Mines*, when identifying the figures. The amalgamated figures added to DBCM’s figures those of:

The Consolidated Diamond Mines of South West Africa, Limited

Premier (Transvaal) Diamond Mining Company, Limited

The Diamond Corporation, Limited

De Beers Investment Trust, Limited

De Beers Industrial Corporation, Limited

Griqualand West Diamond Mining Company (Dutoitspan Mine), Limited

The South West Finance Corporation, Limited

H.L.G. Limited

Marmara Mines, Limited

New Jagersfontein Mining and Exploration Company, Limited.

The amalgamated profits could still be considered meaningfully comparable with the earlier figures as they represent the profits of entities controlled by De Beers. The relevant line in the profit and loss account is now labelled 'To Group Profit carried down.' For 1952-5 and 1959-60, the figures came from De Beers' annual reports, which include values for both DBCM alone and for the 'Consolidated Accounts.' The comparable figures were relatively easily identified as they maintain the labelling convention of the years prior.

The profit series for 1904-60 was expressed as a differential with the S&P Composite earnings in Figure 0.3 of the introductory chapter. It was one of the most important graphs in the dissertation, as it grounded the subsequent analysis. In the conclusion to the dissertation, I updated the series to 2001 (Figure 17). These figures came from the De Beers annual reports, accessed through the Mergent Archive from Moody's.

Mergent carries annual reports for De Beers back to 1968. The only exceptions are 1973 and 1967 – there were no reports for those years, though data for the 1967 were available from the 1968 report. The financial values are reported in South African Rand rather than the British

Pound, as the earlier reports had been. In both cases, I converted the figures by the relevant U.S. dollar exchange rate to make them comparable to the S&P values.

In the 1968 report, comparable figures to those compiled for the 1889-1960 series were labelled as 'GROUP PROFIT BEFORE TAX.' The statements used for the earlier years also listed tax deductions after the values carried to the appropriation account, i.e. the values I used for the profit series. Although using the after tax values would have shifted the entire series downward, it would not have changed the overall picture of the differential. This profit value can be tracked until 1998. However, beginning in 1990, De Beers' annual reports included "Pro Forma¹ Combined Results Attributable to De Beers/Centenary Linked Units." This statement was structured the same way as the DBCM's 'Consolidated Accounts' reported since 1953. The change in financial reported accounted for a reorganization of De Beers that separated its foreign operations into De Beers' Centenary SA, which was registered in Switzerland. De Beers continued to publish these pro forma statements until 2001 when the company was privatized.

¹ Pro forma financial statements are calculated less formally than audited statements required by compliance laws.

Bibliography

- al-Beruni, 1989. *The Book Most Comprehensive in Knowledge on Precious Stones*, Islamabad: Pakistan Hijra Council.
- Anon, 2011a. Anglo American PLC Acquisition of De Beers. *Dow Jones Business News*.
- Anon, 2000. De Beers says to rethink stockpile policy. *Reuters News*.
- Anon, 2011b. Diamonds might be forever, but not for the Oppenheimers. *Cape Times*.
- Anon, 1850. Her Majesty's Steam-sloop Medea has Just Arrived at Portsmouth. *The Times*, p.4.
- Anon, 1941a. Machine Tool Price Limit Set. *The Tuscaloosa News*, p.8.
- Anon, 1852. The Diamonds and Jewellery in the Great Exhibition. *The Bankers' Magazine, and Statistical Register*, 6.
- Anon, 1941b. War Profiteers May Feel Lash. *The Amarillo Daily News*, p.21.
- Antweiler, C., 1998. Local Knowledge and Local Knowing. An Anthropological Analysis of Contested "Cultural Products" in the Context of Development. *Anthropos*, Bd. 93(H. 4./6.), pp.469–494.
- Appadurai, A., 1988. Introduction: Commodities and the Politics of Value. In A. Appadurai, ed. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge, UK: Cambridge University Press, pp. 3–63.
- Arregle, J.-L. et al., 2007. The Development of Organizational Social Capital: Attributes of Family Firms*. *Journal of Management Studies*, 44(1), pp.73–95.
- Arrighi, G., 1994. *The Long Twentieth Century: Money, Power, and the Origins of Our Times*, London: Verso.
- Ayache, E., 2010. *The Blank Swan: The End of Probability*, West Sussex, UK: Wiley.
- Bakan, J., 2006. *The Corporation: The Pathological Pursuit of Profit and Power*, Toronto: Penguin Canada.
- Baran, P.A. & Sweezy, P.M., 1966. *Monopoly Capital: An Essay on the American Economic and Social Order*, New York: Modern Reader Paperbacks.
- Barthes, R., 1977. *Image, Music, Text*, London: FontanaPress.
- Barthes, R., 1972. *Mythologies*, New York: The Noonday Press.
- Bastiat, F., 1996. *Economic Harmonies*, Irvington-on-Hudson, NY: Foundation for Economic Education.

