scholars who do not wish to compromise on theoretical features and analytical tools. Menzel presents a very careful and thoughtful comparison of ellipsis in cohesive ties in an English-German corpus. She notes the difficulty in finding comparable text types and results and notes the need to manually transcribe spoken data. Shagalov and Fine work through clinical interviews of speakers with schizophrenia and mania, annotate and analyze the corpus using the UAM CorpusTool, and develop 46 linguistic variables to determine the "best subset" of combinations of variables which can more accurately classify the language of speakers with schizophrenia or mania. The importance of this kind of work for clinical diagnosis is made clear.

Perhaps due to the large number of chapters (21 including the introduction) and likely constraints on space, some chapters lacked detailed analyses and discussions. Nevertheless, as a whole, the volume will appeal to a wide range of researchers in discourse analysis due to the variety in content, computational methodologies, and corpus tools. There is also a fairly broad spectrum of SFL concepts and analytical levels and frameworks covered, including lexicogrammar, register, method of development, multimodality, genre, appraisal, and cohesion. One area of work that might have been included, however, is O'Halloran's (2015) work on "multimodal digital humanities." For those new to SFL theory, most chapters do not require too much background in the theory. A theme particularly evident in the latter part of the volume is that there remain challenges in developing and adapting computational linguistic tools to text analysis from an SFL perspective because of the multifunctional nature of the lexicogrammar and the meaning-based focus of the theory.

Funding

References

Bateman J, McDonald D, Hiippala T, et al. (2017) Systemic functional linguistics and computation: new directions, new challenges. In: Thompson G, Bowcher WL, Fontaine L, et al. (eds) *The Cambridge Handbook of Systemic Functional Linguistics*. Cambridge: Cambridge University Press.

O'Halloran K (2015) Multimodal digital humanities. In: Trifonas PP (ed.) *International Handbook of Semiotics*. Dordrecht: Springer, pp. 389–416.

Sarah Pink, Heather Horst, John Postill, Larissa Hjorth, Tania Lewis and Jo Tacchi, *Digital ethnography: Principles and practice*. SAGE: Los Angeles, CA, 2016; xii + 202 pp.; ISBN-13: 9781473902381, $35.95 (pbk)

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Digital media, in their multiplying forms, increasingly become inseparable parts of the mundane and spectacular moments of so many of our lives. *Digital Ethnography* reflects

on what this new reality means for doing research on the social world, focusing on the implications for ethnography, a mode of (media) research that focuses on people's everyday lives. The book makes an argument for ethnography's strengths when it comes to understanding a broad variety of contemporary social developments that involve digital media. The examples discussed include, for instance, the role of mobile phones in subtle forms of surveillance in romantic relationships between Japanese youth, the presence of digital technologies within the daily rhythms of Australian households, and the kinds of ambient play that mobile games afford. The authors avoid defining digital ethnography as a finite set of research techniques, presenting it instead as a series of methodological principles: multiplicity, de-centering media, reflexivity, open-ness, reflexivity, and unorthodoxy. They describe what these principles look like in practice through collaboratively discussing examples from their own and others' work, organizing them around seven key concepts—experiences, practices, things, relationships, social worlds, localities, and events—dedicating a chapter to each. The book builds a compelling case for the importance of studying the digital in relation to the "material, sensory, and social words" (p. 7) in which it exists. And its methodological discussion not only prefigures an increasingly digital world to come but also attunes us to the pervasiveness of digital media in the social worlds we already study.

The book seeks less to propose digital ethnography as a methodological or epistemological innovation, and seems more intended to loosen anthropology's claim to ethnographic methods. By showing the advantages, for scholars across disciplines, of understanding specific digital media usage practices within the particular social contexts from which they emerge, the book goes beyond an onto-epistemological critique of "big data"–oriented methods to propose a qualitative alternative, discussing what has (and has not) worked. Furthermore, the organization of the book around key concepts and related debates in the social sciences demonstrates a useful method for thinking about, and writing up, digital research with relation to non-/pre-digital work. It demonstrates how to avoid overstating novelty while assessing what is new by specifying, historicizing, and contextualizing empirical findings on digital media use with relation to wider theoretical discussions. In this way, the book draws attention to an area of empirically grounded thinking about the relationship between the digital and the social to which the authors and other ethnographers have been contributing for a longer time.

The parallels and overlaps with the project of "digital anthropology," and Heather Horst and Daniel Miller's (2012) edited volume by the same title, are evident. Especially since the central principles the book apparently distills from this previous work are in strong continuity with anthropology's earlier research principles. But Horst and Miller's book is more about bringing the digital into the fold of anthropology, largely by demonstrating how well-suited the discipline has always been for studying the relationship between the human and technological. In contrast, with its methodological focus, *Digital Ethnography*'s contribution is in its attention for the details of how ethnographic research practice is developing and changing in light of new technological realities that fieldwork presents. Although the principles Pink and her co-authors present are basically congruent with anthropology's cornerstone principles, they focus on the extent to which things are changing on the level of research practice. And the compelling examples—such as a photo diary technique (p. 52), a video reenactment approach (p. 69), and an

artist–researcher collaboration in producing a phone apps (p. 156)—are presented as ways of doing research that basically any researcher can put into practice, adapt, and build upon in a variety of research settings and contexts.

