

Peter Neijens, Theo Araujo, Judith Möller, and Claes de Vreese (Eds.), **Measuring Exposure and Attention to Media and Communication: Solutions to Wicked Problems**, Amsterdam, The Netherlands: Amsterdam University Press, 2024, 164 pp., \$61.99 (hardcover).

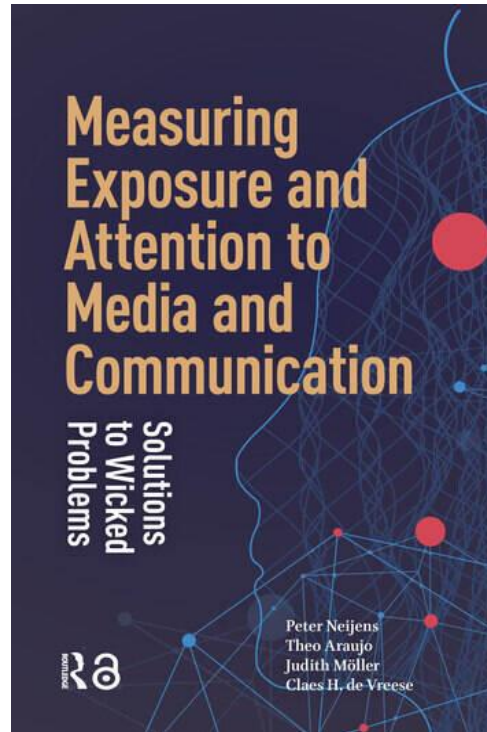
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Although media and communication research is fascinated by studying the effect of media exposure, especially in an ever-changing media landscape, Neijens, Araujo, Möller, and de Vreese step back to address the fundamental question: How do we assess media exposure? Their work, *Measuring Exposure and Attention to Media and Communication*, synthesizes years of engagement with media effects research. This book frames the Media and Communication Exposure (MCE) measurement as a “wicked problem,” given its technical complexity and multifaceted nature of conceptualization. This problem is further complicated by digital transformations, which pose an urgent need to understand more fragmented and diversified exposure on multiple platforms with highly personalized experiences.

Picture a typical day. You start with a quick check of messages as soon as you wake up, then let a podcast or news show shape your first thoughts. On your commute, your attention drifts to the ads in the subway and throughout the day, news alerts, and notification streams across your phone. For most people, the day starts with media exposure and hopefully does not end with a sleepless night scrolling through social media feed. To understand how individuals and even society are affected by these fragmented but aggregated interactions with media, it is essential to begin with a valid and reliable examination of media exposure, which is precisely the challenge this book takes on. The central objective of this book is to provide researchers with a comprehensive diagnostic framework for assessing media exposure rather than prescribing a single best method. Organized across 10 chapters, it systematically addresses three dimensions of measurement challenges: conceptualization, operationalization, and measurement.

The book begins with conceptualizing media contact and distinguishes related but distinct concepts, such as attention, involvement, and engagement, which are commonly conflated in the literature. Along with the overview of metrics taxonomy in studying media exposure, the beginning chapters also highlight the quality criteria for media exposure measures, including both measurement errors and respondent selection errors. The front chapters set the stage for further explorations of different measurement strategies in subsequent chapters by unpacking the conceptualization issue and criteria for quality measures, as well as inviting considerations for issues like the medium itself, its content, and its user interaction.

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Following the foundational chapters, the methodological core of the book presents a toolbox of measurement approaches. It begins by reviewing the most dominant measure—the self-reporting measures in chapter 4. The extensiveness of this chapter reflects the importance of this measure. The self-reporting measure has advantages and disadvantages depending on various factors discussed in the chapter, ranging from types of recall, units of measure, reference period, instruction, and response scale, to linkage options. This chapter offers valuable insight into the heterogeneity of this measure with more specific consideration of methodological choices to evaluate self-reporting measures across contexts. Digital trace data, discussed in chapter 5, distinguish site-centric methods from user-centric methods. Data donation, which involves participants sharing digital traces, is introduced with gathering methods. The most valuable contribution of this chapter is the candid discussion of limitations and concerns with this method, which include ethical concerns (privacy, surveillance, and consent), technical problems (platform differences, background apps, etc.), and response rate (willingness to disclose private data). These limitations, I would argue, represent not only the method-specific considerations for studying media exposure but also an overarching tension in media exposure measurement. In addition, the integration of digital trace data and self-reports discussed in this chapter gestures toward a productive direction in the field, as it can validate how much exposure is cognitively processed and experienced. Subsequent chapters examine observation and eye tracking.