- Bastos, W. & Levy, S.J., 2012. A History of the Concept of Branding: Practice and Theory. *Journal of Historical Research in Marketing*, 4(3), pp.347–368.
- Baudrillard, J., 1981. *For a Critique of the Political Economy of the Sign*, New York: Telos Press Publishing.
- Beccaria, C., 1986. *On Crimes and Punishments*, Indianapolis, IN: Hackett Publishing Company.
- Becker, G.S., 1973. A Theory of Marriage: Part I. *Journal of Peasant Studies*, 81(4), pp.813–846.
- Becker, G.S., 1974. A Theory of Social Interactions. *Journal of Peasant Studies*, 82(6), pp.1063–1093.
- Becker, G.S. & Tomes, N., 1979. An Equilibrium Theory of the Distribution of Income and Intergenerational Mobility. *Journal of Peasant Studies*, 87(6), pp.1153–1189.
- Becker, G.S. & Tomes, N., 1994. Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education. In G. S. Becker, ed. Chicago: University of Chicago Press, pp. 257–298.
- Benjamin, W., 1999. *The Arcades Project*, Cambridge, MA: Harvard University Press.
- Benston, M., 1969. The political economy of women's liberation. *The Monthly Review*, 21(4), pp.13–27.
- Berey, L.A. & Pollay, R.W., 1968. The Influencing Role of the Child in Family Decision Making. *Journal of Marketing Research*, 5(1), p.70.
- Berger, A.A., 2011. *Ads, Fads, and Consumer Culture*, Plymouth, UK: Rowman & Littlefield Publishers.
- Berle, A. & Means, Gardiner, 1991. *The Modern Corporation and Private Property*, New Brunswick, NJ: Transaction Publishers.
- Bernstein, L., 1992. Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry. *Journal of Legal Studies*, 21, pp.115–158.
- Bernstein, P.L., 1996. *Against the Gods: The Remarkable Story of Risk*, New York: John Wiley & Sons.
- Bichler, S. & Nitzan, J., 2004. Dominant Capital and the New Wars. *Journal of World-Systems Research*, 10(2), pp.255–327.
- Birger, J. & Stires, D., 2006. 10 ON THE SPOT. *Fortune*, 153(3), pp.81–88.
- Bourdieu, P., 1991. *Language and symbolic power*, Cambridge, UK: Polity Press.
- Bowker, G.C. & Star, S.L., 2000. *Sorting Things Out*, Cambridge, MA: The MIT Press.

- Brandes, S.D., 1997. *Warhogs: A History of War Profits in America*, Lexington, KY: University Press of Kentucky.
- Braudel, F., 1985. *The Perspective of the World: Civilization and Capitalism, 15th-18th Century, Vol. III*, New York: William Collins Sons & Co Ltd.
- Braudel, F., 1981. *The Structures of Everyday Life: Civilization and Capitalism, 15th-18th Century, Vol. I*, New York: William Collins Sons & Co Ltd.
- Braudel, F., 1982. *The Wheels of Commerce: Civilization and Capitalism, 15th-18th Century, Vol. II*, New York: William Collins Sons & Co Ltd.
- Bronfman, J., 1987. *The experience of inherited wealth: A social-psychological perspective*. Brandeis University.
- Bruton, E., 1971. *Diamonds*, Radnor, PA: Chilton Book Company.
- Callon, M., 1986. Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay. In J. Law, ed. *Power, Action and Belief: A New Sociology of Knowledge*. London: Routledge & Kegan Paul, pp. 196–233.
- Callon, M., Méadel, C. & Rabeharisoa, V., 2005. The economy of qualities. In *Technological Economy*. London: Routledge, pp. 28–50.
- Caporaso, J.A. & Levine, D.P., 1992. *Theories of Political Economy*, Cambridge, UK: Cambridge University Press.
- Carsten, J., 2004. *After Kinship*, Cambridge, UK: Cambridge University Press.
- Castoriadis, C., 2005. *Figures of the Thinkable* Anonymous, ed., Available at: <http://www.notbored.org/FTPk.pdf>.
- Castoriadis, C., 1987. *The Imaginary Institution of Society*, Cambridge, UK: Polity Press.
- Caws, P., 1974. Operational, representational, and explanatory models. *American Anthropologist*, 76(1), pp.1–10.
- Chamberlin, E., 1933. *The Theory of Monopolistic Competition*, Cambridge, MA: Harvard University Press.
- Chandler, A.D., 2006. *Scale and Scope: The Dynamics of Industrial Capitalism*, Cambridge, MA: Harvard University Press.
- Chandler, A.D., 1990. *Strategy and Structure*, Cambridge, MA: MIT Press.
- Chandler, A.D., 1977. *The Visible Hand: The Managerial Revolution in American Business*, Cambridge, MA: Harvard University Press.
- Chase-Dunn, C.K., 1997. *Rise and Demise: Comparing World-systems*, Boulder, CO: Westview

Press.

