

setting and text. Because readers would not be familiar with these terms, I added many cross-references to help them discover these central ideas.

I would like to thank those indexers who have helped me grow as an indexer over the years. Writers of indexing publications have been enormously helpful, including contributors to *The Indexer*, the ISC/SCI newsletter, ASI's *Key Words*, the growing set of Information Today books, and of course, Nancy Mulvany's *Indexing books*. One sentence from Nancy has been a touchstone for my approach to indexing: 'Indexing is a form of writing.' When I read that sentence years ago, I understood that everything I knew about the writing process could be used when I wrote an index. Writing an index involves familiar processes: we gather information, organize it, check it, edit it (and then edit it again, and maybe again), and finally proofread it. I also want to thank presenters at our conferences. One key idea that has shaped my approach came from Kate Mertes, who urged us to 'Index the argument.' That standard guides me when I start to trim and cut back. If an entry appears to be extraneous material, I need to discard it or make clear the relationship to the direction of the argument. And finally, I have been influenced by the many indexers who so graciously answer questions on our listservs. Years ago I was impressed with a response that mentioned these three questions: 1. What is this about? 2. Would anyone look for it? 3. Is it worth the trip? I still have a sticky note on my computer with those questions, and when that note falls off, I write another one and put it up. Just a reminder of the importance of 'aboutness' and the reader's experience.

Judy Dunlop is a freelance indexer residing in Edmonton, Alberta. She holds an MA in English and an MEd in Secondary English. Judy specializes in indexes for scholarly works in the humanities and social sciences. Judy is a member of both ISC/SCI and ASI.

## ASI awards 2017

The 2017 ASI Hines award for exceptional services to

indexing went to Pilar Wyman, currently ASI International Liaison and member of ICRIS.

Richard Genova was awarded the 2017 ASI Excellence in Indexing Award (formerly the Wilson Award) for *The New Appleman on Insurance Law Library Edition*, published by LexisNexis. *The New Appleman* is a multi-volume set that Rich has been working on for 12 years and includes a 3-volume practice set and a 13-volume comprehensive set. The practice set has one index for the set, updated once a year. The comprehensive set has an index for each volume as well as a cumulative index for all thirteen volumes, updated twice a year. The award-winning index encompassed the practice set, the comprehensive set, and approximately ten years of a companion newsletter.

The index to this large, technically complex body of material is an excellent tool for both legal professionals and non-specialists. Its navigation aids enable the user to find common threads across many volumes while using conventions that make it easy to navigate. The headnote is repeated on each page, a simple but helpful device in such a large index. 'Continued' lines are provided for page and column breaks, and also within complex multi-levels of subheadings where it would otherwise be easy to get lost. This extensive index is impressive for the sheer volume of material it clearly and comprehensively makes accessible to the user.

Rich also earned the 1999 Wilson Award for *Brownfields Law and Practice* by Michael B. Gerrard, published by Matthew Bender & Co. Inc. In recognition of *The New Appleton Insurance Law Library Edition* index, Rich received a \$1,000 award check and a certificate acknowledging his accomplishment. The publisher, LexisNexis, also received a certificate.

## SI awards, 2017

The Betty Moys Prize for best newly Accredited Indexer was awarded jointly to Jay Heaton and Tessa Botha. The Bernard Levin Award for outstanding services to SI went to Jan Worrall for all her work on the SI training course.'

# Indexes reviewed

*Edited by Christine Shuttleworth*

*These extracts from reviews do not pretend to represent a complete survey of all reviews in journals and newspapers. We offer only a selection from quotations that readers have sent in. Our reproduction of comments is not a stamp of approval from The Indexer upon the reviewer's assessment of an index. Extracts are arranged alphabetically under the names of publishers, within the sections: Indexes praised; Two cheers!; Indexes censured; Indexes omitted; Obiter dicta.*

## Indexes praised

**Belknap Press of Harvard University Press:** *Track changes: a literary history of word processing*, by Matthew G. Kirschenbaum

(2016, xvi + 344 pp, \$29.95). Rev. by David Walden, *TUGboat*, 38(2017) (1).

