Digital Information Contexts: Theoretical Approaches to Understanding Digital Information

LUKE TREDINNICK

Chandos Publishing
Oxford • England

Contents

List of figures and tables *ix*

Preface *xi*

About the author *xvii*

1. The meaning of information **1**

The fundamental problem 3

Information, knowledge and being 18

Notes 23

2. Librarianship and print culture **25**

The rise of print culture 26

The triumph of print culture 30

Print culture and humanism 34

The library and humanism 37

Classification and humanism 40

The information artefact and weak idealism 44

Digital information and the heritage of humanism 47

Notes 50

3. Digital information, science and the social sciences **53**

The progress of science 54

The theory of science and information science 62

The cognitive shift in information science 72

The progress of information science 77

Notes 82

4. Digital information and computer science **85**

Mechanical computing 85

Logic and computing 87
Digital computing 94
The paradigm of computing 100
The challenge of digital information 104
Critical issues 108
Notes 113

5. Digital information, language and representation 115
Digital information and language 116
Meaning and representation 117
The problem with strong models of representation 123
The later thought of Wittgenstein 129
Mimesis and language 135
The Sapir-Whorf hypothesis 138
Critical issues 140
Notes 141

6. Digital information and semiotics 143
Ferdinand de Saussure 145
Charles Sanders Peirce 154
Roman Jakobson 158
Digital information and semiotics 161
Semiotics and network structures 165
Critical issues 166
Notes 171

7. Digital information and post-structuralism 173
An overview of post-structuralist theory 174
Information management and post-structuralism 181
Post-structuralism and classification 182
Post-structuralism and bibliographic extraction 186
Post-structuralism and the unity of the information artefact 189

Against post-structuralism 194
Critical issues 196
Notes 201

8. Digital information and post-modernism 203
Two kinds of post-modernism 204
Jean-Frangois Lyotard and the post-modern condition 207
Jean Baudrillard and the hyperreal 212
Francis Fukuyama and post-modern neo-conservatism 217
Against post-modernism
Post-modernism and digital information
Critical issues
Note

9. Digital information and complexity
Reductionism and emergence
Complexity and emergence
Complexity and information processing
Symbolic representation and complexity
Complexity and representation
Complexity and digital information
Against complexity
Critical issues
Notes

10. Understanding digital information
Discourse and the two cultures
Digital information culture

Bibliography and references

Index