

Beyond Bibliometrics:

Harnessing Multidimensional Indicators of Scholarly Impact

edited by Blaise Cronin and Cassidy R. Sugimoto

**The MIT Press
Cambridge, Massachusetts
London, England**

Contents

Preface vii

I History 1

1 Scholars and Scripts, Spoons and Scores 3

Blaise Cronin

2 History and Evolution of (Biblio)Metrics 23

Nicola De Bellis

II Critiques 45

3 The Citation: From Culture to Infrastructure 47

Paul Wouters

4 "The Data—It Is *Me!*" ("Les données—c'est *Moi!*") 67

Ronald E. Day

5 The Ethics of Evaluative Bibliometrics 85

Jonathan Furner

6 Criteria for Evaluating Indicators 109

Yves Gingras

III Methods and Tools 127

7 Obliteration by Incorporation 129

Katherine W. McCain

8 A Network Approach to Scholarly Evaluation 151

jevin D. West and Daril A. Vilhena

9 Science Visualization and Discursive Knowledge 167

Loet Leydesdorff

10 Measuring Interdisciplinarity 187

Vincent Lariviere and Yves Gingras

11 Bibliometric Standards for Evaluating Research Institutes in the Natural Sciences 201

Lutz Bornmann, Benjamin F. Bowman, Johann Bauer, Werner Marx, Hermann Schier, and Margit Palzenberger

12 Identifying and Quantifying Research Strengths Using Market Segmentation 225

Kevin W. Boyack and Richard Klavans

13 Finding and Recommending Scholarly Articles 243

Michael J. Kurtz and Edwin A. Henneken

IV Alternative Metrics 261**14 Altmetrics 263**

Jason Priem

15 Web Impact Metrics for Research Assessment 289

Kayvan Kousha and Mike Thelwall

16 Bibliographic References in Web 2.0 307

Judith Bar-Ilan, Hadas Shema, and Mike Thelwall

17 Readership Metrics 327

Stefanie Haustein

18 Evaluating the Work of Judges 345

Peter A. Hook

19 Academic Genealogy 365

Cassidy R. Sugimoto

V Perspectives 383**20 A Publishing Perspective on Bibliometrics 385**

Judith Kamalski, Andrew Plume, and Mayur Amin

21 Science Metrics and Science Policy 397

Julia Lane, Mark Largent, and Rebecca Rosen

List of Contributors 413

Index 423