- Church, R., 1986. Family Firms and Managerial Capitalism: The Case of the International Motor Industry. *Business History*, 28(2), pp.165–180.
- Clark, G., 2014. *The Son Also Rises: Surnames and the History of Social Mobility*, Princeton, NJ: Princeton University Press.
- Clegg, S., 1989. *Frameworks of Power*, London: Sage Publications Limited.
- Cochran, T.C., 1972. *Business in American Life*, New York: McGraw-Hill.
- Cochran, T.C. & Miller, William, 1961. *The Age of Enterprise*, New York: Harper & Row.
- Cochrane, D.T., 2011. Castoriadis, Veblen, and the “Power Theory of Capital.” In I. S. Straume & J. F. Humphrey, eds. *Depoliticization: The Political Imaginary of Global Capitalism*. Malmö, SE: NSU Press, pp. 89–123.
- Cochrane, D.T. & Monaghan, J., 2013. “A Degree of Control”: Corporations and the Struggle against South African Apartheid. In T. Di Muzio, ed. *The Capitalist Mode of Power*. London: Routledge, pp. 92–113.
- Cohen, A.J. & Harcourt, G.C., 2003. Retrospectives: Whatever happened to the Cambridge capital theory controversies? *The Journal of Economic Perspectives*, 17(1), pp.199–214.
- Colchester, M., 2011. *Palm oil and indigenous peoples in South East Asia*, Rome: The International Land Coalition.
- Collins, A.T., 1998. Diamonds in Modern Technology: Synthesis and Applications. In *The Nature of Diamonds*. Cambridge, UK: Cambridge University Press, pp. 255–272.
- Commons, J.R., 2006. *Legal Foundations of Capitalism*, Clark, NJ: The Lawbook Exchange, Ltd.
- Commuri, S. & Gentry, J.W., 2000. Opportunities for Family Research in Marketing. *Marketing Department Faculty Publications*, 10. Available at: <http://www.amsreview.org/articles/commuri08-2000.pdf>
- Conniff, R., 2002. *The Natural History of the Rich: A Field Guide*, New York: W. W. Norton.
- Coontz, S., 2006. *Marriage, a History*, New York: Penguin.
- Coontz, S., 1992. *The Way We Never Were*, New York: Basic Books.
- Corak, M., 2006. Do Poor Children Become Poor Adults? Lessons from a Cross-Country Comparison of Generational Earnings Mobility. In J. Creedy & G. Kalb, eds. *Dynamics of Inequality and Poverty*. Oxford, UK: Elsevier, pp. 143–201.
- Corak, M. ed., 2004. *Generational Income Mobility in North America and Europe*, Cambridge,

- UK: Cambridge University Press.
- Cotte, J. & Wood, S.L., 2004. Families and Innovative Consumer Behavior: A Triadic Analysis of Sibling and Parental Influence. *Journal of Consumer Research*, 31(1), pp.78–86.
- Crick, M.R., 1982. Anthropology of Knowledge. *Annual Review of Anthropology*, 11, pp.287–313.
- Croxton, D., 1999. The Peace of Westphalia of 1648 and the Origins of Sovereignty. *The International History Review*, 21(3), pp.569–591.
- Curasi, C.F., Price, L.L. & Arnould, E.J., 2004. How Individuals' Cherished Possessions Become Families' Inalienable Wealth. *Journal of Consumer Research*, 31(3), pp.609–622.
- Curtin, M., 2011. Anglo American's Extra Sparkle. *The Wall Street Journal Online*.
- da Silva Lopes, T. & Duguid, P. eds., 2009. *Trademarks, Brands, and Competitiveness*, New York: Taylor & Francis.
- Dabbah, M.M., 2003. *The Internationalisation of Antitrust Policy*, Cambridge, UK: Cambridge University Press.
- DaSilva, F.B. & Faught, J., 1982. Nostalgia: A Sphere and Process of Contemporary Ideology. *Qualitative Sociology*, 5(1), pp.47–61.
- Davis, J.H., Schoorman, F.D. & Donaldson, L., 1997. Toward a Stewardship Theory of Management. *Academy of Management Review*, 22(1), pp.20–47.
- Davis, W., 2006. *The Rich: A New Study of the Species*, Cambridge, UK: Icon Books.
- de Grazia, V. & Furlough, E. eds., 1996. The Gendering of Consumer Practices in Nineteenth-Century France. In *The Sex of Things*. Berkeley, CA: University of California Press, pp. 79–112.
- De Landa, M., 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*, London: Continuum.
- De Vries, D., 2010. *Diamonds and War: State, Capital, and Labor in British-Ruled Palestine*, New York: Berghahn Books.
- Deleuze, G., 1991. *Empiricism and Subjectivity: An Essay on Hume's Theory of Human Nature*, New York: Columbia University Press.
- Deleuze, G., 1988. *Spinoza: Practical Philosophy*, San Francisco: City Lights.
- Di Muzio, T., 2015. *The 1% and the Rest of Us: A Political Economy of Dominant Ownership*, London: Zed Books.
- Donaldson, M. & Poynting, S., 2007. *Ruling Class Men: Money, Sex, Power*, Bern, Switzerland:

Peter Lang.

Douglas, M. & Isherwood, B., 2002. *The World of Goods: Towards an Anthropology of Consumption*, New York: Routledge.

Dudden, A.P., 1961. Nostalgia and the American. *Journal of the History of Ideas*, pp.515–530.

Dugger, W.M., 1980. Power: An Institutional Framework of Analysis. *Journal of Economic Issues*, pp.897–907.

Dunne, N., 2015. *Competition Law and Economic Regulation*, Cambridge, UK: Cambridge University Press.

Edmiston, W.F., 1985. *Diderot and the Family: A Conflict of Nature and Law*, Saratoga, CA: Anma Libri.

Elson, D., 1979. The Value Theory of Labour. In D. Elson, ed. *Value: The Representation of Labour in Capitalism*. London: CSE Books, pp. 115–180.

Engels, F., 1972. *The Origin of the Family, Private Property and the State*, London: Penguin Classics.

England, A., 2011. Diamond Dynasty Ends Era of Dominance. *Financial Times*.

Epp, A.M., Schau, H.J. & Price, L.L., 2014. The Role of Brands and Mediating Technologies in Assembling Long-Distance Family Practices. *Journal of Marketing*.

