

Contents

| | |
|--|-------------|
| List of Figures | xiii |
| List of Tables | xvii |
| Contributors | xix |
| Preface | xxi |
| Acknowledgments | xxv |
| | |
| 1. Social Media, Sociality, and Survey Research | 1 |
| <i>Joe Murphy, Craig A. Hill, and Elizabeth Dean</i> | |
| What Is Social Media? 2 | |
| Social Media Origins 6 | |
| Social Networking Sites and Platforms 6 | |
| <i>Blogs 8</i> | |
| <i>Twitter 8</i> | |
| <i>Facebook 9</i> | |
| <i>LinkedIn 9</i> | |
| <i>Second Life 9</i> | |
| <i>Other Social Networking Platforms and</i> | |
| <i>Functionalities 10</i> | |
| Why Should Survey Researchers Be Interested | |
| in Social Media? 11 | |
| <i>The Current State of Survey Research 11</i> | |
| <i>Falling Response Rates 11</i> | |
| <i>Frame Coverage Errors 13</i> | |
| <i>The Coming Age of Ubiquity 14</i> | |
| <i>Public vs. Private Data 17</i> | |
| Social Media Interaction: Next Wave (or Subwave)? 18 | |
| Adding Social Media to the Survey Research Toolbox 21 | |
| Toward Using the Concept of Sociality in Survey | |
| Research of the Future 22 | |
| How Can Survey Researchers Use Social Media Data? 26 | |
| References 28 | |

2. Sentiment Analysis: Providing Categorical Insight into Unstructured Textual Data

35

Carol Haney

- Describing Emotional or Subjective Feeling in Textual Data 36
- Definition of Machine-Augmented Sentiment Analysis 37
 - How Sentiment Analysis Is Used with Text Data* 38
- Different Ways of Representing Sentiment 42
 - Ordinal Scales* 42
 - Nominal Emotion Classification* 43
 - Neutral Sentiment* 44
- Techniques for Determining Sentiment 44
 - Precursors to Analysis* 44
 - Harvesting* 46
 - Structure and Understand* 50
- Approaches to Determining Sentiment 51
 - Machine-Coded Sentiment Analysis* 51
 - Human-Coded Sentiment Analysis* 53
- Sentiment Analysis as a Subset of Text Analytics 54
- Current Limitations of Sentiment Analysis 57
- References 59

3. Can Tweets Replace Polls? A U.S. Health-Care Reform Case Study

61

Annic Kim, Joe Murphy, Ashley Richards, Heather Hansen, Rebecca Powell, and Carol Haney

- Methods 64
 - Twitter Data* 64
- Public Opinion About Health-Care Reform: Kaiser Health Tracking Poll 70
- Analysis 70
- Results 71
 - RQ1: To What Extent Was Health-Care Reform Discussed on Twitter?* 71
 - RQ2: What Is the Distribution of Sentiment of Health-Care Reform Tweets?* 74
 - RQ3: Do Trends in the Sentiment of Tweets About Health-Care Reform Correlate with Observed Trends*

*in Public Opinion About Health-Care Reform from
Nationally Representative Probability-Based
Surveys?* 75

KFF Trends 75

Comparison 77

*RQ4. What Are the Key Topics Discussed in
Health-Care Reform Tweets?* 78

Discussion 80

Conclusions 84

References 85

4. The Facebook Platform and the Future of Social Research

87

Adam Sage

The Changing Web: From Searchable to Social 88

Digital and Digitized Data 93

The Case for Facebook Integration 94

Data and the Graph API 97

Facebook Applications 99

Social Plugins 103

The Future, Mobile Apps, and the Ever Increasing
Complexity of the Social Graph 104

References 104

5. Virtual Cognitive Interviewing Using Skype and Second Life

107

Elizabeth Dean, Brian Head, and Jodi Swicegood

Brief Background on Cognitive Interviews 108

Cognitive Interviewing Current Practice 109

Practitioners' Techniques 109

Cognitive Interviews in Practice: Present and Future 112

Second Life for Survey Research 114

Methods 115

Recruitment 115

Screening 117

Incentive 118

Think-Aloud and Probes 118

| | |
|--|-----|
| Results | 118 |
| <i>Overall Participant Characteristics</i> | 118 |
| <i>Feasibility of Pilot Study</i> | 120 |
| <i>Quality of Cognitive Interviews by Mode</i> | 121 |
| <i>Participant Disengagement</i> | 122 |
| <i>Nonverbal Cues</i> | 125 |
| <i>Total Problems</i> | 126 |
| <i>Type and Severity of Problems</i> | 126 |
| Conclusions | 127 |
| Discussion and Future Research | 128 |
| References | 129 |

