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Handbook of Web Surveys (Book Review)

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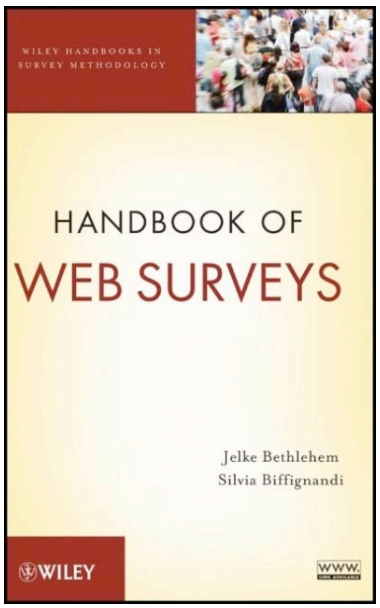
On Christmas day 1990 Berners-Lee at CERN had a browser/editor, which he earlier had nicknamed WorldWideWeb, working on his NeXT computer and on that of a colleague's (Robert Cailliau), and was communicating over what we would now call the Internet[1]. That Christmas in 1990 is as important for survey methodologist as the ride of the first official mail coach in the UK in 1784, which enabled the very first mail survey by Sir John Sinclair and led to the Statistical Accounts of Scotland.

This Christmas it will be the 21st birthday of the Web as we know it, although it took until summer 1991 before the program files became more generally available outside CERN, and it seems fitting that on Christmas Eve I am writing a review for the International Journal of Internet Science on the recently published *Handbook of Web Surveys* (Bethlehem & Biffignandi, 2012). The development of Web surveys spread faster than any other similar survey innovation, such as telephone interviews or CAPI (computer-assisted interviewing), starting with e-mail surveys and tele-panels using modems for sending questionnaires to and from households at the end of the 1980s, but soon evolving into online surveys at the end of the 1990s (cf. Couper et al., 1998, chapters 20–21). In 1998 http://websm.org was launched, a Web site dedicated to the methodological issues of Web surveys, and in 2000 one of the first critical overviews of online surveys was published by Mick Couper in Public Opinion Quarterly. This clearly marked the acceptance of Web surveys as a serious data collection tool. The early adopters of online research were found in market research, survey specialists at universities followed later, and governmental organizations are still lagging somewhat behind. But this is changing fast. A handbook will therefore be a good tool for researchers in many fields, both at universities, official statistical offices, and other governmental organizations, who want to know the ins- and outs of online surveys. Does the newly published *Handbook of Web Surveys* accomplish this task? Yes, to a large extend it does.



Drawing on the earlier book by Bethlehem (2009) on applied survey methods, the handbook gives a thorough overview of issues in online surveys in twelve clearly written chapters. Each chapter has a theoretical part, in which an overview of mostly empirical literature is given, followed by an application, often from the authors own background. Each chapter ends with a glossary of key terms, references to cited literature, and some

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[1] http://www.ncsa.illinois.edu/20years/timeline/documents/B-L-excerpts.pdf, see also http://en.wikipedia.org/wiki/World_Wide_Web

exercises. The presence of exercises in a *handbook* is somewhat surprising and seems more appropriate in a textbook for (graduate) students, but it provides a nice check for attentive readers. Missing at this moment is a list with correct answers and a reference to the relevant paragraphs in the book. Perhaps this can be added to the next version of the accompanying Web site. Another wish is a list with suggested in-depth readings for specific topics. But, in general, the Web site at http://www.web-survey-handbook.com is a great tool with a funny cartoon, a nice simulation and the downloadable SPSS datafile of the General Population Survey, which is used by the authors in many examples and applications. Furthermore, the Web site worked well under a variety of browsers.

The book starts with a short overview of the history of statistics and (computer-assisted) data collection, this is followed by a non-technical introduction in online-data collection, and then plunges into a technical chapter on sampling. This chapter on sampling and the later chapters on self-selection (chapter 9), weighting adjustment (chapter 10) and response propensities are central to statistical analysis of Web survey data, and the concepts treated in these chapters are at the core of debates on the scientific use of Web surveys. The authors should be complemented on the accessible way they introduce and describe these topics.