Epstein, E.J., 1982a. Have You Ever Tried to Sell a Diamond? *Atlantic Monthly*, 23. Available at: <http://www.theatlantic.com/magazine/print/1982/02/have-you-ever-tried-to-sell-a-diamond/304575/>.

Epstein, E.J., 1982b. *The Rise and Fall of Diamonds: The Shattering of a Brilliant Illusion*, New York: Simon and Schuster.

Falls, S., 2008. Diamond Signs: Generic Stones and Particular Gems. *Social Semiotics*, 18(4), pp.449–465.

Falls, S., 2005. *The Configuring of Diamonds: A Study of Consumption*. The City University of New York.

Farnie, D.A., 1956. The Mineral Revolution in South Africa. *South African Journal of Economics*, 24(2), pp.125–134.

Fine, B. & Leopold, E., 2002. *The World of Consumption: The Material and Cultural Revisited* 2nd ed., London: Routledge.

Fisher, I., 2007. *Mathematical Investigations in the Theory of Value and Prices*, New York: Cosimo Classics.

- Foucault, M., 1995. *Discipline & Punish: The Birth of the Prison* 2nd ed., New York: Random House LLC.
- Foucault, M., 1980. *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*, New York: Pantheon Books.
- Foucault, M., 1978. *The History of Sexuality, Vol. 1: An Introduction*, New York: Random House.
- Foucault, M., 1970. *The Order of Things: An Archaeology of the Human Sciences*, New York: Vintage Books.
- Galbraith, J.K., 1967. *The New Industrial State*, Toronto, ON: Signet Books.
- Gardner, B.B. & Levy, S.J., 1955. The Product and the Brand. *Harvard Business Review*, 33(2), pp.33–39.
- Garfinkel, H., 1986. *Ethnomethodological Studies of Work*, London: Routledge.
- Giddens, A., 1984. *The Constitution of Society: Outline of the Theory of Structuration*, Cambridge, UK: Polity Press.
- Gilding, M., 2005. Families and Fortunes: Accumulation, Management Succession and Inheritance in Wealthy Families. *Journal of Sociology*, 41(1), pp.29–45.
- Gilding, M., 1999. Superwealth in Australia: Entrepreneurs, Accumulation and the Capitalist Class. *Journal of Sociology*, 35(2), pp.169–182.
- Gleeson-White, J., 2011. *Double Entry: How the merchants of Venice shaped the modern world- and how their invention could make or break the planet*, Sydney: Allen & Unwin.
- Goldman, R., 2005. *Reading Ads Socially*, London: Routledge.
- Gómez-Mejía, L. et al., 2007. Socioemotional Wealth And Business Risks In Family-Controlled Firms: Evidence From Spanish Olive Oil Mills. *Administrative Science Quarterly*, 52, pp.106–137.
- Graeber, D., 2007. The Very Idea of Consumption: Desire, Phantasms, and the Aesthetics of Destruction from Medieval Times to the Present. In *Possibilities*. Oakland, CA: AK Press, pp. 57–84.
- Graeber, D., 2006. Turning Modes of Production Inside Out: Or, Why Capitalism is a Transformation of Slavery. *Critique of Anthropology*, 26(1), pp.61–85.
- Granovetter, M.S., 1973. The Strength of Weak Ties. *American Journal of Sociology*, 78(6), pp.1360–1380.
- Gregory, T.E., 1977. *Ernest Oppenheimer and the Economic Development of Southern Africa*, New York: Arno Press.

- Habermas, J., 1984. *The Theory of Communicative Action, Volume One: Reason and the Rationalization of Society*, Boston: Beacon Press.
- Hall, R.L. & Hitch, C.J., 1939. Price Theory and Business Behaviour. *Oxford Economic Papers*, 2, pp.12–45.
- Hannah, L., 1976. *The Rise of the Corporate Economy*, Milton Park, UK: Routledge.
- Harcourt, G.C., 1969. Some Cambridge controversies in the theory of capital. *Journal of Economic Literature*, 7(2), pp.369–405.
- Harlow, G.E., 1998. Following the History of Diamonds. In *The Nature of Diamonds*. Cambridge, UK: Cambridge University Press, pp. 116–135.
- Hart, M., 2002. *Diamond: The History of a Cold-Blooded Love Affair*, Toronto: Penguin Canada.
- Haufler, V., 2013. *A Public Role for the Private Sector: Industry Self-Regulation in a Global Economy*, Washington, DC: Carnegie Endowment for International Peace.
- Havlena, W.J. & Holak, S.L., 1991. The good old days: observations on nostalgia and its role in consumer behavior. *Advances in Consumer Research*, 18(1), pp.323–329.
- Hazen, R.M., 1999. *The Diamond Makers*, Cambridge, UK: Cambridge University Press.
- Heller, S. & Vienne, V., 2012. *100 Ideas that Changed Graphic Design*, London: Laurence King Publishing.
- Herman, A., 2012. *Freedom's Forge: How American Business Produced Victory in World War II*, New York: Random House.
- Hobbes, T., 1958. *Leviathan, Parts I and II*, Indianapolis, IN: Bobbs-Merrill Educational Publishing.
- Hocking, A., 1973. *Oppenheimer and Son*, New York: McGraw-Hill.
- Hodgson, G.M., 1997. The Fate of the Cambridge Capital Controversy. In P. Arestis, G. Palma, & M. Sawyer, eds. *Capital Controversy, Post Keynesian Economics and the History of Economic Thought*. London: Routledge, pp. 88–101.
- Holak, S.L. & Havlena, W.J., 2002. Nostalgia: An Exploratory Study of Themes and Emotions in the Nostalgic Experience. *Advances in Consumer Research*, 19(1), pp.380–387.
- Hughes, J.E., Jr, 2004. *Family Wealth: Keeping It in the Family: How Family Members and Their Advisers Preserve Human, Intellectual, and Financial Assets for Generations*, Princeton, NJ: Bloomberg Press.
- Hughes, J.E., Jr, Massenzio, S.E. & Whitaker, K., 2013. *The Cycle of the Gift*, Hoboken, NJ: Bloomberg Press.

