broadest sense. Particularly in "Social identity theory and mass communication research" by Jake Harwood & Abhik Roy and "Intergroup dimensions of the Internet" by Tom Postmes & Nancy Baym, communication is conceptualized more as the site of analysis and less as the object of analysis. Perhaps with the exception of "Organizations as intergroup contexts: Communication, discourse, and identification" by Neil Paulsen, Phil Graham, Elizabeth Jones, Victor J. Callan & Cindy Gallois, which promotes a critical discourse analysis (CDA) approach to the examination of language use, the chapters are generally content with doing research based on what people say they do. Of course, this type of metalinguistic information is an important source of data in the study of communication; however, it can provide only a partial glimpse into the complexities of interaction. For the most part, the authors are up-front about the fact that they draw conclusions about communicative behavior based on participant reports about communicative behavior. Yet the reader often has to keep this in mind when conclusions are occasionally framed in terms of what people do as opposed to what people say they do.

Notwithstanding this criticism, which may be aimed more at the field of social psychology and less at this book, this volume is enormously significant for directing scholarly attention to the dynamic research area of intergroup communication. This collection is poised to inspire future research across several disciplines, continuing to deepen scholarly knowledge on social group and identity processes for many years to come.

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ROY HARRIS, *The semantics of science*. London: Continuum International, 2005. Pp. xvi, 240. Hb $149.00, Pb $49.00

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At least back to *The language myth* (1981), Roy Harris (not related to this reviewer) has plied variations of the same salvationist argument, in his customarily grumpy and entertaining style. If you're familiar with this argument, leap ahead to the third paragraph; if not, a quick synopsis, both of the errors he wants to save us from and of the salve he wants us to buy, will best place *The semantics of science* for you.

Thinking about language – by philosophers, psychologists, sociologists, linguists, and most everyone else – is beset by a cluster of related errors, Harris says. Prime among these errors is what Harris calls the "telementation fallacy," the notion that language exists to transfer thoughts among heads. Further, this

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transfer takes place according to the "fixed-code fallacy," the idea that all speakers of a language share a finite, determined set of rules for getting mental contents into transferable packages (and getting them out again at the other end), and that language is just that body of rules and its associated structures (phonemes, words, sentences, etc.). These two grand mistakes comprise what Harris terms the "language myth," which comes in two competing variants, one governed by the "psychocentric fallacy," and the other by the "reocentric fallacy." In the psychocentric version of the language myth, the rules generate structures that stand for mental contents directly; in the reocentric version (the version most compelling for scientists and their commentators), the structures stand for things external to the mind, like chickens and quarks and chewing gum. In very sharp contrast to this myth – which, Harris argues, has dominated scholarship and lay thought about language since the advent of literacy in 5th century BCE Greece – is the integrationist model that he advocates. This model is, first of all, not a linguistic theory per se, but a semiotic theory that subsumes linguistics. It views all communication as the particular exercise of communal practices, integrated through the available means of intercourse, for creating meaning that draws past and present contexts toward future action. That is, it holds that communication is communication (winking, nodding, writing, speaking, nudging, stroking), without special privilege to any channels or practices, and that meanings are made on the fly in communicative events.

The semantics of science joins Harris's growing catalogue of particular arguments for the integrationist model that rest on analyses of what he calls "linguistic supercategories," as he searches out different scholarly audiences for the program. Supercategories are the products of a kind of linguistic imperialism that "integrate[s] what would otherwise be separate activities and inquiries" (p. xi). *The necessity of artspeak* (2003) charts the supercategory of art, *The linguistics of history* (2004) does the same for history. *The semantics of science* is the most ambitious of these arguments (though one imagines a book that takes on religious discourse is in the works), confronting what is "quite likely the most triumphant, the most imitated, the most universal form of human discourse ever developed" (Montgomery 1996:2). Certainly, it has been the most imperialist discourse over the past two centuries.

The semantics of science has a preface, which sketches out the language myth and the integrationist approach; a very brief introduction, which suggests the deep penetration of the language myth into scientific practice and theories of scientific discourse, and gestures at the rhetorical structure of the overall book; eight developmental chapters; and a conclusion, "Integrating science," which is in all senses the book's telos; as well as two appendices; and a narrow, shallow index.