The book also has a nice index of systems and author names, which lets one see if one's favorite author is mentioned in the book or to look up history on an early word processing system such as WordStar. *Track Changes* is a pretty useful reference book as well as being fun reading. I am glad to have a copy.

**Bloomsbury:** *Beryl Bainbridge: love by all sorts of means: a biography*, by Brendan King (2016, 496 pp, £19.99). Rev. by Diane Johnson, *New York Review of Books*, 22 February–8 March 2017.

One sympathizes with the problems of the biographer – for

instance how to make interesting all the publishing details, which he actually does, by mostly confining himself to dealings with her publisher Duckworth, which involved sleeping with her editor and refusing his requests to mortgage her house to rescue its failing financial situation. It all requires a complicated chronology, fortunately clarified by a useful and ambitious index, except for King's decision to call people by their first names, so you can't look them up especially since so many of them are called Harold. [*Perhaps a case for having an index entry 'Harold see ...'.*]

**Cambridge Scholars:** *Trends in language assessment research and practice: the view from the Middle East and the Pacific Rim*, ed. by V. Aryadoust and J. Fox (2016, 632 pp, £73.99). Rev. by John Pill, *Language Testing*, 24 May 2017.

The book's index is useful, particularly given the limited cross-referencing between the chapters themselves.

**Cambridge University Press:** *Aristotle on female animals: a study of the generation of animals*, by Sophia M. Connell (2016, xv + 437 pp, \$120). Rev. by Kenneth F. Kitchell, Jr, *Bryn Mawr Classical Review*, 10 November 2016.

If a general reader finds the bulk of the text difficult, a comprehensive index allows for selective use. Those interested in wind eggs, deformity, genetic inheritance, bees, crustaceans etc., and their relationship to the issue of the ancient Greek view of women, will also find that female animals are quite good to think with, indeed.

**Chandos Publishing:** *Researching developing countries*, by Forrest D. Wright (2016, 150 pp, £47.50). Rev. by Diana Dixon, *CILIP Update*, March 2017.

The book fulfils its stated purpose of enabling social scientists to discover new resources providing country level most admirably and this is assisted by a good index.

**Coastal Education & Research Foundation:** *Coastal wetlands of the world: geology, ecology, distribution and applications*, by D. B. Scott, J. Frail-Gauthier and P. J. Mudie (2014, 351 pp, \$45.54). Rev. by Charles W. Finkl, *Journal of Coastal Research*, 33(2), March 2017.

The plethora of references and detailed subject index are of great value to students and professionals, whether they are learning for the first time or researching.

**Facet Publishing:** *Altmetrics: a practical guide for librarians, researchers and academics*, by A. Tattersall (2016, 224 pp, £49.95). Rev. by Helena Byrne, *CILIP Update*, May 2017.

There is also an index at the back of the book. This makes the book easy to use, whether you decide to read it from cover to cover, or prefer to dip in and out.

**Facet Publishing:** *Emerging strategies for supporting student learning: a practical guide to librarians and educators*, by B. Allan (2016, 192 pp, £49.95). Rev. by Susie Kitchin, *CILIP Update*, April 2017.

The book is quick to read, and is well structured with a comprehensive contents listing and index.

**Gallimard:** *Lettres à Anne, 1962–1995*, by François Mitterrand (2016, 1,276 pp, €35/£43.76). Rev. by Richard Vinen, *Times Literary Supplement*, 3 March 2017.

There is an excellent index, but no introduction.

**Harvard University Press:** *Gregory of Tours: lives and miracles. Dumbarton Oaks Medieval Library, 39*, ed. by Giselle de Nie (2015, xxx + 944 pp, \$29.95). Rev. by Shami Ghosh, *Bryn Mawr Classical Review*, 9 April 2016.