Observation approaches range from intervening to nonintervening, visible to nonvisible, and extend to contemporary approaches such as digital ethnography and netnography. The key trade-offs in observation approaches are the rich naturalistic data and the presence of an observer. Similar to digital trace data, this measure faces challenges around representativeness of the sample, cost-efficiency, response rate, validity, reliability, comparability of coding, and ethical concerns. Eye tracking technology also offers another possibility to study media exposure, which is well-positioned in this chapter. Although it has its own disadvantages and advantages, the book suggests a strategic usage of eye tracking technology in triangulation, as it offers one of the most trustworthy and validated indicators for media exposure and attention. Substantiating other measures, such as self-reports and digital trace data, with eye tracking technology offers a more robust and nuanced representation of media exposure.

The last two measures in the toolbox, discussed in the book, are neurobiological measures and ecological measures. The neurological measures include skin conductance for arousal, facial electromyography for valence (directions of the affect), and heart rate variability for cognitive attention. Although it is a rough overview of neurobiological measures, chapter 8 leaves us with a call for interdisciplinary research and examination of media exposure through partnerships with methodological experts. Chapter 9 concludes our toolbox with the last measure—ecological measures, which look at media exposure at a macro level distinct from previous measures that examine it at an individual level. This measure includes media availability data (ratings, reach, etc.), campaign intensity indicators, and field experiments. Advantages include no memory problems that exist in self-reports and the mitigation of reciprocal causality. However, this measure captures an estimate of exposure, not actual exposure.

The book closes with 10 recommendations in three aspects: theoretical, practical, and methodological. Theoretically, the authors urge researchers to 1) carefully construct the research questions, 2) specify media content and platform that drive the causal mechanism, 3) account for context, such as multitasking and co-viewing settings, and 4) incorporate physiological and mental processes during

exposure. Practically, authors call for considerations for 1) measurement quality and representativeness of the sample, 2) implications from platforms' affordance, and 3) triangulation of measures. Lastly, methodologically, they advocate for continued studies that look at 1) systematic validation and reliability, 2) nonresponse and noncompliance issues, and 3) merging datasets.

The book fills a distinctive niche within the broader methodological literature on media exposure. Some foundational works, such as Slater (2004) and de Vreese and Neijens (2016), have addressed specific aspects of media exposure measurement. No single volume has synthesized the full range of available approaches with a systematic examination of their trade-offs, applications, and future directions. In addition, the value of this book goes beyond providing a single solution for the "wicked problem" and also manifests in their discussion of factors that influence the quality of measures in a contemporary media environment. This book offers an essential reference for communication and media researchers and scholars. It is also valuable for interdisciplinary researchers and industry practitioners who rely on media exposure measures without field-specific knowledge to evaluate them. Moreover, it sets an agenda for the next generation of exposure measurement research.

While this book offers invaluable insights into media measurement, there are areas left underexplored. First, rapid technological changes are happening in the media landscape. AI-generated content, algorithmic curation, and immersive media experience raise questions about how we should reconceptualize as media consumption gets more complex. Additionally, as mentioned in the conclusion, industry-academic dialogue is needed. The book does not explicitly discuss how such collaboration may be structured or what might impede it, which may deserve further analysis.

In sum, *Measuring Exposure and Attention to Media and Communication* succeeds in making a "wicked problem" tractable without oversimplifying it. As it declares, no best measure exists in general; instead, it equips researchers with a diagnostic framework to make wise, ethical, and transparent decisions tailored to specific research questions and media contexts. The authors close with a declaration, "long live exposure" (p. 158), emphasizing the need for continuous attention in measurement research as the reality grows more complex. For media and communication researchers and scholars, this book leaves us with both challenges and insights to carefully think about what we mean by exposure, be transparent about our assumptions and choices, and engage in sustained validation.

### References

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