

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

---

## *Material Cultures, Material Minds*

Material culture has been part of a distinctively human way of life for more than two million years. Recent symbolic and social analyses have drawn much attention to the role of material culture in human society, emphasising the representational and ideological aspects of the material world. These studies have, nonetheless, often overlooked how the very physicality of material culture and our material surroundings makes them unique and distinctive from text and discourse. In this study, Nicole Boivin explores how the physicality of the material world shapes our thoughts, emotions, cosmological frameworks, social relations, and even our bodies. Focusing on the agency of material culture, she draws on the work of a diverse range of thinkers, from Marx and Merleau-Ponty to Darwin, while highlighting a wide selection of new studies in archaeology, cultural anthropology, history, cognitive science, and evolutionary biology. She asks what is distinctive about material culture compared with other aspects of human culture and presents a comprehensive overview of material agency that has much to offer to both scholars and students.

Nicole Boivin is senior research associate at the McDonald Institute for Archaeological Research, University of Cambridge. She is editor, with Mary Ann Owoc, of *Soils, Stones, and Symbols: Cultural Perceptions of the Mineral World*.

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

# Material Cultures, Material Minds

---

*The Impact of Things on  
Human Thought, Society,  
and Evolution*

**NICOLE BOIVIN**

*University of Cambridge*



**CAMBRIDGE**  
UNIVERSITY PRESS

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi

Cambridge University Press

32 Avenue of the Americas, New York, NY 10013-2473, USA

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9780521873970](http://www.cambridge.org/9780521873970)

© Nicole Boivin 2008

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2008

Printed in the United States of America

*A catalog record for this publication is available from the British Library.*

*Library of Congress Cataloging in Publication Data*

Boivin, Nicole, Ph.D.

Material cultures, material minds: the impact of things on human thought, society, and evolution / Nicole Boivin.

p. cm.

Includes bibliographical references and index.

ISBN 978-0-521-87397-0 (hardback)

1. Material culture. 2. Intellectual life – History.

3. Civilization – History. 4. Social evolution. 5. Human evolution. 6. Social archaeology. 7. Ethnology. 8. Social history. 9. Cognitive science.

10. Evolution (Biology) I. Title.

GN406.B65 2009

306–dc22 2007052895

ISBN 978-0-521-87397-0 hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

---

*To my parents, Janet and Joseph Boivin*

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## Contents

<i>List of Tables and Figures</i>	<i>xi</i>
<i>Acknowledgements</i>	<i>xv</i>
<b>1. Introduction</b>	<b>I</b>
In Pursuit of Symbols in Western India	I
The Model of the Text	10
Idealism in Western Thought	13
Anthropology and the Superorganic	15
The Marginalisation of the Material	16
Uniting Mind and Matter	23
<b>2. Representation and Matter</b>	<b>30</b>
Materiality and the Motivation of Signs	30
Abstracting the World	41
Illuminating the Unknown: Sensual Cosmologies and Material Thoughts	46
Thinking with Metaphors in Everyday Life	50
Bodily and Material Metaphors	53
Technological Understanding	61

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

viii

## CONTENTS

Modelling the Mind: Bringing Back the Body	64
Ecological embodiment: Uniting Mind, Matter, and World	74
Beyond Representation	81
<b>3. Words Are Not Enough</b>	<b>82</b>
Rajasthan Revisited	82
Culture, Thought, and Language	87
Reawakening the Senses	94
Rock Art and Sensory Experience	99
How Matter Moves Us: Emotion and the Material World	106
Neurophenomenology	122
More Than Words Can Say	127
<b>4. The Agency of Matter</b>	<b>129</b>
The Near Eastern Neolithic and the Materiality of Soil	129
Material Agency in Historical Perspective	138
The Spectre of Determinism	148
The Baby with the Bathwater?	153
Material Agents	160
The New Materialism	168
We Are Not Ghosts	178
<b>5. A Self-Made Species</b>	<b>181</b>
The Role of Technology in Evolution	181
Darwin, Mendel, and the Modern Evolutionary Synthesis	182
Gene, Organism, and Environment	184
Niche Construction and Human Culture	187
The Self-Made Species	190

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## CONTENTS

ix

Self-Domestication	197
Molecular Genetics and Recent Human Evolution	202
Cognitive Evolution	211
A Word of Warning: The Role of Development and Cognitive Plasticity	220
<b>6. Conclusion</b>	<b>225</b>
<i>Bibliography</i>	233
<i>Index</i>	257

Members of the Australian Aboriginal community are respectfully advised that this book contains reference to a deceased Indigenous person.