- James, S. & Dalla Costa, M., 1972. *The Power of Women and the Subversion of the Community*, Bristol, UK: Falling Wall Press. Available at:
http://sduk.us/2011/dalla_costa_power_women_subversion_community.pdf.
- Jayasinghe, L. & Ritson, M., 2013. Everyday Advertising Context: An Ethnography of Advertising Response in the Family Living Room. *Journal of Consumer Research*, 40(1), pp.104–121.
- Jessop, B., 2011. *Differential accumulation: Explanans, explanandum, or both? Capitalist Mode of Power: Past, Present, Future*. Available at:
<https://www.youtube.com/watch?v=IZdZmu8mHTw&feature=plcp>.
- Jessup, E., 1979. *Ernest Oppenheimer: A Study in Power*, London: Rex Collings.
- John, D.R., 1999. Consumer Socialization of Children: A Retrospective Look At Twenty-Five Years of Research. *Journal of Consumer Research*, 26(3), pp.183–213.
- Kanfer, S., 1993. *The Last Empire: De Beers, Diamonds, and the World*, New York: The Noonday Press.
- Kennedy, C.S. & Kennedy, G.C., 1976. The Equilibrium Boundary Between Graphite and Diamond. *Journal of Geophysical Research*, 81(14), pp.2467–2470.
- Kim, C. & Lee, H., 2007. Development of Family Triadic Measures for Children's Purchase Influence. *Journal of Marketing Research*, 34, pp.307–321.
- Kirkley, M.B., Gurney, J.J. & Levinson, A.A., 1991. Age, origin, and emplacement of diamonds: Scientific advances in the last decade. *Gems & Gemology*, 27(1), pp.2–25.
- Klein, N., 2000. *No Logo: Taking Aim at the Brand Bullies*, Toronto: Vintage Canada.
- Klein, P.A., 1987. Power and economic performance: the institutionalist view. *Journal of Economic Issues*, 21(3), pp.1341–1377.
- Kliman, A., 2007. *Reclaiming Marx's 'Capital': A Refutation of the Myth of Inconsistency*, Lanham, MD: Lexington Books.
- Knafo, S., Hughes, M. & Wyn-Jones, S., 2013. Differential accumulation and the political economy of power. In T. Di Muzio, ed. *The Capitalist Mode of Power*. London: Routledge, pp. 134–151.
- Knorr Cetina, K. & Bruegger, U., 2002. Global Microstructures: The Virtual Societies of Financial Markets. *American Journal of Sociology*, 107(4), pp.905–950.
- Knorr Cetina, K. & Bruegger, U., 2000. The Market as an Object of Attachment: Exploring Postsocial Relations in Financial Markets. *Canadian Journal of Sociology*, 25(2), pp.141–168.

- Koskoff, D.E., 1981. *The Diamond World*, New York: Harper & Row.
- Kuchta, D., 1996. The Making of the Self-Made Man: Class, Clothing and English Masculinity, 1688-1832. In V. de Grazia & E. Furlough, eds. *The Sex of Things*. Berkeley, CA: University of California Press, pp. 54–78.
- Lamont, J. & Innocenti, N.D., 2001. Oppenheimers buy back control of family jewels. *FT.com*.
- Landes, D.S., 2006. *Dynasties: Fortunes and Misfortunes of the World's Greatest Business Families*, New York: Viking.
- Latour, B., 1996. On Interobjectivity. *Mind, Culture, and Activity*, 3(4), pp.228–245.
- Latour, B., 2010. *On the Modern Cult of the Factish Gods*, Durham, NC: Duke University Press.
- Latour, B., 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford, UK: Oxford University Press.
- Latour, B., 1987. *Science in Action: How to Follow Engineers and Scientists through Society*, Cambridge, MA: Harvard University Press.
- Latour, B., 1993. *We Have Never Been Modern*, Cambridge, MA: Harvard University Press.
- Latour, B. & Lepinay, V.A., 2010. *The Science of Passionate Interests: An Introduction to Gabriel Tarde's Economic Anthropology*, Chicago: Prickly Paradigm Press.
- Latour, B. & Weibel, P., 2005. *Making things public*, Cambridge, MA: The MIT Press.
- Law, J., 1991. Power, discretion and strategy. In J. Law, ed. *Sociology of Monsters: Essays on Power, Technology and Domination*. London: Routledge, pp. 165–191.
- Lee, J. & Li, H., 2009. *Wealth Doesn't Last 3 Generations: How Family Businesses Can Maintain Prosperity*, Singapore: World Scientific.
- Lepinay, V.A., 2011. *Codes of Finance*, Princeton, NJ: Princeton University Press.
- Levinson, A.A., 1998. Diamond Sources and Their Discovery. In *The Nature of Diamonds*. Cambridge, UK: Cambridge University Press, pp. 72–104.
- Levinson, M., 2006. *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger*, Princeton, NJ: Princeton University Press.
- Lippmann, W., 1941. The Underlying Mistake. *The Ottawa Journal*, p.32.
- Lowenthal, D., 1985. *The Past is a Foreign Country*, Cambridge, UK: Cambridge University Press.
- Luhmann, N., 1995. *Social Systems*, Stanford, CA: Stanford University Press.

