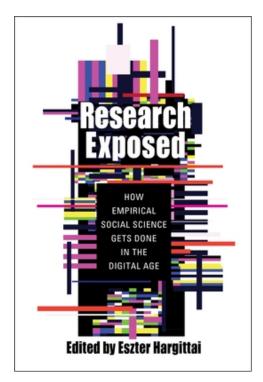
Eszter Hargittai (Ed.), **Research Exposed: How Empirical Social Science Gets Done in the Digital Age**, New York, NY: Columbia University Press, 2020, 288 pp., \$30.00 (paperback).

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Adding to her previous two widely known volumes Research Confidential (Hargittai, 2010) and Digital Research Confidential (Hargittai & Sanvig, 2015), Eszter Hargittai's latest work, Research Exposed: How Empirical Social Science Gets Done in the Digital Age, is a fascinating follow-up, aiming to fill a notable gap in the extant literature on research methods to explore social science questions against the backdrop of the digital era. This collection draws together valuable empirical research of many seasoned and rising scholars who earnestly share their ingenious research records, including some conceivable challenges and unexpected but easily overlooked details.

Hargittai is a professor and chair of the Internet Use and Society Division in the Department of Communication and Media Research at the University of Zurich. Her research focuses on the social and policy implications of digital media. The contributors to this volume include professors from such



universities as the University of Zurich, Princeton University, and the University of Chicago. Research focus in this volume revolves around digital communication technology, digital safety and privacy, data collection management and data quality monitoring, and digital inclusion, among other topics.

The book is divided into an introduction and twelve chapters. In her introduction, Eszter Hargittai establishes the research context and the primary concern of editing 12 remarkable essays: that digital media provide research opportunities for accessing and processing information about people's everyday behavior.

Chapters 1 and 2 introduce two types of emerging "invisible" data online. Deen Freelon provides an indepth introduction to the techniques used to identify and obtain "absent data" (p. 6) on Twitter from Internet Research Agency, a disinformation operation funded by the Russian government.

"Social bots," which refers to social media accounts controlled by computer algorithms (p. 30), is also introduced as a newly emerging data genre. To examine whether they had influenced the formation of public opinion in Germany's 2017 federal election, Tobias R. Keller and Ulrike Klinger explicate the study procedures and the working standards of their study, presenting a new perspective in pursuing the new methods and tools in detecting this kind of data.

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In chapter 3, the researchers narrate how they recruited a hard-to-access population comprised of sexual and gender minorities through distributing appealing ads on targeted social media platforms.

Chapters 4 and 5 draw attention to qualitative studies. Lee Humphreys provides a detailed account of the prominent forms of sampling within digital media. From her own research experience, she suggests that establishing rapport is essential to a productive interview. Elissa M. Redmiles introduces how she conducted her research to understand the technology used in sex work. She elaborates on the experience of recruiting sex workers who speak English and German both through email and door-to-door enrollments.

Chapters 6, 7, and 8 shift focus to ethnographic observations in social science research. Nikki Usher discusses the opportunities and challenges a researcher comes across when she studies "up" (i.e., when the participant or the institution to be studied has more power than the academic researcher). Some alternative data, like public data and semi-public digital data, can be exploited under this circumstance, and Usher argues that they can be used to complement traditional fieldwork when they are not possible to access. For instance, "unexpected data," including objects, semipublic observational opportunities, and biographical data, etc. (p. 129), should be deliberately planned ahead, in case they will be needed in the process of analysis, and when firsthand data are impossible to get, computational data can be used (p. 135). Jeffrey Lane finds the incorporation of social media in studying ethnographic relationships to be quite instrumental. With a five-year ethnographic study of a young Black man's street life in Harlem, Lane finds that the Facebook feed people share is carefully curated, and the same people, both online and in person, aspire to be the personas displayed on social media. To study their behaviors both online and offline is vital for ethnographers to understand why the subjects construct their personas the way they do on social media. Will Marler also conducts ethnographic research to examine the role of smartphones in digital inequality. He concludes that the matter of "getting in" and gaining trust are the two keystones of ethnographic methodology (p. 172).

