Writing Across the Disciplines: Respecting the Untranslatable

Elements that identify a culture include a common language and literature, a common mode of discourse, a particular stage of advancement in civilization, and behavior typical of a group. If we consider the disciplines as "cultures," with their own language, literature, behavior, and mode of discourse, then more and more the need of educated readers is to read across disciplines or multiculturally. This need implies a parallel decision that we meet the professional challenge of dealing with the writing of an unfamiliar discipline either by recreating it for use by another audience or by letting it stand as necessarily--and profitably--untranslatable.

One of my major tenets is that unfamiliarity in a discourse does not imply a barrier. On the contrary. Respect for the structure and perspective of an unfamiliar discourse as for the literature of an unfamiliar culture can bring readers nearer to a world view other than their own thereby extending opportunities for interdisciplinary thinking and imaginative frontiers. Perhaps we can find an analogy for this prodigious task in multicultural literary works, i.e. works written in a single language, say English, by people in many parts of the globe who, though themselves speakers of a common language, are tied to a variety of cultures. The world is in the midst of an English explosion, and works in English are read by a huge variety of people in small and large culturally disparate pockets of English all over the globe. Similarly, we are faced with an information explosion that requires presenting or re-presenting articles for a range of readers, that is, readers able to “read” the material but who cannot decode all of it because they are outsiders to a text that is culture-bound to a discipline not within their own training. I am suggesting that the predicament of a New Yorker or an Atlantan reading Soyinka is not entirely different from that of a New Jersey architect reading the *New England Journal of Medicine*. In

an article in *PMLA* called “Intelligibility and Meaningfulness in Multicultural Literature in English” Reed Way Dasenbrock discusses culture as context: “To be understood,” he says, “any text must be read in the light of prior knowledge, background information, expectations about genre and about sequence--all the aspects often considered together as ‘context’” (10). Yet he goes on to say that if we construe the role of critics as providers of the culture to outsiders, we have seriously compromised the critics' role, for example, to that of explaining Yoruba culture to readers of Soyinka when in fact the entire work has as one of its efforts to “explain” Yoruba culture (12). Instead, the critic can point out where unintelligibility in a text actually assists the reader to a fuller grasp of the meaning of the tent, i.e. confronting those forms and words and thought structures that are untranslatable and must so stand as a kind of zero base in the original. And here is his important contribution to our issue today: “If everything is translated into our terms and made readily intelligible,” he says, “then our cultural categories will be reinforced, not challenged” (14).

I am proposing in this paper that the ideal of "translating" from one discipline into another would serve only to reinforce the biases and boundaries of our thinking and limit interdisciplinary imagination. That does not mean that the musician must now wade through a physicist's report to find out about acoustics or that an architect with diabetes must study the *New England Journal of Medicine* for the latest news of his disease. Rather it calls into question the notion of “translation” as a routinely acceptable metaphor. Perhaps the writer shifts into a related language, as music modulates from one key to another related one. When members of one discipline become readers in another, their task changes by degree rather than by substance, since they assume the task of any hard-working reader who, in order to survive as reader, deals with the unintelligible by forcing intelligibility out of it.

This compulsion of the reader introduces the preliminary question of the pragmatic differences of discourse. I will follow Kinneavy's division into expressive, referential, literary, and persuasive as outlined in his book, *A Theory of Discourse* (61). Since the information explosion is not concerned with expressive or literary discourse I eliminate these from my discussion along with most propagandistic or persuasive discourse, such as political, religious, and legal discourse which have persuasion as their prime aim.

That leaves us with referential discourse. Referential discourse clearly presents much overlap and often hints of expressiveness and persuasion, and, happily, even of literary aspirations in the case of some writers.

