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ABSTRACT

In order to explore the rhetorical components of instruction at the undergraduate level and determine whether differences and similarities exist among the discourse fields represented by instructors in the kind of talk which they regard as desirable in their classroom, formal interviews were conducted with teaching faculty representing 15 different fields at a small midwestern university. The disciplines represented included art, chemistry, communication, economics, English, music, physics, psychology, and theatre. Thirteen of the faculty members had completed a speaking and listening across disciplines workshop, and all were individuals who incorporated student speaking liberally in their courses. Because each discipline was represented by only one respondent, no conclusions about a specific field should be drawn. However, with a broad spectrum of fields represented, useful similarities and differences can be identified, and four conclusions suggest themselves as guides to the disciplinary fields: (1) some distinctions in kinds of talk regarded as appropriate in undergraduate classrooms are seen; (2) in developing programs of speaking and learning across disciplines, a proviso should be introduced to the effect that talk is not the same in every classroom; (3) a discrete "discourse field" which could exist may be labeled "academic," that students should get used to; and (4) the less valued kinds of talk relating common experiences should be built upon rather than discounted. (Fifteen references are attached.)  
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## DISCOURSE FIELDS ACROSS THE CURRICULUM

Speaking and Listening Across Disciplines is fresh enough upon the academic scene that its roots and implications are still in the process of vigorous exploration (Roberts, 1983; Steinfatt, 1986; Weiss, 1986). This paper constitutes an effort to contribute to that exploration by examining the perceptions of teaching colleagues "in the disciplines" who are consciously employing speaking and listening components in their courses.

Primarily, we wanted to know whether professors we interviewed felt that their overt objectives might include helping their students to "talk like an economist" or "like a philosopher" or "like a scientist." What did they see, if anything, as the special rhetorical characteristics of their disciplines? Are there, indeed, many "discourse fields" which must be taken into account when we choose to incorporate speaking and listening elements throughout the curriculum?

A number of the contemporary intellectual influences on speaking and listening across disciplines have contributed toward making such an inquiry especially significant. This paper will first survey some of those influences and then report the results of the specific inquiry we pursued.

## Contemporary Influences Upon SALAD

The basic concept for speaking and listening across disciplines, like that for writing across the curriculum and related movements, is certainly simple enough. When students need practice in communicating orally, why not let them do it in the locations where they are doing it anyway, the classes they take throughout the institution? In any effort to communicate, substantial elements of meaning are after all drawn from context in any event. Working across disciplines puts speaking and listening into their natural settings. The only difficult issue involved in the concept is whether the instructors in these "other" disciplines will be competent, sensitive, or motivated enough to help their students speak and listen effectively in their courses.

At least three trends in speech communication and the intellectual world generally have now begun to put in a new perspective the relationship between the practice of communication and other academic disciplines.

(1) A substantial constructionist movement has arisen to undermine foundationalism even in the hard sciences and contend that meanings are not discovered, but rather created. Scholars as diverse as Nietzsche, Heidegger, Dewey, Wittgenstein, Foucault, and Derrida have added to the impulse in substantial ways. Add the currently popular views of Rorty and MacIntyre to the heavy lucubrations of Habermas and Gadamer and you have an intellectual movement which has to be

taken seriously. Furthermore, the constructionist movement has taken a rhetorical turn as scholars suggest that the social construction of reality is strongly linguistic and rhetorical. "Rhetoric as epistemic" claims to varying degrees that rhetoric is itself constitutive, and thus knowledge is actually "created" through rhetorical activity. If rhetoric contributes to the truths which scholars in various disciplines promulgate, then attention to its impact may well become useful to all of them (Scott, 1967; Weiss, 1979; Leff, 1978; Bruffee (1986)).

