

Reply to Menger and Haim

SIR — In the 10 years or so I have done editorial work for the *Journal of the American Chemical Society (JACS)*, I have from time to time incurred the anger of authors whose papers I felt it my duty to reject, both with and without advice from referees. One colleague threatened a lawsuit, one accused me of forging a referee report, and I was once or twice treated to a selection of telephoned obscenities. The Commentary by F. M. Menger and A. Haim (*Nature* 359, 666; 1992) represents the first case I know of in which the authors published a paper about not being able to publish their papers in *JACS* with sufficient ease.

Menger and Haim's article breaks new ground in other ways and introduces a new genre of scientific writing. This new genre can be called "post-modern scientific writing," as distinct from "naïve scientific writing", with which readers of other scientific journals and other authors are more familiar. In one example of this innovative mode, Menger and Haim present the following. "Schowen wrote: 'I don't think this paper is any good. Breslow and Huang never said they measured a negative rate'. It was difficult to understand the reply as Breslow and Huang had published an entire list of negative rate constants."

The naïve reader envisions Schowen aggressively rejecting a paper on a subject with which he is unfamiliar, perhaps leading to "considerable anguish" on the part of its author. Now I extend the Menger–Haim quotation from my letter by 14 words: "I don't think this paper is any good. Breslow and Huang never said they measured a negative rate, only that the rate decreased with imidazole concentration. They calculated a negative rate constant." With this new information, the author's anguish becomes itself "difficult to understand". Indeed, in the normative genre of scientific writing and reading, the attenuation of this quotation by Menger and Haim, combined with their interpretative sentence, might be taken as a "truly gross" misrepresentation. But this view fails to take account of Menger and Haim's post-modern style. Their quotation of my letter places the word *rate* directly before the quotation mark with no intervening punctuation. Under post-modern close analysis, the reader is alerted that the authors may have information that would reverse the reader's understanding if it should ever come to light.

With the post-modern scientific style, the reader must be deeply cautious about the surface text, and must probe analytically the grammar, syntax, punc-

tuation and every other aspect of form, always considering that other, deep readings may correspond to what the naïve reader would crudely describe as the 'truth'. Most important, much vital information may not be made available to the reader. For example, consider as a deep text that *JACS* rejected papers by Menger and Haim not merely because I was "defensive and evasive", but because the papers by Menger and Haim were frivolous, erroneous or so turgid as to cause more confusion than enlightenment. A naïve text might describe the laborious and public-spirited efforts of good-willed referees to help Menger and Haim formulate logical, honest arguments. These referees now find their confidential reports parodied by appallingly selective quotation in high post-modern style. A disadvantage of the naïve mode for Menger and Haim would have been a loss of self-serving ethical pretence, low drama, a sense of intrigue and entertainment value.

Naïve readers should note that Menger and Haim make much of my request that the *Journal of Organic Chemistry (JOC)* retract Menger's publication (56, 6251; 1991). I now see my action as arising from my own failure to appreciate the post-modern approach. I objected (making clear to the *JOC* editors that I was writing as a reader of *JOC* and not as an editor of *JACS*) to several aspects of the paper, but chiefly to Menger's Fig. 1 and the associated text. The caption of this figure reads (I naively cite its entirety): "Figure 1. The Anslyn–Breslow mechanism utilizing the five rate constants in eq 1 of their article² (and given in eq 1 of the present article). A steady-state treatment of intermediate I generates these equations." (The superscript '2' refers to E. Anslyn and R. Breslow, *J. Am. chem. Soc.* 111, 4473; 1989.)

The mechanism in the figure violates the principle of microscopic reversibility, and Menger's paper attributes the violation to Anslyn and Breslow. Because the contents of the figure do not appear in Anslyn and Breslow and the verbal discussion in Anslyn and Breslow's paper explicitly excludes such a mechanism, naïve readers tend to see the figure and text as a misrepresentation of the content of the Anslyn–Breslow paper. This would be wrong: the close textual analysis required by the post-modern mode shows that the superscript '2' of the caption is not attached to the names "Anslyn–Breslow" nor to the word "mechanism" but rather to the word "article". Only a naïve reader will thus proceed incautiously and incorrectly to the conclusion that the material shown in

the figure is claimed actually to be present in the cited article.

Nature's launching of the post-modern genre of scientific writing is probably irreversible, so the attendant requirement for close analysis by scientific readers is of some concern. Chemists must already try to maintain currency in fields from materials science to molecular biology, and will now have to add to their obligations developments in the theory of literary criticism. Still worse will be the problem, for those journals that adhere to the naïve mode, of trying to ascertain the accuracy of submissions. Naïve 'accuracy' poses no problem for *Nature*, as the Menger–Haim publication illustrates. For the benefit of other journals, however, it might be hoped that *Nature*, which I believe has experience in the use of magicians to validate its papers, could make services in this category broadly available.

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Germane reviews

SIR — Michael Ignatius's concerns¹ betray, at best, an excessively narrow view of the place of review articles in modern interdisciplinary research and, at worst, a fundamental misunderstanding of the methods employed in a machine literature search.

The salient question about his example — plasticity in the developing visual system — is not how many thousands of articles and reviews exist collectively concerning each individual subtopic of this topic, but how many reviews exist that are germane to the specific combination of subtopics in it. In using the NLM program *Grateful Med* to search Medline for the period 1986–92, I found 10,140 articles under "vision" of which 916 were reviews, and 1,479 articles under "neuronal plasticity" of which 320 were reviews. But only 7 review articles that contained both terms were retrieved^{2–8}, and even fewer were identified when more terms were included in the search parameters.

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