Teresa Correa and Isabel Pavez conduct surveys in rural and isolated communities in Chile. They attach great importance to the mixed-methods approach and "triangulation" (i.e., in-depth interviews, focus groups, and quantitative methods are triangulated to ensure the validity of the study and solidity of the data). The authors also note that understanding local geographic features is crucial to properly planning research schedules.

Erin Flynn Klawitter investigates how independent women artists use social media to help create or sustain their businesses under the circumstances of the sharing economy. Three-phase studies are fully elaborated on, including survey questionnaires, web-based applications for data collection, and semi-structured interviews.

Matthias Hofer explores the relationship between older adults' media use and well-being. A measurement burst study (MBS), a hybrid design in which multiple bursts of intensive (e.g., hourly, daily) measurements are embedded in longer periods of months or even years (p. 227), is employed to detect the media participation of older adults, and the design can not only detect short-term variability but also developments of the variability among persons. Hofer hopes that MBS can be applied to other research projects so that with more new data sets, original theories can be drawn.

The volume ends with Hyunjin Seo seeking to narrow the digital divide by conducting a multistage, mixed-methods approach research study to examine the community-based digital competency, access, and skills of older, low-income African Americans in Kansas City. Due to limited access to these marginalized populations, it is noted that a partnership between an academic institution and a community organization can contribute to implementing an effective program.

Most of the studies in the volume use innovative data mining methods, along with traditional mixed methods, including interviews, focus groups, ethnographic research, surveys, and so forth. The subject matter diverges between marginalized populations such as sex workers, low-income older African Americans, and journalists working in the White House. The essays are also highly readable, featuring twists and turns and resembling the experience of, in Hargittai's words, "reading detective novels" (p. 2).

Contributors faithfully record the actual obstacles and lessons learned during digital research, such as that the act of violating terms of service on certain social media platforms may jeopardize a researcher's data access (chapter 1). Usher (chapter 6) also describes her attempts conducting face-to-face interviews, and states that they can bolster fieldwork experience and supplement digital data.

Elaborate details to improvise and modify the contributors' research plans are also invaluable resources for other scholars, e.g., Usher and Klawitter (chapters 6 and 10) suggest that scholars recruit participants broadly and deeply before settling down. When research gradually unfolds, survey questions are constantly modified to better fit study purposes (chapter 11). The researchers also shut down their survey link regularly to check and analyze the data, so that they could make revisions after detecting any issues (chapter 3).

Several provocative suggestions are also made in this volume. Humphreys (chapter 4) urges that "methodological transparency" should be "revitalized" to strengthen the readability and validity of the research (p. 78), as is what all the authors strictly honor in this volume. In addition, "ethics" should always be kept in mind during the research process and strictly observed by researchers (chapters 2, 3, 4, 5, and 8). For one thing, without owners' explicit consent to participate in the research, users' public accounts are all pseudonymized (chapter 2). For another, researchers collect minimal information to respect the privacy and ensure the safety of marginalized populations (chapters 3 and 5). On top of that, even though digital research heavily relies on online technology, several chapters (chapters 5, 7, 8, 9, 10, and 11) point out that research studies work best when online and offline methods are brought together.

In conclusion, *Research Exposed*, as its name indicates, is a well-written volume that reveals many behind-the-scenes experiences of social scientific researchers in the digital age. Compared with many edited volumes, this collection provides firsthand accounts of novel digital research projects, such as identifying accounts as bot or human by trained machine-learning algorithms (p. 36), with an interest in various social aspects (i.e., understanding the landscape of digital inequality in an unstable housing community [p. 164], etc.). Engaging and accessible details during recruitment and data analysis are especially reassuring for junior scholars to read, and they might also inspire practiced academics to conduct future projects.

References

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- Hargittai, E., & Sandvig, C. (Ed.). (2015). *Digital research confidential: The secrets of studying behavior online.* Cambridge, MA: MIT Press.