ATD Reviews A Review of *The Forgotten Tribe: Scientists as Writers*

Lisa Emerson (2016). *The Forgotten Tribe: Scientists as Writers*. Fort Collins, CO: The WAC Clearinghouse [ISBN 978-16-07326-44-1 http://wac.colostate.edu/books/emerson/tribe.pdf. 243 pages, including index (eBook).] Boulder, CO: University Press of Colorado, [ISBN 978-1607326434. 243 pages, including index (softcover).]

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The WAC and WID movements have made substantial progress in understanding how scientists feel about, do, and learn science writing. Empirical studies guided by socialization and discourse-community theory have assisted in this progress (e.g., Florence & Yore, 2004; Poe, Lerner, & Craig, 2010). Methodological approaches to these studies have included semi-structured questionnaires and interview protocols capable of providing insight into scientists' science-writing perceptions and practices (e.g., Yore, Hand, & Prain, 2000; Yore, Hand, & Florence, 2004). These studies provide a useful backstory for understanding the contribution that Lisa Emerson's *The Forgotten Tribe: Scientists as Writers* makes to this conversation.

Emerson's work enters a thriving conversation about scientists' perceptions of reality, knowledge, and writing. Yore, Hand, and Florence (2004), for example, found that scientists mainly adopted a "modern (naïve realist ontology, evaluativist epistemology) view of science," a view that "proposes that science knowledge is a set of temporary descriptions and explanations that best fits the existing evidence and current understanding of the real world" (p. 342). This view of science aligned with scientists' views of writing as objective knowledge-building rather than a more creative, subjective practice (Yore, Hand, & Florence, 2004). Meanwhile, other research has noted that co-authorship is a primary mechanism of socialization into disciplinary communication practices in the sciences and, thus, one of the "signature-pedagogies" of learning to write in the sciences (Maher, Timmerman, Feldon, & Strickland, 2013, p. 140). Other authors who have studied scientists' attitudes about writing argue that many scientists see research writing as an objective representation of an observable "best" truth. These authors have proposed that this mindset may at times hinder scientists' overall development as writers since they may not recognize revision as a necessary step in producing persuasive communication for a wide range of audiences (Shanahan, 2004). Further research has suggested that particular writing experiences may impact scientists' attitudes toward, and performance in, writing and knowledge-making; for instance, imagining and writing for genuine,

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cross-disciplinary audiences have been linked to stronger academic performance in undergraduate science communication classes (Poe, Lerner, & Craig, 2010).

Still, while the WAC/WID movement has made significant progress in understanding how scientists feel about and do science writing, research reports that allow scientists to speak for themselves outside of the shaping influence of a WAC/WID paradigm have been lacking. This is where Lisa Emerson's book *The Forgotten Tribe: Scientists as Writers* steps into the conversation. Science-writing literature, Emerson argues, has inadequately represented scientists' beliefs about writing, attitudes toward writing, and experiences with writing, because much of it has been written by writing studies researchers who represent writing is, does, and practice in ways that reflect their theoretical and pragmatic investments in what writing is, does, and how it is learned. Thus, in featuring 19 extended narratives, Emerson's study "invites scientists to speak of their beliefs, attitudes, processes, development and experiences as writers of science through the development of literacy narratives—and it invites those of us in the humanities to listen" (p. 9).

Emerson's methodology entails the collection and analysis of 106 semi-structured narrative interviews occurring over five years with scientists in North America, the United Kingdom, and Australia from 17 total universities. Like previous research studies that have used surveys and interviews to explore scientists' perceptions and practices related to writing, Emerson's storytelling methodology theorizes that stories, "conveyed as the hybrid oral history/literacy narrative genre," foreground participants' co-constructed experiences in communities of practice. Emerson's thematic analyses, both qualitative and quantitative, provide finely grained understandings of several themes: (a) early science-writing influences, (b) learning experiences related to science writing, (c) attitudes toward writing, and (d) beliefs about writing and why they practice writing the way they do, offering a more complex picture of how scientists perceive and produce writing.

Emerson also provides data-driven support for positions long held among WAC/WID practitioners. Specifically, Emerson's data indicates that senior scientists cannot all be grouped into one category, but rather demonstrate a number of divergent traits. Examples of these differences include how senior scientists may quite differently adapt to various writing situations and may demonstrate a greater or lesser degree of willingness to write for specific peer-reviewed journals in a single genre. Another important contribution to WAC/WID scholarship concerns Emerson's report that scientists who had positive childhood experiences with writing and with WAC/WID as undergraduates were often more adaptive, flexible, and resilient science writers later in their careers. Further, Emerson's text affirms the assertions of WAC/WID pedagogies about the power of co-authorship and collaborative writing environments to prompt socialization into disciplinary ways of communicating. These findings will be welcome for WAC/WID practitioners looking for data-driven defenses of the field's work and its benefit to students across the curriculum and in the disciplines.

People who would benefit from reading Emerson's book include undergraduate science students, who may benefit from reading about scientists who struggle through writing experiences to gain fluency in various genres, and also graduate science students, who may gain insights from reading about the diverse processes of gaining writing fluency. Composition teachers and researchers, especially those involved in WAC and WID, may also benefit from the insights Emerson's work reveals. As Emerson herself notes, the needs of

writers in science and the writing processes they encounter may differ significantly from those of writers in the humanities, making it incumbent upon those outside of science departments to attend to what science writers are saying. Additionally, Emerson's expansive study provides numerous launching points for further WAC/WID research. Ultimately, then, the major strength of *The Forgotten Tribe: Scientists as Writers* is its presentation of much-needed knowledge about scientists and their perceptions of writing in a way that lets scientists speak for themselves to inform a range of interested audiences.

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