The eight rhetorically developmental chapters trace out the intersections of the language myth and various claims about science, lining up and knocking off several choice targets along the way. Harris gives particularly rough rides to

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scholars who anachronistically make Aristotle into a scientist, and who make Aristotle's reocentric semantics into a theory of scientific language; to scholars who anchor "the" language of science in the "language" of mathematics (mathematics is not a language, and is not sufficiently rich to anchor science); to linguists, and other poseurs, who poach the status of science by aping its discourse, including its structure of claims; and to all and sundry scholars of science whom Harris perceives as falling under the spell of the language myth.

Harris is impressively familiar with millennia of relevant thought. Still, his scholarship is recognizably finite, as those of us who have read far more narrowly but somewhat more deeply into specific crevices frequently discover. My particular bones of contention concern his sweeping disregard of many discourse scholars outside the linguistic and philosophical mainstreams, and his dismissal of the scholarship in the crevice known as rhetoric of science. Harris could, for instance, learn a good deal from theorists like Mikhail Bakhtin and Lev Vygotsky, who see language as inextricably embedded in contexts of use, and who see meanings as achieved through continuous, dynamic negotiations; or Bruno Latour, who has looked closely at scientific communication in and around the laboratory, developing an approach that sees communicative practices as even more broadly distributed and widely integrated than Harris does (that is, his Actor-Network Theory); or Charles Bazerman, who has closely charted the moment-to-moment making of scientific meaning in the practice of reading (1985), and genre formation in science (1988), and the impact of a specific technology, the electric light bulb, as what Harris might be tempted to call a "supercategory phenomenon" (1999), and who has diachronically explored the linguistic practices of the Royal Society (1988), to which Harris devotes a chapter. All of these scholars, not coincidentally, reject the language myth, some with even more vehemence than Harris, and in somewhat different but largely integration-compatible terms.

Bazerman, in particular, deserves more respect from Harris. I'm saying this in part because Bazerman's work occupies one of the crevices I have read deeply in, rhetoric of science, and because Harris first sneers at rhetoric of science, and second uses Bazerman (whom he clearly can't have read with any attitude but hostility, if indeed he read more than a summary) as the metonymic target of his sneer, "standing for" the entire discipline, rhetoric of science. Rhetoric of science is, quite simply, a field that investigates how scientific discourse does its work, particularly how it does the work of aggregation and expansion and consolidation – that is, the sort of work supercategories do; and I don't know a single telementationist among its scholars. Harris devotes one paragraph to eliminating rhetoric of science from consideration, effectively to license his own recurrent use of the word "rhetoric" about scientific language practices, while ignoring research specifically into the rhetoric of scientific language practices (Harris cites only Bazerman in this dismissal, and Steve Fuller, who is a critic of the field, not a practitioner).

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Should you buy and read the book? Of course. Harris is always a fun and profitable read, partly because of the wide learning, partly because of the grumpiness, and mostly because he is, in the main, right: Language is a dynamic set of practices that blur into visual and gestural and tactile practices and other acoustic practices (as, ahem, rhetoricians have always insisted), into which context penetrates inseparably (as, again, rhetoricians insist), for the ongoing, mutual, negotiative accommodation of human activities – not a fixed code for pure transference of mental contents. This particular book brings these insights to bear on the most powerful set of language practices in contemporary society, in a demythologizing argument that humbles those practices, downgrading their claims from the revelation of the ultimate fabric of the universe and all its pieces, to the projection of human concerns, plans, and limits onto the phenomenal world.

Harris's case for an integrationist theory of scientific language effectively comes down to a view of science known as instrumentalism, the view that theories do not "reveal to us the real nature of things" but "only … co-ordinate the physical laws with which experiment makes us acquainted" (Poincaré 1952:211). Theories are instruments, like beakers and telescopes, and therefore, like beakers and telescopes, are not "true" or "false," just more or less convenient for certain tasks; when they are inconvenient, they are refashioned or replaced. The major difference with Harris is that his instrumentalism doesn't stop with the theories but extends to the higher-order instruments used to build those theories, languages.

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