Chapter 4 focuses on errors in Web surveys, but mainly treats nonresponse and measurement errors; to another important error source in Web surveys (coverage error) a separate chapter is devoted (chapter 8). The classification of survey errors in chapter 4 contains a curious slip-up: the term *specification error* is used consistently for what in Bethlehem (2009, pp. 180–181) and in other books is called *selection error*. A specification error is something different and has to do with operationalization and measurement; "a specification error occurs when the concept implied by the survey question and the concept that should be measured in the survey differ" (Biemer & Lyberg, 2003, pp. 38–41).

Chapter 5 is a bit the odd chapter out. Titled *Web surveys and other modes of data collection*, it devotes most space to face-to-face, mail and telephone surveys and their advantages and disadvantages. Also the application in this chapter is more about computer-assisted interviewing and the Blaise system than on Web surveys. In another aspect, this chapter is also a bit the odd-man out. In discussing and comparing data collection methods, another framework for quality and survey errors is used than in the previous chapter. In chapter 5, besides coverage and nonresponse, a mixture of important global indicators, such as timeliness, and more detailed response styles (e.g., nondifferentiation, acquiescence, and social desirability) are used, with routing and checking thrown in too. Nevertheless, this chapter provides readers who are interested in mode choices with some nice references and makes the step to chapter 7 on mixed-modes easier. Mixed-mode surveys, in which several data collection methods are combined, are often used to overcome the disadvantages (e.g., undercoverage and low response) when only a Web survey is used. After discussing the advantages and disadvantages of the most common data collection methods in chapter 5, the mixed-mode strategies in chapter 7 make sense and these two chapters really form a unity, which makes placing chapter 6 in between a bit of an odd choice. Happily, most chapters can be read independently of each other.

Chapter 6, designing a Web survey questionnaire gives a good overview of the important issues in designing Web surveys and offers an extensive reference lists.

Chapter 8 and 9 discuss in detail two important error sources for Web surveys: undercoverage and self-selection. The following two chapters critically discus potential statistical solutions to these problems, namely weighting adjustment techniques, including the use of a reference survey, and the use of response propensities in correction models.

The book ends with a chapter on Web panels. The first "online" panels were pioneered by Willem Saris as early as 1986. Saris had the brilliant idea to equip respondents with computers and modems, and to send questionnaires to panel members about once a week. This basic idea is still used today in probability based online panels as CentERdata and LISS in the Netherlands and Knowledge Networks in the USA. However, the majority of online panels are non-probability based, self-selected panels. Online panels offer many advantages, of which the most important one is that they can be used as a data base for sampling specific groups to be interviewed online. Online panels also give rise to critical questions, some going back to classical panel research (e.g. attrition, panel conditioning), others to new questions, such as, are professional respondents emerging who only are in it for the incentive, do the frequent requests make respondents bored and lazy, and will they satisfice more. The final chapter in this book does not give full justice to issues in online panels. It focuses more on statistical/technical details, such as how to calculate different response rates, than on quality issues. It does mention the ESOMAR and EFAMRO guidelines and the AAPOR task force on online panels. But, it does *not* mention that the very informative report of the AAPOR task force is freely available online at http://poq.oxfordjournals.org/content/early/2010/10/19/poq.nfq048.full.html or through the AAPOR Web site at http://aapor.org. This could easily be remedied with a reference on the Web page of the book. It is also

interesting for the reader to know that there are now official ISO standards for (online) access panels in market, opinion and social research (ISO 26362:2009) which are very helpful to establish the quality of online panels.

In sum: I would recommend this book. Certainly, I will even ask our department and our university library to order a copy. It is a very useful handbook for everyone who uses data that are based on online studies. It is certainly useful for policy makers in all fields who commission research and have to make decisions based on "survey evidence". One word of wording, though clearly written – the authors are extremely good teachers –, readers should have a good knowledge of basic research methods and statistics to really appreciate this book. In principle it could, as the cover text states, be used as a supplement for survey method courses at undergraduate and graduate level. However, there is one main impediment to this: the price. At a price of 120 US dollars for a hard cover and 99.99 dollars for an e-pub (according to the Wiley site), and even higher prices at Amazon, it is not easily affordable as a supplementary text for students.

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