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## List of Tables and Figures

### Tables

2.1:	Technology and artefact-oriented metaphors discussed by Lakoff and Johnson.	60
4.1:	Examples of some house changes associated with human life-cycle changes in Balathal village.	132

### Figures

1.1:	Red patch above the hearth in a Balathal house.	3
1.2:	Valuable pure white soil.	5
1.3:	Prehistoric to historic period tell in Jordan in the Near East.	7
1.4:	A domestic ritual underway in Balathal village.	9
1.5:	A decorated calabash from Kenya.	11
1.6:	Street in downtown Halifax, Canada.	19
1.7:	Steam tractor.	23
1.8:	Skyscrapers in Hong Kong.	25
2.1:	The designs and jewellery worn by Maasai women in Kenya.	31
2.2:	The skulls and horns of dead cattle embedded within plastered walls at Çatalhöyük.	37
2.3:	Weathervane.	42
2.4:	Stone.	43
2.5:	Pottery for sale in Oaxaca.	45
2.6:	Dew on a leaf.	51
2.7:	Embellished entrance in Rajasthan.	55



Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

xii

## LIST OF TABLES AND FIGURES

2.8: Moving through a doorway, from one space into another.	57
2.9: Rice harvesting in India.	59
2.10: The Mind Is a Machine.	61
2.11: Medieval Spanish coat of armour with sword.	63
2.12: Father holding baby.	71
2.13: Boy trying to catch a baseball.	73
2.14: Approximate time scale of major achievements in biological evolution.	76
2.15: Thick clothing and open landscape characteristic of the Central Andean highlands.	79
3.1: Painting designs.	83
3.2: Carving from a Zafimaniry house.	85
3.3: An Indian bride's hands.	89
3.4: The Neolithic ashmound at Kudatini in South India.	95
3.5: Art on gallery walls.	99
3.6: Ramdas ringing rocks at the Hiregudda rock art site in South India.	102
3.7: A 'San' rock engraving from North-West Province, South Africa.	103
3.8: An example of the sand drawings made by the Kutjungka of Western Australia.	105
3.9: Emotion.	107
3.10: A house in shadows.	112
3.11: An evocative photo of an old truck.	113
3.12: The shimmering effect called <i>Bir'yun</i> .	115
3.13: Tombstone bearing a Harley-Davidson insignia.	119
3.14: Personal, everyday object.	120
3.15: Priest hammering a drum during a Shinto ritual.	123
4.1: Microscopic image of layers of mud plaster from a house floor in Balathal village.	134
4.2: Building 65 at the Neolithic site of Çatalhöyük in Turkey.	135
4.3: Clay objects from Çatalhöyük.	137
4.4: Late Neolithic ceramic vessel from northern Jordan.	139
4.5: Gun.	141
4.6: Newspapers on sale in London.	143
4.7: Auschwitz concentration camp.	149

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## LIST OF TABLES AND FIGURES

xiii

4.8: Sixteenth-century-style garden in the Loire Valley, France.	157
4.9: The exterior of the Chartres cathedral.	159
4.10: Freeway system seen from Sears Tower in Chicago.	161
4.11: A Luo man repairing the thatched roof of his wife's house, Kenya.	163
4.12: Mechanic holding a ratchet.	167
4.13: A woman works with a computer and a telephone.	171
4.14: Sign just before one of Robert Moses' parkways.	172
4.15: Solar panel.	173
4.16: Vacuum cleaner.	177
5.1: Spider web.	187
5.2: View down the Champs Élysées in Paris.	189
5.3: Diagram of human evolution.	193
5.4: Middle Stone Age (MSA) points from Hollow Rock Shelter, South Africa.	195
5.5: A modern European farm.	201
5.6: Mud-built grain storage container in Rajasthan, India.	207
5.7: Milk in container.	209
5.8: Primate family tree.	213
5.9: A chimpanzee mother at Bossou, Guinea, uses a stone hammer and anvil to crack open oil palm nuts.	215
5.10: Granite core dating to the Oldowan period.	217
5.11: Person holding pencil.	219
5.12: The author's daughter in her cultural learning environment.	221
6.1: Smoking power plant in Hungary.	231