- Lukes, S., 1986. Introduction. In S. Lukes, ed. *Power*. New York: New York University Press, pp. 1–18.
- Lukes, S., 2005. *Power* 2nd ed., New York: Palgrave Macmillan.
- Machiavelli, N., 1950. *The Prince and The Discourses*, New York: The Modern Library.
- MacKenzie, D., 2006. *An Engine, Not a Camera: How Financial Models Shape Markets*, Cambridge, MA: MIT Press.
- MacKenzie, D., 2008. *Material Markets: How Economic Agents are Constructed*, Oxford, UK: Oxford University Press.
- Mann, C.C., 2005. *1491: New Revelations of the Americas before Columbus*, New York: Vintage Books.
- Marchand, R., 1986. *Advertising the American Dream: Making Way for Modernity, 1920-1940*, Berkeley, CA: University of California Press.
- Marshall, A., 1997. *Principles of Economics*, Amherst, NY: Prometheus Books.
- Martel, J., 2006. *The Dilemmas of Family Wealth: Insights on Succession, Cohesion, and Legacy*, New York: Bloomberg Press.
- Marx, K., 1967a. *Capital, Vol. 1: A Critique of Political Economy* F. Engels, ed., New York: International Publishers.
- Marx, K., 1967b. *Capital, Vol. 2: The Process of Circulation of Capital* F. Engels, ed., New York: International Publishers.
- Marx, K., 1964. The Power of Money in Bourgeois Society. In D. J. Struik, ed. *The Economic & Philosophic Manuscripts of 1844*. New York: International Publishers, pp. 165–169.
- Marx, K. & Engels, F., 1948. *The Communist Manifesto*, New York: International Publishers.
- Marx, K. & Engels, F., 1998. *The German Ideology*, Amherst, NY: Prometheus Books.
- McFall, L., 2004. *Advertising: A Cultural Economy*, London: Sage Publications Ltd.
- McMahon, J., 2013. The Rise of a Confident Hollywood: Risk and the Capitalization of Cinema. *Review of Capital as Power*, 1(1), pp.23–40.
- McNichol, D., 2005. *Paving the Way: Asphalt in America*, Lanham, MD: National Asphalt Pavement Association.
- Mead, G.H., 1972. *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*, Chicago, IL: University of Chicago Press.
- Means, G.C., 1935. Price Inflexibility and the Requirements of a Stabilizing Monetary Policy.

- Journal of the American Statistical Association*, 30(190), pp.401–413.
- Miller, Daniel, 1997. *Material Culture and Mass Consumption*, Hoboken, NJ: Wiley-Blackwell.
- Miller, Danny, Le Breton-Miller, I. & Scholnick, B., 2008. Stewardship vs. Stagnation: An Empirical Comparison of Small Family and Non-Family Businesses. *Journal of Management Studies*, 45(1), pp.51–78.
- Miller, Peter, 1998. The Margins of Accounting. In M. Callon, ed. *The Laws of the Markets*. Oxford, UK: Wiley-Blackwell, pp. 174–193.
- Mills, C.W., 1999. *The Power Elite*, Oxford, UK: Oxford University Press.
- Mitchell, J., 1966. Women: The Longest Revolution. *New Left Review*, 40. Available at: <https://www.marxists.org/subject/women/authors/mitchell-juliet/longest-revolution.htm>.
- Mitchell, T., 2009. Carbon democracy. *Economy and Society*, 38(3), pp.399–432.
- Morton, T., 2013. *Hyperobjects: Philosophy and Ecology After the End of the World*, Minneapolis, MN: University of Minnesota Press.
- Moschis, G.P., 1985. The Role of Family Communication in Consumer Socialization of Children and Adolescents. *Journal of Consumer Research*, 11(4), pp.898–913.
- Mumford, L., 1966. *The Myth of the Machine: Technics and Human Development*, New York: Harcourt Brace Jovanovich, Inc.
- Muniesa, F., 2008. Trading-room Telephones and the Identification of Counterparts. In R. Swedberg & T. Pinch, eds. *Living in a Material World: Economic Sociology Meets Science and Technology Studies*. Cambridge, MA: MIT Press, pp. 291–313.
- Nace, T., 2003. *Gangs of America: The Rise of Corporate Power and the Disabling of Democracy*, San Francisco: Berrett-Koehler Publishers.
- Nelson, D., 1992. Scientific Management in Retrospect. In D. Nelson, ed. *A Mental Revolution: Scientific Management Since Taylor*. Columbus, OH: Ohio State University Press, pp. 5–39.
- Newbury, C., 1989. *The Diamond Ring: Business, Politics, and Precious Stones in South Africa, 1867-1947*, Oxford, UK: Oxford University Press.
- Nitzan, J. & Bichler, S., 2000. Capital Accumulation: Breaking the Duality of 'Economics' and "Politics." In R. Palan, ed. *Global Political Economy: Contemporary Theories*. New York: Routledge, pp. 67–88.
- Nitzan, J. & Bichler, S., 2009. *Capital as Power: A Study of Order and Creorder*, London: Routledge.
- Nitzan, J. & Bichler, S., 2002. *The Global Political Economy of Israel*, London: Pluto Press.