De Nie also gives readers, in addition to a very useful general index, an index of illnesses, including signs to indicate when an affliction is caused by divine punishment or by the devil, and ranging from animal disease through cramps, fright, gout, fish-bones in the throat, plague, rigidification and toothache to the simple 'wound'. (Somewhat oddly – to my mind anyway – 'death' and being struck by lightning are also included in this index of illnesses.) A whole entry with numerous sub-entries is devoted to Gregory's own ailments.

**Monthly Review Press:** *Cuba and the US empire: a chronological history*, by Jane Franklin (2016, 456 pp, £68.79). Rev. by Edgar Göll, *European Review of Latin American and Caribbean Studies/Revista Europea de Estudios Latinoamericanos y del Caribe*, 102 (October 2016).

Its chronology, cross-referenced index, and its ability to place in historical context all aspects of US-Cuban relations make this book an import source book and a classic.

**Routledge:** *Handbook of thanatology: the essential body of knowledge for the study of death, dying and bereavement*, ed. by D. K. Meagher and D. E. Balk (2013, 529 pp, \$99.95). Rev. by Paul A. Metzler, *Omega – Journal of Death and Dying*, 75(1).

I began my review by reading the 11-page 'Index of Key Terms.' It is a good way to start because its hundreds of entries immediately demonstrate the comprehensive depth of this Handbook and drew my interest to many chapters.

**Sussex Record Society:** *The logbook of Thomas Slatford, headmaster, Littlehampton Boys School 1871–1911*, ed. by Ruth Brown (2016, 400 pp, £20). Rev. by John Kay, *Sussex Past and Present* (newsletter of the Sussex Archaeological Society), April 2017.

Ruth Brown provides a scholarly 70-page introduction covering the local and national background to these decades of institutional change. This is followed by a 370-page transcript of Mr Slatford's log books and then the comprehensive indexes that are a Sussex Record Society trademark.

## Two cheers!

**DeGruyter:** *Relations of power in early Neo-Assyrian state ideology. Studies in ancient Near Eastern records 10*, by Mattias Karlsson (2016, xiv + 507 pp, \$182.00). Rev. by Seth Richardson, *Bryn Mawr Classical Review*, 6 November 2016.

The project is driven by the indexing of literary motifs, royal titles and epithets, and visual/iconographic elements found in the royal inscriptions and reliefs of ten early Neo-Assyrian kings, from Aššur-dan II to Aššur-nerari V (934–746 BC). Many tropes are covered: reciprocity motifs in accounts of tribute, gendered roles, relations with other kings, and more. The relevant epithets, titles, and passages are collected and classified in fifteen indices of well over a hundred pages (pp. 381–507). There can be little doubt that this is a 'data-driven' study, and the ten chapters analyzing these elements as the 'relations of power' all build up from the indices.

So how good is the index? Quite good. Without indexing the inscriptions oneself, it is difficult to assess the indices' comprehensiveness, or the rigor of the indexing system's criteria, which are not always clearly stated. But a spot-check of three topoi suggests that the system is internally consistent and dependable. The topos 'geopolitical setting,' for instance, is numbered 1.7.1. Of the seven texts associated with this topos Indices 1 and 2 (pp. 381–406), six are discussed on pp. 32–36, with one omitted. Those pages of discussion mention three other texts that are not associated with this topos in the indices. For a second case, the topos 'master builder' (4.3) shows much the same treatment: 61 of the 70 inscriptions so indexed are discussed in the relevant chapter (pp. 103–13), with only nine omitted. Seven more texts are mentioned in the chapter, but not in the index. Finally, the sources for the topos 'pacifying the foreign animals' (5.2) are very well accounted for: of 26 indexed sources, 25 are mentioned in the chapter (pp. 133–40), and two sources are not so identified in the index. So there is a little discrepancy between the sections; but only a little: and so the correspondence between the two main parts of the book sits in the range of about 85% dependability or better. This seems perfectly sufficient to illustrate the topoi discussed. At the same time, it may be a little bothersome to anyone intending to use the discussion and indices by themselves as definitive or exhaustive guides to any particular topos in the corpus.