6. Second Life as a Survey Lab: Exploring the Randomized Response Technique in a Virtual Setting 133

Ashley Richards and Elizabeth Dean

| | |
|-----------------------------------|-----|
| Overview of Second Life | 134 |
| Research in Second Life | 134 |
| The Randomized Response Technique | 136 |
| <i>Study Design</i> | 137 |
| Results | 142 |
| Discussion | 144 |
| References | 146 |

7. Decisions, Observations, and Considerations for Developing a Mobile Survey App and Panel 149

David Roe, Yuying Zhang, and Michael Keating

| | |
|--|-----|
| Impact of the Evolution of Technology on Data Collection | 150 |
| <i>Telephone Interviewing</i> | 151 |
| <i>Web Interviewing</i> | 151 |
| <i>Cell Phones</i> | 152 |
| <i>Smartphones</i> | 153 |
| Building an App | 156 |
| <i>Goals</i> | 157 |
| Preliminary Findings | 168 |
| <i>Recruitment</i> | 170 |
| <i>Respondent Communication</i> | 170 |

| | |
|---|-----|
| <i>Survey Topics</i> | 172 |
| <i>Respondent Impressions on Incentives, Survey Length, and Frequency</i> | 175 |
| Next Steps | 175 |
| References | 176 |

8. Crowdsourcing: A Flexible Method for Innovation, Data Collection, and Analysis in Social Science Research

179

Michael Keating, Bryan Rhodes, and Ashley Richards

What Is Crowdsourcing? 180

Open Innovation 181

Cisco Systems I-Prize Challenge 182

RTI International's 2012 Research Challenge 183

Options for Hosting Your Own Challenges 185

Legal Considerations 186

Data Collection 187

Crowdsourcing Survey Response on Mechanical Turk 187

Targeted Data Collection 190

Cost Considerations 194

MyHeartMap Challenge 195

Analysis by Crowdsourcing 197

Sentiment Analysis 197

Challenge-Based Data Analysis 198

Conclusion 199

References 200

9. Collecting Diary Data on Twitter

203

Ashley Richards, Elizabeth Dean, and Sarah Cook

Background 204

Twitter 204

Diaries 204

Methods 206

Recruitment 208

Data Collection 210

Results 211

Nonresponse 212

Data Quality 216

| | |
|-----------------------------|-----|
| <i>Incentive Preference</i> | 221 |
| <i>Participant Feedback</i> | 222 |
| Discussion | 227 |
| References | 229 |

10. Recruiting Participants with Chronic Conditions in Second Life **231**

Saira N. Haque and Jodi Swicegood

| | |
|---|-----|
| Background | 233 |
| Methods | 234 |
| <i>Instrument Development</i> | 235 |
| <i>Recruitment Methods</i> | 235 |
| <i>Survey Administration</i> | 244 |
| Results | 244 |
| Discussion | 247 |
| <i>Communities</i> | 247 |
| <i>Using Existing Second Life Resources</i> | 248 |
| <i>Other Effective Methods</i> | 249 |
| <i>The Importance of the Recruitment Avatar</i> | 249 |
| <i>Conclusion</i> | 250 |
| References | 251 |

11. Gamification of Market Research **253**

Jon Puleston

| | |
|--|-----|
| Significance of Gamification in Market Research | 254 |
| <i>Apply Gamification to Market Research</i> | 256 |
| <i>Gamification in Survey Design</i> | 259 |
| <i>Apply Rules to Question Design</i> | 265 |
| <i>Add the Competitive Element</i> | 269 |
| <i>Add Reward Mechanics</i> | 271 |
| <i>Give Feedback</i> | 272 |
| <i>Make Tasks More Involving</i> | 273 |
| <i>Ensure the Challenge Can Be Accomplished</i> | 275 |
| How to Design Questions To Be More Game-Like | 275 |
| Common Questions About Gamification | 284 |
| <i>Who Responds to Gamification?</i> | 284 |
| <i>What Impact Does Gamification Have on the Data?</i> | 285 |
| <i>How Do These Techniques Work in Different Cultures?</i> | 289 |

Conclusions 291

References 292

12. The Future of Social Media, Sociality, and Survey Research

295

Craig A. Hill and Jill Dever

Statistical Challenges with Social Media Data 296

Quality and Representativeness 297

Sampling from Social Media Sources 298

Population Estimation from Social Media Data 303

Future Opportunities 306

What Does the Future Hold? 307

Sociality Hierarchy Level 1: Broadcast 308

Sociality Hierarchy Level 2: Conversation 311

Sociality Hierarchy Level 3: Community 312

Final Thoughts 314

References 315

Index

319