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## *Acknowledgements*

As those close to me will know, this book has been a long time in the making. Its origins lie in ideas that emerged during the writing of my PhD thesis, and its main thesis has evolved dramatically in subsequent years. I am grateful for the many ‘homes’ I have had during its conception, research, and writing. The book proposal for Cambridge University Press was generated during my time as a Research Fellow in Cognitive Archaeology at the McDonald Institute for Archaeological Research in Cambridge from 2002 to 2004. I am very grateful to Colin Renfrew and Chris Scarre for their support and encouragement during my time at the Institute. The conference entitled Rethinking Materiality, organised by Chris Gosden, Elizabeth DeMarrais, and Colin Renfrew in March 2003, and published by the McDonald Institute, provided an important venue for me to test out and develop some of my ideas at an early stage.

Much of the research and early writing of the book was carried out while I was a Fyssen Foundation Post-Doctoral Research Fellow in Paris in 2005. The Laboratoire de Préhistoire et Technologie at the Maison René Ginouvès de l’Archéologie et de l’Ethnologie, University of Paris X, Nanterre, provided a warm and friendly work atmosphere, and I am particularly grateful to Valentine Roux, Hélène Roche, Jacques Pelegrin, and Isabelle Sidéra for helping me to settle in and feel at home there. The book was completed during my residence at the Leverhulme Centre for Human Evolutionary Studies in Cambridge. I am indebted to Rob Foley and Marta Mirazón Lahr for inviting me to be part of the Centre, and for expanding my horizons in so many ways.

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

This book would not have been written without the encouragement and support of Richard Bradley, who as one of my PhD examiners, and the original Cambridge editor of the book, saw something to get excited about in my PhD thesis. Richard's enthusiasm is contagious, and it inspired me to develop some fledgling ideas into a long book proposal. Richard played an active role in driving the early stages of my research on the book, and his encouragement, advice, and support have been invaluable. I am also indebted to Andy Jones for playing a pivotal role in promoting my work and for endlessly encouraging and inspiring me along the way.

I am grateful to the many colleagues and friends who have helped out with this book in various ways over the years – whether stimulating ideas, providing a forum for my thoughts to be aired, sharing information, or advising me on practicalities – including Paul Devereux, Mark Devitt, Rob Foley, Dorian Fuller, Chris Gosden, Ian Hodder, Andy Jones, Toomas Kivisild, Carl Knappett, Marta Mirazón Lahr, Bill McGrew, Sven Ouzman, Mike Parker Pearson, Michael Petraglia, Valentine Roux, Jay Stock, Marc Verhoeven, Dave Wengrow, Howard Williams, and the members of the Cambridge Archaeological Theory Discussion Group.

I am exceedingly grateful to those who, once the book was completed, took time to read and comment on it or on particular chapters: Joseph Boivin, Paul Devereux, Rob Foley, Dorian Fuller, Clive Gamble, Matthew Johnson, Bill McGrew, Michael Petraglia, and Colin Renfrew. They have provided valuable feedback and editorial advice, and the book is a better one for their efforts. I bear full responsibility for any errors or inconsistencies that may remain.

I would also like to thank those who played a less direct, but still important, role in this work. I am grateful to the people of Balathal village, whose lives and material culture I discuss at various points in this book. They welcomed a stranger into their midst, endlessly and patiently dealt with her strange questions and even stranger ways, and had the generosity to not only feed, house, and shelter me, but also make me feel at home. I am grateful also to the many other people who helped me to accomplish my ethnoarchaeological and archaeological research in India, including in particular Bridget and Raymond Allchin, Raj Bhanti, B. R. Chauhan, Lorraine

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

## ACKNOWLEDGEMENTS

xvii

Fernandes, Rima Hooja, Jheevan Kharakwal, Ravi Korisettar, V. N. Misra, R. K. Mohanty, Lalit Pandey, Vasante Shinde, Rabindra Nath Vyas, and S. R. Walimbe.