(2) In the bouncy subdiscipline of argumentation, Chaim Perelman and Stephen Toulmin became instantly popular when they demonstrated the value of looking at argument as it is actually practiced in the law, in ethical decision making, and elsewhere. Toulmin especially insists that there are in effect "many logics" and that arguments are frequently field dependent. The search for and definition of argument fields has been a popular sport in argumentation theorizing for the past decade. If what is considered reasonable proof also varies from discipline to discipline, then insofar as academic communication consists of reasoned discourse, the particular nature of the argumentation in any given field (as distinguished from that in other fields) will require attention by its members (Toulmin, 1958; Wenzel, 1982; Rieke a. J Sillars, 1984).

(3) A relative newcomer to the academic world, the "rhetoric of inquiry" draws its strength from scholars who have begun to look upon their disciplines as consisting of a

fabric of agreements reached within a community and produced by communication and even persuasion amongst them. Books and articles with titles such as the rhetoric of economics, the rhetoric of history, and the rhetoric of sociology have appeared in rapid success, with more on the way. A conference on the rhetoric of inquiry drew respectable scholars from a wide variety of fields and received broad national attention recently. This movement coming at us from the other side of the fence also leads us to ask whether the rhetorical impulse has perhaps become manifest enough to teachers to affect the way they approach speaking and listening activities within their classrooms (Geertz, 1983; McCloskey, 1985; Nelson and Megill, 1986).

These three intersecting thrusts will tell those who are concerned with any form of communication across the curriculum that training professionals in academic institutions to handle communication aspects of student participation goes well beyond telling them what we know about communication. It means substantially sharing the task of recognizing the ways in which communities are formed and knowledge shared in all the diverse fields of learning. It is necessary to know what the academic specialists know about the rhetorical aspects of their own disciplines.

#### Procedure

The present inquiry is directed toward exploring the rhetorical components of instruction in a wide variety of

academic disciplines at the undergraduate level. Do differences and similarities exist among the discourse fields represented by instructors in these disciplines as represented in the kind of talk which they regard as desirable in their classrooms?

To gather data for this investigation, formal interviews were conducted during the summer and fall of 1987 with teaching faculty representing 15 different fields at a small midwestern university. The interviews were conducted, transcribed and analyzed by the author. The disciplines represented included the following: art, biology, chemistry, communication, economics, English, history, mathematics, music, philosophy, physics, political science, psychology, sociology and theatre. Thirteen of the faculty members had completed a speaking and listening across disciplines workshop and all of them were individuals who incorporated student speaking liberally in their courses.

Each person was instructed to answer the questions posed as they would apply to advanced courses where students would be expected to have had preliminary work in the subject and to be dealing with fundamental disciplinary concepts. The questions were open-ended, follow-up questions were employed in every interview, and the format was flexible enough to allow respondents to follow relevant trains of thought.

The questions themselves were derived from rhetoric and argumentation theories in order to discover the kinds of persuasion and proof which was deemed appropriate in each case. Among the key questions which were asked of every

respondent were these:

Is it an aim of your advanced classes to have a student talk like an artist, a biologist, etc.?

Is it necessary for the student to possess a specialized vocabulary?

What constitutes good evidence or support for ideas presented in your class?

What kinds of thinking do you approve (and disapprove) in your class?

Do you provide students with set formats for reports or discussions?

How are conflicts to be resolved in your class discussions?

Some other questions, such as "To whom are students supposed to direct their talk?" did not provide useful information and are not analyzed below.

Other limitations should be noted. For instance, because each discipline is represented by only one respondent, no conclusions about a specified field can be drawn. Any idiosyncracies could as easily be attributed to the instructor as to the discipline, or to scholarly communities cutting across disciplinary lines. Still, it was felt that when a broad spectrum of fields was represented, useful similarities and differences could be identified as being worth noting across the curriculum.

Under the condition of a relatively small number of interviews, it is also evident that statistical analysis would not be appropriate. Conclusions are based upon either



distinctive or recurrent themes in the responses.

Finally, it is possible that disciplinary uniqueness is more identifiable at the graduate or professional level than at the undergraduate, making conclusions from these interviews more suggestive than precise.