- Noble, D.F., 1984. *Forces of Production: A Social History of Industrial Automation*, New York: Alfred A. Knopf.
- O'Donoghue, M., 2006. *Gems: Their Sources, Descriptions and Identification*, Oxford, UK: Butterworth-Heinemann.
- Ostrander, S., 1984. *Women of the Upper Class*, Philadelphia: Temple University Press.
- Parsons, T. et al. eds., 1965. *Theories of Society: Foundations of Modern Sociological Theory*, New York: Free Press.
- Perrot, P., 1994. *Fashioning the Bourgeoisie: A History of Clothing in the Nineteenth Century*, Princeton, NJ: Princeton University Press.
- Pierre, J., 2000. *Debating Governance: Authority, Steering, and Democracy*, Oxford, UK: Oxford University Press.
- Piketty, T., 2014. *Capital in the Twenty-First Century*, Cambridge, MA: Harvard University Press.
- Pinch, T., 2008. Technology and Institutions: Living in a Material World. *Theory and Society*, 37(5), pp.461–483.
- Polanyi, K., 2001. *The Great Transformation: The Political and Economic Origins of Our Time*, Boston: Beacon Press.
- Preda, A., 2009. *Framing Finance: The Boundaries of Markets and Modern Capitalism*, Chicago: University of Chicago Press.
- Preda, A., 2008. Technology, Agency and Financial Price Data. In R. Swedberg & T. Pinch, eds. *Living in a Material World: Economic Sociology Meets Science and Technology Studies*. Cambridge, MA: MIT Press, pp. 217–252.
- Preda, A., 1999. The Turn to Things: Arguments for a Sociological Theory of Things. *The Sociological Quarterly*, 40(2), pp.347–366.
- Proctor, R.N., 2001. Anti-Agate: The Great Diamond Hoax and the Semiprecious Stone Scam. *Configurations*, 9(3), pp.381–412.
- Prusher, I., 2015. The High Cost of Not Making Peace: RAND Study Calculates Dividends for Israelis, Palestinians. *Haaretz.com*. Available at: <http://www.haaretz.com/blogs/jerusalem-vivendi/1.660303> [Accessed August 2015].
- Read, D.W. & Behrens, C., 1989. Modeling Folk Knowledge as Expert Systems. *Anthropological Quarterly*, 62(3), pp.107–120.
- Richman, B.D., 2006. How Community Institutions Create Economic Advantage: Jewish Diamond Merchants in New York. *Law & Society Inquiry*, 31(2), pp.383–420.

- Roberts, J.P., 2003. *Glitter & Greed: The Secret World of the Diamond Empire*, New York: Disinformation Company.
- Robinson, J., 1934. *The Economics of Imperfect Competition*, London: Macmillan.
- Rockoff, H., 1998. The United States: From Ploughshares to Swords. In M. Harrison, ed. *The Economics of World War II: Six Great Powers in International Comparison*. Cambridge, UK: Cambridge University Press, pp. 81–121.
- Samuelson, P.A., 1947. *Foundations of Economic Analysis*, Cambridge, MA: Harvard University Press.
- Schudson, M., 2013. *Advertising, The Uneasy Persuasion: Its Dubious Impact on American Society*, New York: Routledge.
- Schwarzkopf, S., 2008. *Turning Trade Marks Into Brands: How Advertising Agencies Created Brands in the Global Market Place, 1900-1930*, Centre for Globalization Research. Available at: <http://webpace.qmul.ac.uk/pmartins/CGRWP18.pdf>.
- Serres, M., 2007. *The Parasite*, Minneapolis, MN: University of Minnesota Press.
- Sethi, S.P. ed., 2011. *Globalization and Self-Regulation: The Crucial Role that Corporate Codes of Conduct Play in Global Business*, New York: Palgrave Macmillan.
- Shaikh, A.M. & Tonak, E.A., 1994. *Measuring the Wealth of Nations: The Political Economy of National Accounts*, Cambridge, UK: Cambridge University Press.
- Siegel, D., 2009. *The Mazzel Ritual*, Utrecht, NL: Springer.
- Slater, D., 2002. Capturing Markets from the Economists. In P. Du Gay & M. Pryke, eds. *Cultural economy*. London: Sage Publications Ltd, pp. 59–77.
- Slater, D., 2011. Marketing as a Monstrosity: The Impossible Place between Culture and Economy. In D. Zwick & J. Cayla, eds. *Inside Marketing: Practices, Ideologies, Devices*. Oxford University Press, pp. 23–41.
- Slater, D. & Barry, A., 2005. *Technological Economy*, London: Routledge.
- Smith, A., 2000. *The Wealth of Nations*, New York: The Modern Library.
- Sombart, W., 1967. *Luxury and Capitalism*, Ann Arbor, MI: University of Michigan Press.
- Stachel, T. & Harris, J., 2008. The Origin of Cratonic Diamonds: Constraints From Mineral Inclusions. *Ore Geology Reviews*, 34(1-2), pp.5–32.
- Stachel, T. & Harris, J.W., 2009. Formation of Diamond in the Earth's Mantle. *Journal of Physics: Condensed Matter*, 21(36), pp.1–10.
- Starrs, S., 2014. *The Persistence of American Economic Power in Global Capitalism: From the*

