Experimental studies on the psychology of property rights
el Haji, A.

Citation for published version (APA):
El Haji, A. (2017). Experimental studies on the psychology of property rights

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Property rights determine who owns what. Trade is very difficult if it is unclear who owns what or if property rights are not enforced. For this reason, many scholars argue that property rights and their enforcement are essential to economic prosperity. A distinction can be made between a legal and psychological approach to property rights. A legal approach to property rights considers how the rules of property rights are codified in law while a psychological approach focuses on how humans tend to think about property rights intuitively.

The two approaches seem to diverge if more unconventional goods are considered. This thesis consists of four studies that investigate how consumers perceive unconventional goods in different contexts. The aim of these four studies combined is to gain a better understanding of consumers’ perception of property rights, which not only furthers relevant theories but also provides practical recommendations to policy-makers and managers.
Experimental studies on the psychology of property rights
Experimental studies on the psychology of property rights

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor

aan de Universiteit van Amsterdam

op gezag van de Rector Magnificus

prof. dr. ir. K.I.J. Maex

ten overstaan van een door het College voor Promoties

ingestelde commissie, in het openbaar te verdedigen

in de Aula der Universiteit

op vrijdag 3 februari 2017, te 11:00 uur

door Anouar El Haji

geboren te Purmerend
Promotiecommissie

Promotor: Prof. dr. W.M. van Dolen Universiteit van Amsterdam

Co-promotor: Prof. dr. J.H. Sonnemans Universiteit van Amsterdam

Overige leden: Prof. dr. T.J.S. Offerman Universiteit van Amsterdam
               Dr. A.M. Onderstal Universiteit van Amsterdam
               Prof. dr. P.W.J. Verlegh Vrije Universiteit
               Prof. dr. C.B. Weinberg University of British Columbia
               Prof. mr. dr. N.M. Wijnberg Universiteit van Amsterdam

Faculteit Economie en Bedrijfskunde


Cover: Sarah Essbai
Acknowledgements

My PhD journey started with a number of talks with Jan-Willem Stoelhorst. Jan-Willem’s fatherly advice helped me to make sense of academic life, for which I am incredibly thankful. His passion for posing the big questions and his intrinsic drive to produce quality research were critical in shaping my own research approach and practice.

I would also like to thank Ans Kolk and Jean Johnson who provided me the opportunity to become part of a circle of outstanding researchers whom I am honored to call my colleagues and mentors. Mark Leenders’ positive attitude and great enthusiasm inspired me to challenge the boundaries of the possible in the field of marketing. Willemijn van Dolen, who became my promotor after Mark’s departure to sunny Australia, inspired me with her great ability to generate practically useful insights that are at the same time academically novel. I am also greatly indebted to my co-promotor Joep Sonnemans whose timely and elaborate feedback helped improve all aspects of the research presented in this thesis.

Due to the interdisciplinary nature of my research, I was fortunate to work extensively with researchers who are active in fields other than marketing. My collaboration with Gert-Jan Munneke resulted in countless conversations about human moral psychology, which helped me understand how little we really know about moral behavior. With the always apt and valuable input from Maurits van der Molen, this collaboration brought about the second chapter of this thesis. I also had the great privilege to work with Aljaž Ule who, as a true scientist, is ever-ready to examine and re-examine
possible explanations of the phenomenon at hand. The fruits of this collaboration are presented in chapter four. The fifth chapter is the result of my collaboration with Sander Onderstal whose positive and can-do attitude motivated me immensely. Sander’s deep knowledge of mechanism design helped me gain a better understanding of how economic theory can be used to improve people’s lives.

Although research is most of the time a solitary endeavor, my colleagues at the Amsterdam Business School made me feel part of a team. Thank you, Renske van Geffen, Joris Demmers, Bram Kuijken, Robert Kleinknecht, Binqi Tang, Alfred Zerres, Boris van Leeuwen, Matthias Weber, Thomas de Haan, Jona Linde, Hannah Berkers, Liselore Havermans, Frederik Situmeang, Pawan Bhansing, Nicole Stofberg, Marlene Vock, Jonne Guyt, Karin Venetis, Katinka Quintelier, Roger Pruppers, Nachoem Wijnberg, Flore Bridoux and the many others who made my experience at the University of Amsterdam enjoyable.

While still committed to academic research, I took on the stimulating, yet daunting, task of starting a new venture. Stemming from an academic side-project, Veylinx evolved into an analytics platform that is currently used by academic and industry researchers. With Bram’s willingness to explore, it was possible to bring Veylinx to life. I would also like to thank Marc Salomon and Ans Kolk for providing space, literally and figuratively, to incubate Veylinx. Last but not least, I would not have been able to continue to grow Veylinx to what is today without the hard work of my team.
Finally, I cannot miss to mention the great assistance and availability that my close family, parents and siblings, has always offered unconditionally. One person in particular provided inexhaustible moral support and I am certain that I would not have been able to get to where I am now as a person, husband, researcher and entrepreneur without the support and sacrifice of my dear beloved wife Sarah.
Table of Contents

List of Tables ........................................................................................................... ix
List of Figures ........................................................................................................... x

1. Introduction ........................................................................................................... 1
   1.1. PROPERTY RIGHTS .................................................................................. 1
   1.2. A BASIC TAXONOMY OF GOODS ..................................................... 3
   1.3. THE PSYCHOLOGY OF PROPERTY RIGHTS ....................................... 6
   1.4. METHODOLOGY ...................................................................................... 8
   1.5. THESIS OVERVIEW .............................................................................. 9