### Acceptance or Denial

The first dichotomy discernible in interview responses is between those instructors who explicitly agree that they are encouraging a certain kind of disciplinary talk and those who to varying degrees deny that claim.

When disciplinary "ways of thinking" are seen to exist, they appear to represent conceptual schemes. They are referred to as "sociological concepts and ways of thinking," as "having historical insight," as being "familiar with concepts" (political science), as having to do "with visual issues" (art), or "we're dealing with the way literature works" (English). Or more generally, "It's very important, talking like a chemist."

Degrees of denial are represented by straightforward assertions such as that talking like a zoologist means "talking like an intelligent person would talk in any field." This denial is also reflected by the economist saying "we're more interested in analytical skills than jargon" or a mathematician asking merely for "a style that doesn't ramble." The philosopher would encourage students to speak "in the way in which Socrates spoke." Should students talk

like a psychologist? "Not really. I would like them to think like a scientist."

No doubt differences in the interpretation of the question led to responses ranging from a blunt "yes" to a blunt "no," but these answers may also indicate a substantial difference in perceptions about the uniqueness of the talk in various disciplines or by various individuals.

Most instructors, of course, admit the presence of a specialized vocabulary (or "jargon"), but again there is some resistance to regarding it as necessary.

For some respondents, knowledge of terminology is absolutely necessary. "That is certainly true" (Physics); "I think that they need necessarily to know the basic terms" (art); or "Yes, I would expect them to be able to distinguish between structural factors and individual factors" (sociology). A communication professor insists that "terminology is an interesting way to learn to think about that subject matter." And an economist uses this image: "We try to get them to use the correct terminology, which is a sort of initiation into the fraternity of economists."

Although terminology is useful to specialists, it is not always regarded as necessary for academic talk, some believe. "If I'm speaking as a chemist I will really be saying the same thing as I would to you, except that I would be using words that the layman may not be familiar with. But the method seems to me to be not that much different."

And some seem rather proud of not using technical terminology. Do students need a specialized vocabulary?

"Not really. No. Not in history," and "I think with literature the language is less unusual." Even more bluntly, "Philosophy can be done with ordinary words. It doesn't require a technical vocabulary."

#### Hypothesis Testing or Multiple Perspectives

The two most strikingly disparate postures with regard to the objectives of learning in various disciplines are (1) knowledge seen as an answer or hypothesis which can be confirmed or rejected and (2) knowledge seen as recognition of a relatively wide range of perspectives or viewpoints. Epistemologically, this would appear to be one of the most fundamental splits in the academic world.

This position may be stated quite directly: "In a physics course there isn't really that much flexibility. You either get it right or you don't." In zoology, to decide what interpretation is correct, in case of doubt you "do another experiment." We always think in terms of "hypothesis testing."

In the same vein, in mathematics "we like to think of ourselves as doing more than proving a proposition . . . In some sense we like to think of it as an absolute proof, although it's not. We have our basic axioms we accept on faith." Still, deniability is the test of a theorem. "To prove that something is not true, you find one example that isn't satisfied."

Hypothesis testing is the key to chemistry, also. If

things don't go as you thought, "you may want to change your hypothesis."

"A philosophical thesis has to hold across the board," it is asserted, "in any and all possible cases." Therefore, "if someone can think of a possible or actual case that the thesis can't account for or is incompatible with, that's an important objection. It doesn't mean repudiating a thesis, but it may well mean modifying it." In these cases the modified hypothesis is closer to a true position.

The ideal of the uniquely testable single hypothesis is just as flamboyantly rejected by other disciplines or instructors, who subscribe to a vision of multiple perspectives as appropriate knowledge.

In literature, for instance, "it's not necessary to reconcile different ideas and different opinions. There are often multiple interpretations, and usually the interpretations are not conflicting. They're viewing it from different angles."