**LIT Verlag:** *Griechische und lateinische Inschriften zum Ptolemäereich und zur römischen Provinz Aegyptus. Einführungen und Quellentexte zur Ägyptologie, Bd 9*, by Stefan Pfeiffer (2015, vi + 376 pp, €34.90). Rev. by Peter Nadig, *Bryn Mawr Classical Review*, 4 November 2016.

A thorough general index follows, as well as indices of places, persons, gods and mythological figures, inscriptions, papyri, and literary sources. The indexing system has one minor flaw, as it only refers to the entry numbers, with the result that some keywords in the introductory pages have been left out. Also, in the case of longer entries the user may have to thumb through several pages to find the desired reference; it would have been more useful to give the entry numbers in bold face followed by references to page numbers in italics where necessary.

## Indexes censured

**Cambridge Scholars Publishing:** *Ancient warfare: introducing current research, vol. 1*, ed. by Geoff Lee, Helène Whittaker and Graham Wrightson (2015, xvi + 361 pp, £24.99). Rev. by Carlos Villafane, *Bryn Mawr Classical Review*, 2 December 2016.

To highlight one small criticism, the general index seems to be too concise and restrictive for such a lengthy volume full of a myriad of topics from the Greco-Roman world.

**Cambridge University Press:** *The end of athletics in late antiquity. Greek culture in the Roman world*, by Sofie Remijsen (2015, xviii + 389 pp, £70). Rev. by Nigel M. Kennell, *Bryn Mawr Classical Review*, 11 April 2016.

The book's major flaw is a common one: an inadequate index that contains many entries to specific individuals and institutions, but none to concepts. For example, the entry for 'athletes' (383–384) lists eleven names under 'imperial age' and fifty under 'late antique', but no sub-entries for 'career athletes,' 'athlete performers,' or 'Christian athletes.' A reader interested in any of these subjects must therefore be armed with quite specialised knowledge of individual athletes' names to utilise this resource.

**Routledge:** *Religion, pilgrimage, and tourism* (4 vols), ed. by Alex Norman and Carole M. Cusack (2015, 1,618 pp, \$1,345). Rev. by Frank J. Korom, *Asian Ethnology*, 75(1).

The fourth volume closes with a nineteen-page index that seems rather superficial. Given that the set runs over 1,500 pages, one would have hoped that with such a huge endeavor more care would have been taken to generate an exhaustive index that would have truly made this set a valuable reference tool. Due to the exorbitant cost of the set, librarians might be cautious in purchasing it solely for this reason, since most of the essays included in it could easily be found in such sources as JSTOR.

**University of Delaware Press:** *Jonathan Swift: Irish blow-in*, and *Jonathan Swift: our Dean*, by Eugene Hammond (2016, 798 and 822 pp, \$140 each). Rev. by Claude Rawson, *Times Literary Supplement*, 17 March 2017.

His volumes (physically unhandsome, in a rebarbative print-on-demand format, with cramped typesetting) are reader-unfriendly. There is no consolidated index, and the separate indexes are thin (compare Ehrenpreis's\*).

\* 'Irvin Ehrenpreis's magisterial three-volume masterwork', *Swift: The man, his works, and the age*, 3 vols, Routledge, 1962, 1967 and 1983.

## Indexes omitted

**John Blake Publishing:** *Theresa May: the Downing Street revolution*, by Virginia Blackburn (2016, 256 pp, £8.83). Rev. by 'Alistair', <https://www.amazon.co.uk/product-reviews/178606264X>, 23 September 2016.

... could have done with a bit more proof reading with several typos ... There is also no index or bibliography and overall it's not a particularly substantial work.

**Dublin City Council/Four Courts Press/University College Dublin:** *More than concrete blocks: Dublin city's twentieth-century buildings and their stories, vol. 1, 1900–40*, by Ellen Rowley (2016, 456 pp, €22.45). Rev. by Mary Davies, *History Ireland*, 24(6).

There is an extensive bibliography. But could we please have an index in subsequent volumes? Or, if not a full index, at least one of architects and builders?

