

## Introduction

### **Part One: Data Journeys**

- 1 Making Data Travel: Technology and Expertise
  - 1.1 The Rise of Online Databases in Biology
  - 1.2 Packaging Data for Travel
  - 1.3 The Emerging Power of Database Curators
  - 1.4 Data Journeys and Other Metaphors of Travel
- 2 Managing Data Journeys: Social Structures
  - 2.1 The Institutionalization of Data Packaging
  - 2.2 Centralization, Dissent, and Epistemic Diversity
  - 2.3 Open Data as Global Commodities
  - 2.4 Valuing Data

### **Part Two: Data-Centric Science**

- 3 What Counts as Data?
  - 3.1 Data in the Philosophy of Science
  - 3.2 A Relational Framework
  - 3.3 The Nonlocality of Data
  - 3.4 Packaging and Modeling
- 4 What Counts as Experiment?
  - 4.1 Capturing Embodied Knowledge
  - 4.2 When Standards Are Not Enough
  - 4.3 Distributed Reasoning in Data Journeys
  - 4.4 Dreams of Automation and Replicability
- 5 What Counts as Theory?
  - 5.1 Classifying Data for Travel
  - 5.2 Bio-Ontologies as Classificatory Theories
  - 5.3 The Epistemic Role of Classification
  - 5.4 Features of Classificatory Theories
  - 5.5 Theory in Data-Centric Science

### **Part Three: Implications for Biology and Philosophy**

- 6 Researching Life in the Digital Age
  - 6.1 Varieties of Data Integration, Different Ways to Understand Organisms
  - 6.2 The Impact of Data Centrism: Dangers and Exclusions
  - 6.3 The Novelty of Data Centrism: Opportunities and Future Developments
- 7 Handling Data to Produce Knowledge
  - 7.1 Problematizing Context
  - 7.2 From Contexts to Situations
  - 7.3 Situating Data in the Digital Age

## Conclusion

## Acknowledgments

## Notes

## Bibliography

## Index