The cognitive life of things

Recasting the boundaries of the mind

Edited by Lambros Malafouris & Colin Renfrew
## Contents

Contributors vii  
Figures viii  
Tables viii  
Acknowledgements ix  

Introduction  The Cognitive Life of Things: Archaeology, Material Engagement and the Extended Mind  
**Lambros Malafouris & Colin Renfrew**  
Things ‘full of gods’ 1  
How can things have cognitive life? 3  
Archaeology and the extended mind: prospects, worries, challenges 5  
Implications for the archaeology of mind and the philosophy of matter 8  

Chapter 1  Knapping Intentions and the Marks of the Mental  
**Lambros Malafouris**  
Introduction: the ‘handaxe enigma’ revisited 13  
Archaeology and the extended mind 14  
Extended intentionality and the Acheulean handaxe 16  
As a conclusion 19  

Chapter 2  Material Surrogacy and the Supernatural: Reflections on the Role of Artefacts in ‘Off-line’ Cognition  
**Andy Clark**  
Coupling and the material world 23  
Surrogacy and the supernatural 24  
Selective concretization and temporal relaxation 25  
*Augmented Fish Reality* 26  

Chapter 3  Minds, Things and Materiality  
**Michael Wheeler**  
Taking material culture seriously 29  
So what exactly is the extended-mind hypothesis? 30  
Extended functionalism and implementational materiality 32  
Enactivism and vital materiality 33  

Chapter 4  The Death of the Mind  
**Chris Gosden**  
Intelligent artefacts in intelligent landscapes 40  
Discussion 45  

Chapter 5  Metaphor and Materiality in Earliest Prehistory  
**Fiona Coward & Clive Gamble**  
Introduction: a relational perspective 47  
Background 47  
Relational archaeology: a missed opportunity? 47  
Material metaphors, body and language 48  
Material metaphors and the archaeological record 50  
Case study 1: lithics, blades and fragmentation 50  
Case study 2: bones, hunting and accumulation 52  
Conclusion: metaphor and materiality in early prehistory 53
## Contents

### Chapter 6  
Technological Conceptualization: Cognition on the Shoulders of History  
**Niels Johannsen**

- The sapient paradox  
- Technology and creative cognition  
- The paradox revisited  
- Conclusion  

59

### Chapter 7  
The Exographic Revolution: Neuropsychological Sequelae  
**Merlin Donald**

- Memory media: engrams and exograms  
- Radical properties of exograms  
- Neuropsychological sequelae  
- The redistribution of cognitive work in society by means of exograms  

71

### Chapter 8  
Communities of Things and Objects: a Spatial Perspective  
**Carl Knappett**

- Direct and indirect perception  
- Communities of objects/things  
- Iconic relations  
- Indexical relations  
- Temporal aspects: vertical and horizontal transmission  
- Archaeological case study: Minoanization  
- Conclusions  

81

### Chapter 9  
Imagining the Cognitive Life of Things  
**Edwin Hutchins**

- Part I: The cognitive life of things is manifest in the ways people jointly engage things with their bodies and their words  
- Part II: The cognitive life of a high-fidelity flight simulator  
- Part III: Understanding the cognitive life of things is essential to understanding cognitive life in general  

91

### Chapter 10  
Things and their Embodied Environments  
**Charles Goodwin**

- What kind of thing is that?  
- Environments for the organization of cognition and action  
- Interacting bodies as frames for the organization of cognition and action  
- Human language as a public environment  
- The reciprocal constitution of things, actors and communities  
- Conclusion  

103

### Chapter 11  
Explaining Artefact Evolution  
**David Kirsh**

- Introduction: interpreting an artefact's cognitive life  
- Part A: Clarifying the argument for optimal design  
- Part B: The case for optimality in artefact design  
- Part C: Problems with an optimization approach  
- Summary and conclusion  

121