**Duckworth Overlook:** *Wear and tear: the threads of my life*, by Tracy Tynan (2017, 320 pp, £18.99). Rev. by Anthony Quinn, *The Guardian*, 18 March 2017.

Her publishers have also let her down. The absence of an index is regrettable; the absence of photographs is unforgivable.

**HarperCollins:** *Capital dames: The Civil War and the women of Washington, 1848–1868*, by Cokie Roberts (2015, 494 pp, \$27.99). Rev. by Sandra Longman, *Washington History*, 28(2).

Her research is detailed in more than 60 pages of footnotes and bibliography, but the book lacks an index, a surprising omission.

**Lilliput Press:** *Dublin 7*, by Bernard Neary (2016, €20). Rev. by Donal Fallon, *History Ireland*, 25(2).

Gripes with the book relate not to its content but to issues of format. Such a well-researched work warrants an index, for example, especially given the decision to divide chapters by districts rather than themes, such as labour, culture and built heritage.

**Little, Brown:** *Do I make myself clear? Why writing well matters*, by Harold Evans (2017, 416 pp, £20). Rev. by Matthew Engel, *Financial Times*, 6/7 May 2017.

However, Evans does seem unsure himself what job he is trying to do here. Is this a pleasurable read or a textbook? It veers between the two. Either way, it would have been a damn sight more useful if the publishers had bothered with an index.

The most helpful comment on writing I know came from Matthew Arnold: ‘People think that I can teach them style. What stuff it all is! Have something to say, and say it as clearly as you can. That is the only secret of style.’ I may have just been reminded of this by Evans, but there is no easy way of checking.

**Parlor Press:** *Chinese rhetoric and writing: an introduction for language teachers*, by Andy Kirkpatrick and Zhichang Xu (2012, 232 pp, £23). Rev. by Nia Sottile, <http://open.umn.edu/open-textbooks>, 12 June 2016.

This textbook would be suitable for teachers of academic English writing, who teach Chinese students. However, I would consider this textbook complementary to additional resources, if one were to gain a solid grasp of how historical and traditional Chinese rhetorical writing influences the writing of Chinese students today. Perhaps connections throughout the text, or an additional chapter, on pedagogical implications would be helpful. An index or glossary would have also been helpful, considering the many foreign terms used repeatedly in the text. The book does include a helpful table of contents with descriptive titles. ... The content is organized in a way that builds on the student’s understanding and knowledge of previous chapters. Most topics are presented in a logical and clear fashion. However, some of the information requires memorization as the text refers to multiple, foreign/technical terms used earlier in the book. Perhaps this is where an index or glossary would be useful in order to avoid interruption of flow, as the reader is required to search extensively for the original reference to the term.

**Pluto Press (Left Book Club):** *Being red: a politics for the future*, by Ken Livingstone (2016, 168 pp, £12.99). Rev. by David Lane, *Political Studies Review*, 15(2).

While the Left Book Cooperative is a positive initiative, one might hope for more substantive books in future. They might also include an index, which is absent in this one.

**Reaktion Books:** *Virginia Woolf*, by Ira Nadel (2016, 224 pp, £9.20). Rev. by Kathy Chamberlain, *Virginia Woolf Society of Great Britain Bulletin*, no. 55, May 2017.

An unconscionable omission should be mentioned: this book has no index.

**Sage:** *Huawei: leadership, culture, and connectivity*, ed. by Tian Tao, David De Cremer and Wu Chunbo (2017, 361 pp, £33.69). Rev. by Mark Crowder, *Management Learning* (date not known).

It is a long book (361 pages) that needs to be read in several sittings. Therefore, the lack of an index is a significant drawback. Several times, this writer read something of interest that he wished to return to some days later, but it was difficult to quickly locate the key section. This is, therefore, not a book that one can easily dip in and out of, which is a pity. This is, though, a relatively small gripe that does not really detract from the overall excellence of the book. Perhaps this is an issue that future editions could rectify.