In political science, should you try to resolve disagreements? "No. Hardly. It's nice to have these differences of opinion and bring them out for class discussion. It's possible to make an argument for a variety of views."

"It is important to recognize that many of the issues we are talking about are very complex, that there are frequently different perspectives, different approaches to studying these issues. There's not one answer" (sociology). And "what I try to teach in all my courses is to look at a

variety of perspectives" (communication).

As for resolving a difference, "It's not always resolved" (art). "Nine times out of ten the faculty will disagree on how we respond to a particular image, and students have to learn that's not an unusual event."

Halfway positions between hypothesis testing and multiple perspectives seem to be relatively difficult to articulate. "Nobody can be totally objective; that's one of the things that's reserved for the saints" (history). "I want them to express their own interpretations. I ask, however, that they be able to defend it." Objective truth apparently would be nice, but perhaps the best we can do is defend our positions.

#### Support and Evidence

Academic fields are to some extent characterized by the nature of the evidence they find acceptable. Moving across the curriculum, students are expected to adapt themselves, and be able to provide the forms of substantiation called for in the field they have entered. Interviews with their instructors in this study reveal a considerable diversity in these expectations. And in some cases signals will be switched so that what is acceptable in one class may not be called for in another.

Among the kinds of support or evidence mentioned by the our respondents are "studies," experimental data, documents and primary sources, imagination, personal experience, and

personal feelings.

Studies. Conclusions and data set forth in academic studies are highly valued in a some of the courses. The term "studies" refers in the scholarly world to a systematic and disciplined gathering and interpretation of objective data. "I would like them to be able to refer to studies that have been done" (sociology). How do you judge student evidence? "I want the opportunity to say, 'was the study done well?'" (psychology).

Experimental data. "In chemistry, experimental data, either your experimental data or that of someone else." In zoology,

They simply have to say so-and-so did this experiment, in this way, this is the hypothesis they were testing, these were the predictions of the hypothesis, these are the results they had, the results agree with the predictions.

In psychology, "the evidence comes from data" (some of which may presumably be found in "studies").

Primary sources. Primary sources are ordinarily documents of some kind, "simply speeches or documents or something of that sort" (history). In communication, "primary sources, although I feel that's difficult to begin with, and primary sources pulled from different perspectives."

Assigned texts. In classes studying literary or artistic works, the evidence comes from the work itself. "It's a challenge to find the kind of musical examples which are both representative of the opera as a whole, and also interesting" (music); "I always bring them back to the text"

(English); and, "Simply using evidence from the work that they are criticizing" (theatre).

Imagination. In some cases examples drawn from within the student are acceptable. In "thinking up counter-examples to a thesis," these can be "either actual cases or possibly even fantastic, yet logically conceivable cases" (philosophy). In mathematics, the counter example "oftentimes is a numerical example, just a number." And "when a student comes in with something imaginative, that really is a breath of fresh air" (English).

Personal Experience. The employment of personal experience as evidence in academic courses appears problematic. Where do students go wrong in their talk? "They try to talk about their personal experiences and then try to generalize to society" (economics). "I don't like evidence like 'my father did this, or my mother, or my dog'" (psychology). "I don't think examples from personal experience are valid as evidence," but "I like them to be able to take personal experiences and to see the concept operating" (sociology). They can use personal experience as starters and then move on: "If you open a story up they'll be getting beyond just their own experience, and then they can start dealing with things i., the story" (English).

Feelings. Personal or "gut" feelings likewise get mixed reviews. A direct dismissal would be, "No, gut feelings don't count for anything. We need to think scientifically" (psychology). Even in music there is this complaint:

I think the biggest block that I run into is the tendency of musicians to rely upon intuition and on feeling and on emotion rather than on objectively quantifiable information."

A mild acceptance would be put into these terms, "I wouldn't want to subjugate their own personal feelings right away" (art). A stronger approval is expressed in, "I think it is terribly important that they get emotionally involved" (theatre).