A number of friends and colleagues have helped in locating, providing, or making the illustrations that appear in this book, and I gratefully acknowledge their assistance: Ted Banning, Ofer Bar-Yosef, Maurice Bloch, Susana Carvalho, Chris Clarkson, Mark Devitt, Michael Dietler, Shahina Farid, Dorian Fuller, Ingrid Herbich, Ian Hodder, Lisa Maher, Bill McGrew, Steve Mithen, Howard Morphy, Sven Ouzman, Michael Petraglia, Tom Plummer, Jason Quinlan, and Christine Watson. I am also grateful to the many independent and professional photographers who agreed to let me use their photos, and to the various people who helped with photos that ultimately could not appear herein, including Joakim Goldhahn, Janet Hoskins, Tim Insoll, and Paul Stoller.

For various forms of technical support and assistance, I would like to thank Fabio Lahr and Aidan Baker. I am also grateful to the team at Cambridge for their enthusiasm for the book, particularly to my editors, Simon Whitmore and Beatrice Rehl, for their hard work in bringing it to publication. Mary Paden at Aptara was very patient and supportive during the copyediting stage, and a pleasure to work with.

I raced with my daughter Eva to see which would be born first, her or this book, and my daughter won. I am grateful to her for bringing so much joy to my life, and equally grateful to the many friends and family members who have taken such wonderful care of her so that I could slip off, worry free, for a few peaceful hours of work over the past months. That time was instrumental to my completing this book. In particular, I would like to thank Marc Boivin, Federica Crivellaro, Joanne Horton, Fabio Lahr, Marta Mirazón Lahr, Natasja Windsor, the Petraglia family (especially Catherine, Maria, Larry, and Roseanne), the Young family, and my parents.

Last, but certainly not least, I would like to specially thank the three individuals who, more than anyone else, have supported, encouraged, and inspired me, and who have done so much to make this book possible. The first is my husband, Michael Petraglia, whose endless optimism and excitement I thrive on, and who, over the past year, has sacrificed much to ensure I can continue to do

Cambridge University Press

978-0-521-87397-0 - Material Cultures, Material Minds: The Impact of Things on Human Thought, Society, and Evolution

Nicole Boivin

Frontmatter

[More information](#)

---

xviii

ACKNOWLEDGEMENTS

the research I love. The other two are my parents, Janet and Joseph Boivin, who have never wavered in their support, their love, or their belief in me. Though I have often been far away, they have always been present, in the most important of ways, giving me the stability, security, and encouragement to pursue my dreams. It is for this reason that I dedicate this book, born out of the PhD research they played such a role in supporting, to both of them. Thank you.

Nicole Boivin. Recent symbolic and social analyses have drawn much attention to the role of material culture in human society, emphasising the representational and ideological aspects of the material world. These studies have, nonetheless, often overlooked how the very physicality of material culture and our material surroundings make them unique and distinctive from text and discourse. In this book, Boivin explores how the physicality of the material world shapes our thoughts, emotions, cosmological frameworks, social relations and even our bodies. *Material and Non-Material Culture*. Sociologists describe two interrelated aspects of human culture: the physical objects of the culture and the ideas associated with these objects. Material culture refers to the physical objects, resources, and spaces that people use to define their culture. These include homes, neighborhoods, cities, schools, churches, synagogues, temples, mosques, offices, factories and plants, tools, means of production, goods and products, stores, and so forth. When considering non-material culture, sociologists refer to several processes that a culture uses to shape its members' thoughts, feelings, and behaviors. Four of the most important of these are symbols, language, values, and norms. In *Material Cultures, Material Minds*, Nicole Boivin invites readers to rethink fundamental relationships between people and material culture. With indifference to disciplinary boundaries, her highly original synthesis shows how the material world "œplays and has long played a fundamental role in shaping human thought, society and, over the long term, evolution" (p. 225). A post-processualist archaeologist trained at Cambridge University, Boivin became adept at treating material culture as a symbolic medium. Her specialty, however, is geoarchaeology, the study of soils. Through immersion in this