**Springer International:** *The Andes: a geographical portrait*, by

Axel Borsdorf and Christoph Stadel, tr. by Brigitte Scott and Christoph Stadel (2015, xiv + 368 pp, \$139). Rev. by Anthony Bebbington and Anna Bebbington, *Mountain Research and Development*, May 2016.

The glossary of terms and reference list at the end of the book are helpful and comprehensive. However, the absence of an index is frustrating and means that the only way to explore the book is through the headings and subheadings of the contents pages. The translation from the original German (Borsdorf and Stadel 2013) is excellent.

**Viking:** *The pigeon tunnel*, by John le Carré (2016, 320 pp, £10). Rev. by Nicholas Lezard, *The Guardian*, 13 May 2017.

His portraits are succinct and fascinating, and we want to hear about these people. (It is a shame the book doesn’t have an index.)

## Obiter dicta

**William Collins:** *This fight is our fight*, by Elizabeth Warren (2017, 320 pp, £20). Rev. by Gregory Cowles, *New York Times*, 7 May 2017.

You can tell a lot about a book from its index. Consider Elizabeth Warren’s *This Fight Is Our Fight*, reviewed by Paul Krugman and new to the hardcover nonfiction list at No. 1. On its face, the book — subtitled ‘The Battle to Save America’s Middle Class’ — is all about economic issues, and the index is correspondingly flecked with terms like ‘layoffs’ (one citation), ‘manufacturing decline’ (one citation) and ‘rent assistance’ (two citations). But really these are just the parsley on the meatloaf. Flip through the back pages and it’s clear that Warren, the hard-punching Massachusetts senator, has a more personal fight in mind: The index listing for ‘Trump, Donald’ is divided into dozens of subcategories beginning with ‘bait-and-switch and’ (two citations), then moving on to ‘bigotry and’ (four citations), ‘corporate influences on’ (five citations) and ‘trickle-down and’ (seven citations). There are also listings for ‘tax returns and,’ ‘“nasty woman” comment of’ and — my favorite — ‘tweetstorms vs.,’ which directs readers to a four-page recap of Warren’s social media battle with Trump during the presidential race. ‘I tweeted about how he cheated hardworking people who had built his hotels and golf courses,’ she recalls. ‘I mentioned his bullying, his attacks on women, his racism, his obvious narcissism. And in that first tweetstorm, I did my best to sound the alarm: This guy is dangerous, and he could end up as president of the United States.’

**Hutchinson:** *The Benn diaries*, by Tony Benn (2017, 736 pp, £30). Rev. by David Runciman, *London Review of Books*, 20 April 2017.

Inevitably, the first thing I did when I got my copy of the one-volume edition of *The Benn Diaries* ... was to look up Jeremy Corbyn in the index. He appears about as often as you’d expect, 15 times in total, scattered at regular intervals across 24 years, from 1983 until 2007. (The diaries end in 2009, five years before Benn’s death.) Corbyn rarely shows up on his own; more often he features in long lists of names from the left of the Labour Party who have gathered for rallies, protests and funerals. He is there at an anti-poll tax demonstration; at a Sinn Féin press conference; at a meeting of the Palestine Solidarity Campaign; at the laying to rest of Tony Banks. Some of these entries are inadvertently comical. Writing of Ralph Miliband’s funeral at Golders Green Crematorium in 1994, Benn notes: ‘Anyone on the real left of any significance was there.’

Jeremy Corbyn couldn't make it.' For the most part, the mentions of Corbyn are respectful, if a little detached. He is a good man to have alongside you on the platform or to put up in front of a sympathetic crowd. You know where you stand with Jeremy. You just don't often notice him.

*Warm thanks to the contributors to this section:*

Rohan Bolton, Chalfont St Giles  
Pat Booth, Reading  
Christine Boylan, Deal

Glenda Browne, Sydney  
Moyra Forrest, Edinburgh  
Nicholas J. Higham, Manchester  
Nicola King, Newport Pagnell  
Cherry Lavell, Cheltenham  
Norma Munson, Rockford, IL  
Christopher Phipps, London  
Caroline Wilding, Knutsford

*Contributions of review extracts welcomed by the editor of this section, Christine Shuttleworth (please see inside front cover for further details).*

## Book reviews

**Scholarly metrics under the microscope: from citation analysis to academic auditing.** Blaise Cronin and Cassidy R. Sugimoto, eds. Information Today, Inc. (December 2014). 976 pp. ISBN 978-1-57387-499-1 \$149.50 (ASIST member price \$119.60).