Where feelings are acceptable in class discussion, they tend to serve as leads to more objective considerations. "If they are angry, say, over Heirich Himmler's policy of genocide, I can sympathize with that, but they still should rise above the anger to deal with what the facts are and the proper interpretations are" (history). In political science, "I'll want them to label this as a gut feeling. . . . And if it's too egregious, I'll egregiously respond." In philosophy,

The way a person feels about something can often unearth some important feature of the thing that may otherwise remain hidden, and it may be important to talk about that feeling and see what sort of case can be made for a thesis that founds itself upon an appeal to that feature.

Or, "I think there's some encouragement of feelings, but I guess I always turn that back to what we're looking at" (communication).

The above classification is not exhaustive, but it illustrates the variety of acceptable evidence in classroom discussion. Seldom or never mentioned in these interviews were such other potential sources of evidence as intuition, revelation, authority, and traditional beliefs. Academic



discourse apparently has its limits as well as its manifest variety.

### Secondary Sources

An examination of the responses in these interviews reveals that a firm line which cuts across all the disciplines seems to exist between the secondary sources which it is appropriate for students to cite and those which are unacceptable.

First and foremost among the approved sources of information are the academic journals which carry the approved scholarship of the specialized disciplines.

A political scientist, for instance, will want students to employ the following:

Journal studies by reputable political scientists, government documents, congressional debates, historical frameworks, voting data, congressional indexes that have been used to measure behavior, all of these sorts of things.

For the economist, the evidence should come from "economics journals, economics books, federal documents such as hearings where economists testify, the Economic Report of the President, basically documents written by economists who specialize in that area."

Other responses reflect the strong dependence of journal articles from within the discipline: "The American Sociological Review, actually almost any social science journal"; "different articles by different art historians and critics"; "we have in chemistry a large number of journals

and books"; and (for theatre) "I like them to go to the major acknowledged authorities, to the publications, to the journals."

As is also reflected in these statements, books in the field are also important and respected sources of information.

A significant subcategory of books is textbooks. In some cases, reliance upon the textbook is almost complete. "I don't encourage them to go outside of the textbook for the exercises that I use during the week" (mathematics). With reference to a physics course, in response to whether supplemental readings were used, "No, pretty much out of the textbook." Where supplemental sources are used, textbooks are also mentioned: "Textbooks at an advanced level, at least portions of textbooks" (communication). Or textbooks are used as reference material. In chemistry, how do you know that the chemical reaction is relevant to your certain data? "Well, it's in Marshall and Boyd, the textbook."

While journal articles, books, and textbooks in the respective academic fields are treated with great respect, a striking consensus exists that journalistic and popular sources of information are to be assiduously avoided.

"I don't like it when they cite Readers' Digest or Time Magazine or Psychology Today or that sort of thing" (sociology).

"Readers' Digest (laugh). Those sources in general do not give actual experimental evidence" (chemistry). And similarly in psychology, "Popular sources aren't very good.

Psychology Today is getting better, but they don't provide the experimental, hard-nosed types of things." And in economics, "Newsweek, The Wall Street Journal, or the New York Times would be inappropriate references."

What about citations from popular sources, such as the Indianapolis Star? "Well that would be good for a laugh, wouldn't it?" The zoologist's complaint is that "there's lots of baggage they get from Walt Disney and Marlin Perkins."

The political scientist is asked if he likes popular sources to be used. "No. No. (Laugh.) No, I stay away from all that. I have a problem, too with the All THE PRESIDENTY'S MEN type of thing, the fly on the wall sort of observation, the semi-fiction." The historian uses as an example of a book which would better not have been written John Toland's book, INFAMY. "Toland is a good journalistic historian, but in this book he really becomes a cropper."

"Popular" and journalistic sources of information thus proved to be fertile grounds for laughter, while journal articles, books, and textbooks were treated with respect by these respondents.

#### Logic and Reasoning

The question of whether discourse fields at the undergraduate level may be identified according to the forms of logic they employ is not easily answered from the evidence of these interviews.