In referential discourse, reference to subject matter is primary (Kinneavy 77). Discourse in the natural sciences has for its purpose the description of what Kinneavy calls "a limited range of realities." Readers of a scientific communication can replicate what others have enacted, can abstract a principle, or, without repeating the experiment themselves, move on to work that depends on the previous work for its validity, calling on the literature of the "culture" of science, i.e., other incidences of this discourse that came before it. Kinneavy says, "The communication of scientific knowledge always involves description that is a mimetic reproduction of facts in thought, the object of which is to replace and save the trouble of new experience. That is all that natural laws are." So science not only attempts to represent the universe (myth, folklore, legend do the same) but attempts to demonstrate the validity of such a representation as well (78) and embody the results in its literature. In addition to scientific discourse, referential discourse includes exploratory discourse (social science, criticism, i.e. posing questions and finding solutions, dialectic), and informative discourse (reports, news articles, textbooks etc.). But what about the enigmatic forms of referential discourse? Enigmatic, that is, to outsiders. J. Robert

Oppenheimer had said that in his lifetime it had become almost impossible to translate sceintific language into conventional language (Kinneavy 74). But science is not the only highly technical discourse. Consider music theory. This discourse appears to lack referentiality; to many outsiders music is as insubstantial a reality as one can meet. Following Kinneavy, I find music discourse perplexing since, as in certain forms of scientific discourse, I have trouble "referring" to its referentiality. Its emphasis on structural relationships creates a discourse that is foreign to me, as foreign as physics. It is rhetorical in the sense that any critical writing is rhetorical and aims to persuade. Surely it is not emotive in the sense that poetry is emotive, yet, like literary criticism, it often becomes literary. Yet it is of use to outsiders precisely because of its structural relationships. Musician colleagues explain that in the discourse of musical theory, structural relationships and internal coherence, which appear to have their own referentiality, have implications for critics and structural theorists in many fields of discourse.

Discourse in the social sciences is split between those who write scientifically, like natural scientists (psychologists, say), and those who write exploratively, like literary critics (cultural anthropologists) (Faigley and Hansen 140). Medical discourse introduces us still more sharply to areas of overlap. For medicine brings science into the teeth of social concern. Just as Keats's bird is different from an ornithologist's bird, so a medical problem takes on a different reality depending on whether a humanistic or a scientific discourse represents it.

Assuming that certain scientific documents, music theory documents, and other highly technical forms of discourse are virtually "untranslatable," we question those remaining forms of discourse which are more accessible to educated readers, but which assume unfamiliar forms and perspectives. For audience is characterized by the conventions of the discourse. According to Arthur E. Walzer's examination of audience in the May 1985 issue of *CCC*, the same readers

become members of different audiences (155).

Let us examine several articles in the *New England Journal of Medicine*. The end of this referential writing is to increase scientific knowledge, yet several of the articles also have immediate social implications. All articles within the *Journal* follow a prescribed format, regardless of how technical the writing, how pure the science, *or* how socially relevant the proposal. Every article has an abstract. The article itself states the problem, the methods, the results in quantifiable terms, and a discussion of results. The language is formal, the problem discussed in the third person passive voice, but the point of view and mode shift to an active "we" usually in the Methods section and in the final Discussion section. Results occasionally revert to "we" but generally are delivered in a third person passive voice. Diction is conventional or technical, depending on the subject. Tables appear chiefly in the Results section. Judgment is withheld except where measurements indicate a trend of sociological importance, such as in an article on teen-age suicide or another on sexually transmitted diseases in victims of sexual assault. These, though they manifest the same format, often appear in a section headed "Current Concepts." In an article on the "Relation of Private or Clinic Care to the Caesarean Birth Rate" (de Regt) the format for the article, though readable by someone--me--untrained in medicine, is precisely the same as that for a virtually unreadable, highly technical article called "Immunity to Malaria and Naturally Acquired Antibodies to the Circumsporozoite Protein of Plasmodium Falciparum" (Hoffman). Here is the conclusion of the article on the increase of Casesarean birth rate: "Continuing medical education courses on the newer techniques, in-hospital training protocols, and peer review of diagnosis and management in each case of Caesarean birth may contribute to a reduction in the disparity between the rates of surgery for private and clinic patients. In addition, practicing physicians need more training in legal

medicine. Until private physicians' fears are allayed through a more thorough understanding of professional liability or through legal reform, higher rates of cesarean delivery, with a concomitant increase in health care costs, may be a result of the malpractice crisis."

The conclusion of the article on malaria, however, is "culture-bound," so dependent on specialized vocabulary and an understanding of antibody systems as to remove it from the domain of a general audience. Yet the structure of presentation is virtually identical, reflecting in both instances the scientific convention of seeing reality by way of problem, methods, results, and discussion. Can the scientist learn flexibility of form from the humanist? Exploration of alternatives from the philosopher? What about self-expression in science? What about logic? Is science as monologic as it appears? Why not build in dialog?