- 1960s into the Twenty-First Century*. York University.
- Stern, B.B., 2006. What Does *Brand* Mean? Historical-Analysis Method and Construct Definition. *Journal of the Academy of Marketing Science*, 34(2), pp.216–223.
- Stigler, G.J., 1961. The Economics of Information. *The Journal of Political Economy*, 69(3), pp.213–225.
- Strum, S.S. & Latour, B., 1987. Redefining the Social Link: From Baboons to Humans. *Social Science Information*, 26(4), pp.783–802.
- Su, C., Fern, E.F. & Ye, K., 2003. A Temporal Dynamic Model of Spousal Family Purchase-Decision Behavior. *Journal of Marketing Research*, 40, pp.258–281.
- Sullivan, V.B., 2006. *Machiavelli, Hobbes, and the Formation of a Liberal Republicanism in England*, Cambridge University Press.
- Swedberg, R., 2011. The Role of Senses and Signs in the Economy. *Journal of Cultural Economy*, 4(4), pp.423–437.
- Swedberg, R. & Pinch, T. eds., 2008. *Living in a Material World: Economic Sociology Meets Science and Technology Studies*, Cambridge, MA: MIT Press.
- Swetz, F.J., 1987. *Capitalism & Arithmetic: The New Math of the 15th Century*, La Salle, IL: Open Court.
- Tappert, R. & Tappert, M.C., 2011. *Diamonds in Nature: A Guide to Rough Diamonds*, London: Springer.
- Tarde, G., 2012. *Monadology and Sociology*, Victoria, AU: re.press.
- Therborn, G., 2004. *Between Sex and Power: Family in the World, 1900-2000*, London: Routledge.
- Thomas, R. & Gup, B.E. eds., 2010. *The Valuation Handbook: Valuation Techniques from Today's Top Practitioners*, Hoboken, NJ: John Wiley & Sons.
- Tilly, C., 2005. *Trust and Rule*, Cambridge, UK: Cambridge University Press.
- Tucker, R., 1941. Washington Gossip. *Middletown Times Herald*, p.4.
- Tulett, S., 2014. “Genericide”: Brands destroyed by their own success. *BBC News*, pp.1–3. Available at: <http://www.bbc.com/news/business-27026704> [Accessed June 3, 2014].
- Veblen, T., 1923. *Absentee Ownership: The Case of America*, Boston: Beacon Press.
- Veblen, T., 1908a. On the Nature of Capital: Investment, Intangible Assets, and the Pecuniary Magnate. *The Quarterly Journal of Economics*, 23(1), pp.104–136.

- Veblen, T., 1908b. On the Nature Of Capital. *The Quarterly Journal of Economics*, 22(4), pp.517–542.
- Veblen, T., 1914. *The Instinct of Workmanship and the State of the Industrial Arts*, New York: Macmillan Company. Available at: <https://archive.org/details/instinctofworkma00vebl>.
- Veblen, T., 1904. *The Theory of Business Enterprise*, New York: Mentor Books.
- Veblen, T., 1994. *The Theory of the Leisure Class*, New York: Dover Publications.
- Veblen, T., 1898. Why Is Economics Not an Evolutionary Science? *The Quarterly Journal of Economics*, 12(4), pp.373–397.
- Vogel, S.K., 1996. *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*, Ithaca, NY: Cornell University Press.
- Wallerstein, I., 1979. *The Capitalist World-Economy*, Cambridge, UK: Cambridge University Press.
- Waring, M., 1999. *Counting for Nothing: What Men Value and What Women Are Worth* 2nd ed., Toronto: University of Toronto Press.
- Weber, M., 1978. *Economy and Society: An Outline of Interpretive Sociology* G. Roth & C. Wittich, eds., Berkeley, CA: University of California Press.
- Weber, M., 2005. *The Protestant Ethic and the Spirit of Capitalism*, London: Routledge.
- Wells, A., 1951. Legislative History of Excess Profits Taxation in the United States in World Wars I and II. *National Tax Journal*, 4(3), pp.237–254.
- Wilkinson, R. & Pickett, K., 2009. *The Spirit Level: Why Greater Equality Makes Societies Stronger*, New York: Bloomsbury Publishing USA.
- Williamson, J., 1978. *Decoding Advertisements: Ideology and Meaning in Advertising*, New York: Marion Boyars.
- Wilson, J.L., 2005. *Nostalgia: Sanctuary of Meaning*, Lewisburg, PA: Bucknell University Press.
- Wolin, S.S., 2004. *Politics and Vision; Continuity and Innovation in Western Political Thought*. 2nd ed., Princeton, NJ: Princeton University Press.
- Wood, E.M., 2002. *The Origin of Capitalism: A Longer View*, London: Verso.
- Worden, N., 2012. *The Making of Modern South Africa* 5 ed., West Sussex, UK: Wiley-Blackwell.
- Yang, S. et al., 2010. Modeling the Intrahousehold Behavioral Interaction. *Journal of Marketing Research*, 47, pp.470–484.

Zelizer, V.A., 2010. *Economic Lives: How Culture Shapes the Economy*, Princeton, NJ: Princeton University Press.

Zoellner, T., 2007. *The Heartless Stone: A Journey Through the World of Diamonds, Deceit, and Desire*, New York: St. Martin's Press.