

## SECTION 5.

# SCIENTIFIC AND ACADEMIC PRACTICE

Writing in science has long been a concern of writing studies in part because it gets so visibly to the issue of the role of writing in the formation of knowledge and contests so directly the idea that science eschews language to go directly to facts of nature, untainted by the colors of rhetoric. But of course modern science could not exist without the publication system of science, and that would not exist without the journals and books that must be written to represent and contest knowledge. On the other hand, those writings would not reach toward scientific knowledge if they did not accountably attempt to represent our experience of the world through methodically collected evidence, theoretically careful argument, and communal comparison and aggregation of findings across the wide intertexts of fields of inquiry.

Yet it is the practical importance of science and the practical difficulties scientists face in writing science that keep it at the forefront of writing studies, for these motives challenge us in our role as writing educators to understand the struggles of scientific writers and provide support for writing development in scientists' degree and post-degree careers. It is to these struggles to write successfully for publication and to meet communal standards that all seven of the chapters in this section speak—by studying the practices and orientations of either erstwhile writers seeking publication (Mur-Duenas; and Boch et al.) or experts with substantial publication records (Emerson; Watson; Keranen et al.; Iñesta & Castelló; and Riazí). The struggles are even greater for non-native English speaking scientists who seek international publication in English language journals, and to that particular problem three of the articles are addressed (Watson; Keranen et al.; and Riazí).

Yet, while the problems of scientists writing may seem specialized and particular, they highlight phenomena of importance to all writers, often with a striking clarity because of the visible specialization of the writing. In the past, scientific writing was one of the key research sites for exploring genre, intertextuality, nominalization and lexis, register, and specific purposes. The articles here find in scientific writing windows into a new range of issues of more general concern: the processes and practices of advanced writers, their cognitive and affective orientations, their development over careers, and the role of evaluation. This research is leading us beyond the typical school-based models earlier

research proposed for writing processes and development to see the complexity and subtlety gained by writers engaged in advanced intellectual endeavors.

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