A writer redoing the cesarean article, say for the *New York Times Magazine*, or *Newsweek*, has little more to do than round off numbers (instead of "15.2%" say "more than 15% of births are cesarean"; "almost 66,000 obstetrical cases were reviewed"), highlight key methods, and state the results of the tables and diagrams in prose, using vectors, verbs such as *rose*, *declined*, *leveled off*, etc. The final paragraph, however, may lead the popular writer into an area that clearly distinguishes that writing from what we call strictly scientific writing.

Although the authors of the original *Journal* article appear to have an agenda, implicit in their final reference to the "malpractice crisis," the persuasive elements are minimal. The popularizer however often reverts to his own agenda, capitalizing on the merest suggestions of persuasion in the original. In a non-scientific presentation (except for meticulous popular translations such as appear in *Scientific American*, read by humanists as well as by scientists who seek to broaden their understanding of other scientific disciplines), the members of the audience now are struck by social comment, political innuendo, exposé and attack on both the legal and

the obstetrical establishment. *Newsweek*-type hype appears to catch the reader's attention, phrases like “the surging Cesarean birth rate” and “women in droves being delivered by cesarean section.” Although *Newsweek* is an extreme perversion, the tendency of “translators” is to translate science into a social agenda. In the same way, since no apparent social agenda exists, there is no practical reason why a writer would seek to “translate” the malaria article for general consumption, other than to summarize the results into outcomes about the protective immunity induced by antibodies to the circumsporozoite protein. For, who is the audience? Travel agents? Victims of malaria?

Here's the point. Just as the scientist might extend his/her world view by adding interdisciplinary elements of self-expression, aesthetics, and philosophy, so non-scientific readers ought to come away with the same “referential” experience as readers of the original article in the *New England Journal*. If persuasion takes over, then the reader is reinforcing those habitual prejudices that assault her in advertising, editorials, and other forms of propaganda. As teachers of writing, we need to oversee a more faithful rendering of readable scientific articles into still more readable pieces for popular consumption which, nonetheless, convey the procedures and methods of science *without* the expectation that they will be replicated. An overly simplified, agenda-loaded base, even when free of the exaggerated language I have given you as hypothetical examples from *Newsweek*, does nothing to refresh the reader, to remind the reader that scientific writing offers another model of the universe, virtually stripped of hype and restricted to a statement of problem, methods, results, and discussion.

In the *Journal for the American Planning Association*, an article called "Conserving Rental Housing: A Policy Analysis" (Mayer 311) begins with a paragraph that summarizes the article; but even from the first, the tone and substance of the abstract differ from the treatment of

abstracts in the *New England Journal of Medicine*. The medical abstract is authoritative. It speaks as if it *were* the article, but in shortened form. There is no editorial intervention. In the Planning journal, on the contrary, an editorial voice appears. Each abstract contains the phrase, "this article," and then proceeds to interpret what "this article" does, i.e. "This article reviews, analyzes, identifies problems, focuses on issues, examines the link. . ., evaluates, recommends. . ." etc. The voice in the *Planning* article appears itself to become the agent of change whereas the voice in the pure science article reports on changes that have occurred in the laboratory or under controlled circumstances and authoritatively brings to the attention of a culture of readers what has taken place and been noted. Kinneavy says, "scientific writing is thing-oriented; social science writing is person-oriented" (88). Informative social science writing asks a question, then asserts an answer, often without the rigor of proof we associate with science.

The case study is often introduced as evidence, but case studies come in several varieties. One is the impressionistic case study. The *Planning* journal gives a run-down in vague terms of the Clairol company's contributions to Stamford, Connecticut's fair housing practices and then moves to other companies with another set of terms. But case studies also can be written scientifically. Freud's famous case studies allowed him to achieve the scientific stance and voice he craved. Like Marx and Darwin in the 19th Century, he held up science as his ideal. Today we tend to think that a lucid style makes a scientist suspect. That was not true in the 19th century. Darwin, Marx, Freud wrote lucidly. Marx saw history as science. Darwin had enormous respect for science. Freud was anxious to be known as a scientist. But in those days geology, biology, psychology required skill in narration. Let us not forget that although Freud never won a Nobel prize in science, he did win the Goethe prize for literature. His theories were admired by philosophers and literary people before they were embraced by scientists. The

reading public had not yet become specialized.