Faculty members for the most part seem to have a more or less generalized concept of logic which they assume is appropriate for all academic study. This logic is described in such terms as "logically organized in that someone listening can easily follow what the speaker is saying" (zoology). The history professor calls it "the good academic sense of logic: the conclusions follow from the argument, which follows in turn from premises that are acceptable, and also does not omit important and relevant information." And the mathematician declares, "Good old Aristotelian logic is basically what we use. It would be very much like another class."

To "think like a scientist" (psychology) is to "question theses, look for flaws, look for inconsistencies, try to put ideas together with the research data." Still, the perception that all good thinking is pretty much alike, even when designated as scientific, is reinforced by the chemist: "I'm not sure you can separate the two words 'thinking' and 'scientific.' Scientific thinking can be social science thinking or humanities thinking -- coherent and logical thinking."

When specific kinds of thinking are mentioned, they represent tendencies or preferences rather than exclusive domains. The economist talks about "an economic argument, such as explaining cause and effect." To the sociologist, "I like it when students are able to compare and contrast." Or, (theatre) "clearly this is not a field where deductive reasoning plays a large role; it's more inferential."

Looking at the other side of the coin, bad or unacceptable thinking, one is struck by the variety of responses expressed. Their range may, of course, be a product of the many possible interpretations of the word "thinking," so that they refer to more than logical reasoning. Still, these replies also at least suggest that some sorts of differences may exist among fields.

Not thinking at all is certainly a legitimate complaint. "They accept a theory without ever questioning it" (psychology); "were they just taking someone's interpretation without really questioning it?" (economics); "pat answers" (communication).

Undue rigidity is similar, "not being open to other points of view" (political science), as is borrowing ideas, "the kind of thinking we try to discourage is the type that is too derivative of other individuals" (art).

The history professor notes two bugaboos: (1) "there are many students who tend to have a conclusion and then want to do what they have to do to prove it" and (2) the other tendency you have to fight is just the opposite of that, "seeing nothing but trees and no forest."

One answer which might well be more field specific was an answer to this question, "What kinds of thinking would a zoologist frown upon?" An answer: "Mystical thinking, namely the sort of supernatural ideas for the origin of adaptations and the way ecosystems work."

These responses would indicate that in relation to thinking processes, substantial similarities in the

perception of reasoning are matched by extensive differences in expectations of students. They suggest a general academic sort of discourse as well as potential field variances.

### Discussion

This analysis of the interview responses of 15 faculty members in disparate fields reveals both similarities and differences among them. Conclusions about the rhetoric of individual disciplines cannot be made from these responses, but the factors which emerged are worth further exploration as guides to the many disciplinary fields which may exist. The following conclusions suggest themselves.

(1) Some clear distinctions in the kinds of talk regarded as appropriate in undergraduate classrooms are seen in terminology, conceptions of truth, acceptable evidence, employment of sources, and logical reasoning. These distinctions may incipiently represent early stages in the construction of knowledge communities or discourse fields in the various academic disciplines.

(2) In developing programs of Speaking and Listening Across Disciplines, an urgent proviso should no doubt be introduced to the effect that talk is not the same in every classroom. Students should perhaps be oriented more directly than they now are to the fact that talk which is acceptable in one discipline may be out of place or irrelevant in another. Teachers should be aware that their expectations may differ from those of instructors in other fields.

(3) On the other hand, there are also similarities worth exploring. The proposition may be defensible that there exists a discrete "discourse field" which may be labeled "academic," with a kind of academic talk all serious students should get used to and representing perhaps a view of reality with its own constraints and imperatives.

(4) The apparent rejection or denigration of all that is closest to the ordinary experience of students (and other individuals) may pose a problem worth further attention. The less valued kinds of talk are those based upon personal experience, feelings, and the common store of information circulated in the popular press. Are there ways in which the common experience may be built upon rather than discounted?

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