

Contents

Acknowledgments XI

Introduction 1

1 Manuscript World, Print World, Digital World 8

1 Three Worlds 8

1.1 *Surfaces of Emergence* 14

1.2 *Authorities of Delimitation* 18

1.3 *Grids of Specification* 23

2 Case Study 1: *ABC for Book Collectors* versus *A Dictionary of English Manuscript Terminology* 31

2.1 *Manuscript Practices in a Print World* 31

2.2 *Fear of Voiding or Fear of the Void* 33

2.3 *Moldy Manuscript or Pristine Print* 35

3 Case Study 2: *A World Without Whom* versus *Do I Make Myself Clear?* 37

3.1 *Word of the Year: 2015 or 2016?* 37

3.2 *Thinking to Type or Typing to Think? Typewriter versus Text Messages* 40

4 Case Study 3: The Written, Printed, and Digital Koran 42

4.1 *From Manuscript to Print* 43

4.2 *From Print to Digital* 46

4.3 *From Digital to Manuscript* 47

5 Consequences for Digitized Manuscripts 50

2 The Digital Materiality of Digitized Manuscripts 51

1 Stepping into the Digital World 51

2 Larger Than Life Digitized Manuscripts 56

3 The Intangible Aura of Material Manuscripts 60

4 What Are Digitized Manuscripts? 64

5 New Habits for Philologists in a Digital World 69

3 Digitized Manuscripts and Their Repositories, an Ethnography 73

1 Old Collections in Europe 74

1.1 *Staatsbibliothek zu Berlin* 74

1.2 *Qatar Digital Library* 74

- 1.3 *Leiden Universiteitsbibliotheek* 75
- 1.4 *Bibliothèque nationale de France* 75
- 1.5 *Biblioteca Apostolica Vaticana* 76
- 2 New Collections in North America 76
 - 2.1 *Caro Minasian Collection at the University of California, Los Angeles Library* 76
 - 2.2 *Beinecke Rare Book & Manuscript Library* 77
 - 2.3 *Princeton University Library* 77
 - 2.4 *University of Michigan Library* 77
 - 2.5 *Islamic Studies Library, McGill University* 78
- 3 Major Collections in the MENA Region 79
 - 3.1 *Süleymaniye Kütüphanesi* 79
 - 3.2 *Topkapı Sarayı Müzesi Kütüphanesi* 79
 - 3.3 *Ketābkhāna va mūza-ye melli-ye Malek* 80
 - 3.4 *al-Maktaba al-waṭaniyya li-l-mamlaka al-maghribiyya* 80
 - 3.5 *Jāmi'a Malik Sa'ūd* 80
- 4 Notable Collections in Africa, the Levant, and Asia 81
 - 4.1 *Jāmi'a al-najāh al-waṭaniyya* 81
 - 4.2 *Jafet Library* 82
 - 4.3 *Aboubacar Bin Said Library and Mamma Haidara Library on vHMML* 82
 - 4.4 *MyManuskrip Malaya University* 83
 - 4.5 *Daiber Collection Database at the Institute of Oriental Culture, University of Tokyo* 83
- 5 A Grand Comparison of the Quality of Digital Surrogates 84
 - 5.1 *Size of Collection* 84
 - 5.2 *Online* 85
 - 5.3 *Downloadable* 85
 - 5.4 *Portal* 87
 - 5.5 *Viewer* 88
 - 5.6 *Page Numbers* 89
 - 5.7 *Resolution* 90
 - 5.8 *Color Balance* 90
 - 5.9 *Lighting* 91
 - 5.10 *Cut* 92
 - 5.11 *A Final Rating* 92
- 6 A Visual Comparison 94
- 7 Difference between Professional and Amateur Photos 95
- 8 The Future of Digital Manuscript Repositories 95

- 4 Paleography: Between Erudition and Computation 102**
 - 1 The Variety of Digital Paleographic Experience 102
 - 1.1 *From Paper to Digital* 103
 - 1.2 *Born Digital, with A Hint of Print* 105
 - 1.3 *Traditional Work Done Better* 107
 - 1.4 *Towards Handwriting Recognition* 111
 - 2 Rise and Fall of Team Projects Funded by Grants 117
 - 2.1 *Archetypes across the DH Spectrum* 121
 - 3 Drawing Ancient Symbols on a Tablet 123

- 5 Philology: Standards for Digital Editing 132**
 - 1 File Formats 133
 - 2 Encoding of Text 140
 - 3 Markup of Text 145
 - 4 Intermezzo: Using the Right Editing Tool 156
 - 4.1 *You Need to Create a Small Critical Edition Solely for Print Purposes* 156
 - 4.2 *You Are Working with a Very Large Text from Which You Will Mine Specific Bits of Information* 157
 - 4.3 *You Have a Large Set of Separate Writings* 157
 - 4.4 *You Will Work Intensively with a Stable Text* 158
 - 4.5 *You Wish to Critically Edit a Text with Unusual Features or Multiple Manuscript Witnesses* 158
 - 4.6 *Concluding Thoughts* 159
 - 5 Handling Images 160
 - 6 Archiving and Publishing 167

- 6 Cataloging: From a Dusty Backroom to the World Wide Web 175**
 - 1 Field Research Workflow: From a Dusty Backroom to My Computer 176
 - 2 Web Development: From My Computer to the World Wide Web 185
 - 3 Structure: HTML 187
 - 4 Content: JSON 193
 - 5 Style: CSS 197
 - 6 Interactivity: JavaScript 199
 - 7 Productivity: Code Editor and Code Repository 220
 - 8 Quantitative Analysis of the Collection 223

7	Codicology: Automated Analysis Using Python and OpenCV	227
1	Why Code?	229
2	Description of Case Study	231
3	Introduction to Python	232
4	Introduction to OpenCV	235
5	Step 1: Extraction of Images	237
6	Step 2: Analysis of an Image	247
6.1	<i>The Function</i> Check_image_readable	249
6.2	<i>The Function</i> Analyze_image	251
6.3	<i>The Function</i> Display_image	257
6.4	<i>The Function</i> Find_angle	263
6.5	<i>The Mathematics behind Finding the Angle</i>	267
7	Step 3: Running the Script over Large Numbers	271
8	Results	282
8	A Digital Orientalist	287
	Postscript. Among Digitized Manuscripts	292
	Bibliography	311
	Index of Persons	325
	Index of Subjects	329