There are times when an indexing project is completed and when, before the next assignment requires me to again juggle my various jobs and projects, it is rewarding to take a step back, learn what other information professionals are working on and thinking about, and take a look at our profession as part of a larger whole. As reviews editor Nicola King noted when I suggested this book, 'There are only so many how-to-index books out there.' That is true. As a science writer I am also fascinated by the attempts to quantify scholarly knowledge, as well as by the history of science and what I see as a growing interrelation between the 'soft' and 'hard' sciences, with information science as one possible link.

*Scholarly metrics under the microscope* consists of 65 essays divided into six sections ('Concepts and theories,' 'Validity issues,' 'Data sources,' 'Indicators,' 'Science policy,' and 'Systemic effects'). Each section is prefaced by an overview by the editors. The collection is wide-ranging and comprehensive. It includes, inter alia, Eugene Garfield's seminal paper, 'Citation indexes in science: a new dimension in documentation through association of ideas,' which resulted in the creation of the *Science Citation Index* (SCI). However, the compilation is not exhaustive, but an attempt to represent the main threads, issues, and questions in modern bibliometrics. I have chosen two sections/issues to reflect on and connect, or not, to the indexing experience.

### Concepts and theories

It was the theme of this section in particular which made me choose the book: the attempts by scientists and researchers to assess the real contributions of authors and works to the body of scientific knowledge taking as criteria how, how often, and by whom they are cited. This question is quite complicated and full of pitfalls. The reader is reminded that 1) there is no real theory of citation, 2) scientists and researchers cite for a variety of reasons, some of which are not necessarily rational, but 'social and psychological,' and 3) it is 'subjective and inhospitable to standardization.' This subjectivity, the lack of a citation theory framework with precise definitions of meritoriousness, means the citation process can lead to outcomes that measure those who wish to cite in a 'me-too' fashion bibliometric stars who may or may not have merit rather than 'establish the pedigree of ideas and unravel networks of relationships to indebtedness.'

There is also the 'noise factor,' the inclusion of citations 'of a normative, trivial, perfunctory, or wayward nature.' Then, of course, there is 'window-dressing, padding, or just sprinkling a few citations as an afterthought to enhance one's own respectability.' As Cronin puts it, 'In the majority of cases it should be possible to adduce the motive to within an acceptable margin of error. But what we are talking about is an attributive process; one which cannot make the author's intentions overt.' He adds, 'What seems like a perfectly good explanation ... may be little more than a surface explanation.' This is why there are calls for journal referees to pay closer attention to how citations are employed even as they assess the article's content.

What occurred to this indexer was that our related but very different profession has indeed developed methods of determining 'aboutness' that strip away noise and padding, rendering a map of a work just as citation frequencies were hoped (perhaps vainly) to render 'maps of science.' Therefore, I ask, what could indexers contribute to a theory of citation? Do scientists and researchers in truth need indexers to aid them on this question? Would indexers offer a valuable relative objectivity to an issue perhaps too close to those grappling with it? This was a fascinating insight to ponder as I read.

### Indicators

Section 4 examines the definitions, use, and criticisms of three indicators: Jorge E. Hirsch's *h-index* to characterize the scientific output of a researcher, otherwise known as the 'h-bomb' or, in the case of his critics, the 'h-bubble;' the Journal Impact Factor (JIF), which measures the annual average of citations

of articles published in a journal; and the Crown Indicator. Cronin and Sugimoto caution in their introduction against mistaking such indicators for the raw data from which they are derived. Indexers too discriminate between 'citations' or occurrences of a term or concept on the page, in that if we deem them to be passing