The *New England Journal of Medicine* also features case studies. Here is the beginning of Case #36-1986 (Munsat 694). "A 29-year-old woman was admitted to the hospital because of weakness of proximal muscles. She was born of a normal gestation and delivery. She rolled over and sat up at normal times but was slightly slow to walk. Throughout her early childhood she had short Achilles tendons, particularly on the left side; she tended to run on her toes and could not stand with either foot flat against the ground. Persistent plantar flexion made it difficult for her to keep her feet in the stirrups when she was riding a horse," and so forth. Notice that despite terms like *Achilles tendon* and *plantar flexion*, this comes close to novelistic style, and in the same sense Freud's emphasis on autobiography in *The Interpretation of Dreams* is novelistic or William James's case studies in *Varieties of Religious Experience* are novelistic.

But we do not need to revert to the 19th century. The writings of Oliver Sacks have become best sellers: *The Man Who Mistook his Wife for a Hat* and his articles in the *New York Review of Books* are widely read. Here, a noted neurologist writes for an educated audience a kind of case history but quite different from what we have just read about the 29-year-old woman in the records of the Massachusetts General Hospital. But despite the literary "refinements" of his writing, he rarely sacrifices the reader's respect for scientific obsessiveness. What are his strategies as a "translator" of material that is, as scientific writing, expected to be culture bound? How has he achieved such wide appeal?

In his article called "The President's Speech," Sacks takes us into an aphasia ward which has just responded with roars of laughter as the President begins to speak. He argues that aphasiacs, who are incapable of understanding words, outdo their normal counterparts in perceiving tone and intent through non-verbal cues. He says, "We recognize this with dogs, and

often use them for this purpose--to pick up falsehood, or malice, or equivocal intentions, to tell us who can be trusted, who is integral, who makes sense--when we, so susceptible to words, cannot trust our own instincts."

His article on the idiot savant twins, John and Michael, (Sacks, "Twins") explains in scientific terms that one theory to their prodigious calendrical stunts is to make use of "an unconscious calendrical algorithm that enabled them to say at once on what day of the week a date far in the past or future would fall." But he adds a literary dimension when he describes them as a "sort of grotesque Tweedledee and Tweedledum," and he carries the metaphor as far as it will go, in this case calling them "mirror images, identical in face, in body movements. . . they are undersized, with disturbing disproportions in head and hands, high-arched palates, high-arched feet, monotonous squeaky voices, a variety of peculiar tics and mannerisms, and a very high, degenerative myopia, requiring glasses so thick that their eyes seem distorted, giving them the appearance of absurd little professors, peering and pointing, with a misplaced, obsessed, and absurd concentration."

Some of his strategies as "translator" are already apparent to us: the personal evaluation of neurological data as in "disturbing" disproportions, "monotonous" and "squeaky" voices, and his own strong, moralistic first person voice throughout his work. His use of metaphor is a hallmark of literary, even expressive, discourse. How vivid is his analogy between the failure to deceive aphasiacs and the failure to deceive dogs. How picturesque is the grotesque Tweedledum and Tweedledee and the "absurd little professors." His metaphors not only serve to explain but allow an intensification of feeling by poetic means that is unacceptable in the obsessive detail of the scientific case study, yet appears to derive seamlessly from such detail as observed by the writer. As you may remember, the twins are separated "for their own good"

according to the sociological and medical jargon of the day. Sacks reveals an agenda in many of his essays. Here he says, "deprived of their numerical 'communion' with each other, and of time and opportunity for any 'contemplation' or 'communion' at all. . .they seem to have lost their strange numerical power, and with this the chief joy and sense of their lives."

I submit that what Sacks has written is not a popularization of a scientific case study; he has claimed the culture of science and moved with it into a new interpretative, humanistic essay. Part of its appeal, I believe, is in the interdisciplinary novelty of a neurological essay. Translation theory tells us there are two kinds of translation: the instrumental, which is a restatement of a text for the transmission of data, and the hermeneutic, which is an interpretative recreation of a text. Oliver Sacks has merged them, for the educated reader clearly has a right to both. Still, not all of us are essaying neurologists or some other wonderful combination of training and talent. But as teachers of writing we have the burden of encouraging our best undergraduates as comparatists, urging them into other unfamiliar thought-structuring disciplines and cultures.

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