2. The Moral Distinction Between Theft and Piracy ............. 15
   2.1. INTRODUCTION .................................................................................... 15
   2.2. THEORETICAL FRAMEWORK ............................................................ 17
   2.3. EXPERIMENT 1: MORAL EVALUATION OF PIRACY AND THEFT ... 25
   2.4. EXPERIMENT 2: LIKELIHOOD OF CHEATING ..................................... 29
   2.5. EXPERIMENT 3: TANGIBILITY VERSUS RIVALRY ............................ 34
   2.6. EXPERIMENT 4: FOREGONE GAINS VERSUS RIVALRY ............... 38
   2.7. DISCUSSION ......................................................................................... 42

3. Theft and Piracy: Incentivized Experiments ................. 48
   3.1. INTRODUCTION .................................................................................... 48
   3.2. THEORETICAL FRAMEWORK ............................................................ 50
   3.3. STUDY 1: EXCHANGE GAME ............................................................... 56
   3.4. STUDY 2: DICTATOR GAME ................................................................. 62
   3.5. DISCUSSION ......................................................................................... 71
   3.6. APPENDIX: EXPERIMENTAL INSTRUCTIONS EXCHANGE GAME . 75
   3.7. APPENDIX: EXPERIMENTAL INSTRUCTIONS DICTATOR GAME... 76
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Dilution Illusion</td>
<td>77</td>
</tr>
<tr>
<td>4.1.</td>
<td>Introduction</td>
<td>77</td>
</tr>
<tr>
<td>4.2.</td>
<td>Literature Review</td>
<td>79</td>
</tr>
<tr>
<td>4.3.</td>
<td>Experimental Design</td>
<td>86</td>
</tr>
<tr>
<td>4.4.</td>
<td>Theoretical Predictions</td>
<td>95</td>
</tr>
<tr>
<td>4.5.</td>
<td>Results</td>
<td>100</td>
</tr>
<tr>
<td>4.6.</td>
<td>Discussion</td>
<td>109</td>
</tr>
<tr>
<td>4.7.</td>
<td>Appendix: Instructions</td>
<td>115</td>
</tr>
<tr>
<td>5.</td>
<td>Trading Places</td>
<td>118</td>
</tr>
<tr>
<td>5.1.</td>
<td>Introduction</td>
<td>118</td>
</tr>
<tr>
<td>5.2.</td>
<td>Theoretical Framework</td>
<td>126</td>
</tr>
<tr>
<td>5.3.</td>
<td>Experimental Design and Hypotheses</td>
<td>132</td>
</tr>
<tr>
<td>5.4.</td>
<td>Results</td>
<td>138</td>
</tr>
<tr>
<td>5.5.</td>
<td>Conclusion</td>
<td>156</td>
</tr>
<tr>
<td>5.6.</td>
<td>Appendix: Proofs of Propositions</td>
<td>162</td>
</tr>
<tr>
<td>5.7.</td>
<td>Appendix: Experimental Instructions</td>
<td>167</td>
</tr>
<tr>
<td>6.</td>
<td>Discussion and Implications</td>
<td>174</td>
</tr>
<tr>
<td>6.1.</td>
<td>Theoretical Contributions</td>
<td>174</td>
</tr>
<tr>
<td>6.2.</td>
<td>Managerial Implications</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>Samenvatting</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td>194</td>
</tr>
</tbody>
</table>
List of Tables

Table 1.1: A taxonomy of goods ................................................................. 3
Table 2.1: Tangibility, rivalry and appropriation type ................................. 21
Table 3.1: Monetary value of possessions depending on the Buyer's decision ... 59
Table 3.2: Determinants of perceived ownership after making a decision ....... 62
Table 3.3: Final distribution of tokens and payoffs Dictators and Receivers .... 65
Table 3.4: Overview ................................................................................. 66
Table 4.1: Donors' choice set .................................................................... 89
Table 4.2: Descriptives of initial offers ...................................................... 102
Table 4.3: Descriptives of final offers ........................................................ 105
Table 5.1: Numerical example for the rules of the server-initiated auction .... 127
Table 5.2: Numerical example for the rules of the customer-initiated auction . 129
Table 5.3: Experimental design and number of participants ....................... 133
Table 5.4: Descriptive statistics .................................................................. 140
Table 5.5: Average efficiency gains ............................................................ 143
Table 5.6: Estimation of efficiency gains ..................................................... 145
Table 5.7: Estimations of bids in the server-initiated auction ........................ 147
Table 5.8: Regressions explaining bids in the customer initiated auction ....... 151
Table 5.9: Estimations of likelihood voting for server-initiated auction ......... 154
List of Figures

Figure 2.1: Moral evaluation of theft and piracy ..........................................................28
Figure 2.2: Willingness to pay and cheating rate ........................................................33
Figure 2.3: Moral evaluation of theft and piracy ..........................................................37
Figure 2.4: Perceived moral acceptability, rivalry and foregone gains .......................41
Figure 3.1: Perceived shared ownership .................................................................61
Figure 3.2: Cumulative distribution of Dictators’ appropriation ...............................67
Figure 3.3: Mean appropriation rate per price range .................................................69
Figure 3.4: Mean actual and expected appropriation rate .........................................70
Figure 4.1: Visualization token distribution ..............................................................92
Figure 4.2: Confirmation dialog box .........................................................................93
Figure 4.3: Cumulative distribution of donors’ initial offers ......................................100
Figure 4.4: Mean initial and final offer per treatment and CRT score .......................108
Figure 5.1: Average bids in the server-initiated auction by position and arrival process ........................................................................................................................................................................149
Figure 5.2: Defenders’ bids in the customer-initiated auction by arrival process ........................................................................................................................................................................152
Figure 5.3: Attackers’ bids in the customer-initiated auction by arrival process ........................................................................................................................................................................153