The book also makes an argument for the importance of material aspects of digital media usage, such as the physical spaces of the home or city in which digital media are taken up, and the materiality of devices, themselves. For instance, they show how materiality is key to the ways people's sensory relationships to their spatial environments are shaped through an interplay between digital devices, places, and practices. And this argument about the importance of the researcher registering the materiality of digital media forms runs through each of the key concepts the authors discuss. However, their emphasis on the material seems to be focused on the physical, meaning that the materiality of software platforms, applications, and their interfaces is not elaborated upon in depth in the examples. This is surprising given that interfaces are a key factor in the digital user experience, and because the authors' conceptual understanding of the material is defined by the sensorial experience of the user rather than any ontological distinction between hardware and software. Methodologically, the omission of the materiality of digital objects also reproduces the very form–content divide the authors seem interested in challenging with their inclusion of material forms as an integral part of mediation.

Their approach also leaves out how platforms make large-scale aggregations of data experience-able to the user and, indeed, to the researcher. The new Digital Ethnography Research Lab—to which the book refers, and within the framework of which some of the authors have continued their collaboration—is currently doing fascinating work on "data ethnography." And this has already gone a long way toward addressing questions that *Digital Ethnography* raised about how ethnographers can effectively grapple with "data." But the book stops short of discussing how researchers might make use of digital data, and the technological tools oriented toward analyzing it, as part of ethnographic research practice. For instance, the authors elaborate multiple angles of an example in which a researcher produces a video document of a respondent's home for the purposes of recording and remembering details audio-visually as well as eliciting interview responses. Despite this encouragement to use audio-visual media technologies within ethnographic research on digital media technologies, the book does not deal with questions of how researchers might use emergent digital technologies as research tools to make digital data (differently) experience-able to the user/respondent. Are there digital tools that can be used as part of an ethnographic approach in comparable ways to the audio-visual technologies the authors propose as research tools, and what might the practical, ethical, epistemological implications be of doing so?

In the face of the predominant reality that digital infrastructures and protocols are designed precisely to configure usage *without* being sensed by users, the book's emphasis on the world of the situated user may be seen as a bold plea for the sustained importance of the user experiences that ethnography is so good at accessing. But this is simultaneously a limitation of the book's approach in the context of the proliferation of algorithmic design that remains un-sensed by the user and yet is integral to the ways platforms sustain themselves and develop. Nevertheless, the authors deliver on the promise of accessibly and thoroughly elucidating what doing digital ethnography means,

showing the vast variety of contemporary digital media usage contexts. Ultimately, the book masterfully demonstrates to a wide readership what the urgent value of an ethnographic approach to digital media is.

Reference

Horst HA and Miller D (eds) (2012) *Digital Anthropology*. London; New York: Berg.

Ryan M Milner, *The world made meme: Public conversations and participatory media*. The MIT Press: Cambridge, MA, 2016; 262 pp.; ISBN: 9780262034999, $32.00 (hbk)

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Milner describes multiple ethical and social considerations related to participatory media in this monograph that comes out of his dissertation research. In part because memes have been around for a while, Milner leaves their definition to other authors like Limor Shifman (2014). Instead, Milner posits "five fundamental logics evident in the creation, circulation, and transformation of memetic media: multimodality, reappropriation, resonance, collectivism, and spread" (p. 23). Milner's explanation of these five logics yields a valuable exploration of memes and their associated cultural spaces, including 4chan, Reddit, and Tumblr. Although these subcultures have in many instances begun to reject memes as too mainstream or overwrought, Milner argues that "memetic logics are as pervasive as ever" (p. 49) and thus continue to be essential to understanding participatory digital media.

The methodology of Milner's study is somewhat occluded within the book itself, but he does indicate that this work grew out of his 2012 dissertation, wherein he stated that he collected 4890 image files (p. 74) as part of a large, multi-year, critical discourse analysis. Milner also indicates that he has been studying memes since 2010, and several examples in the book are relatively recent as of its writing, so it is safe to assume that the number of artifacts has grown beyond the initial 4890. Regardless, a clearer indication of the author's methodology would help us to better understand Milner's work and does represent a slight weakness of the book, although few authors and publishers enjoy getting bogged down in such methodological details, which may have contributed to the decision.

Milner spends the first two chapters setting up definitions for memetic media, his memetic logics, and "grammar" for analyzing underlying memetic structures. Chapter 2 is largely spent exploring the fundamental memetic logics, including a review of multimodality as articulated by Kress and van Leeuwen (2006) and the nature of imitation and reappropriation in memes. Milner is also concerned that "memes are dead" (p. 48), and he articulates how if memes are dead, then memetics yet lives on. This ties into his argument regarding subculture, that even if subcultures lose control of certain memes or those memes become tired, it in no way implies that memetic logics will cease to be. This discussion leads into Milner's articulation of memes as a vernacular lingua franca in Chapter 3, which includes rich discussion of "Doge" interior monologuing, "Rickrolling" trolling, image macro-satire, dark comics, and use of contemporary vernacular with iconic and historic images.

As he transitions to Part II, Milner's tone becomes more serious as he articulates the frustrations many subculture groups feel as they lose control over memes that embody