Language and Learning Across the Disciplines

A journal about interdisciplinarity, situated discourse communities and writing across the curriculum programs.
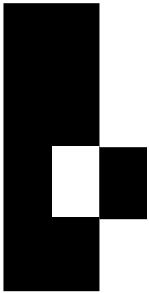
In This Issue...

Letter from the Editors

Sharon Quiroz
University of Michigan, Ann Arbor
Michael A. Pemberton
University of Illinois, Urbana-Champaign

This is the inaugural issue of *Language and Learning across the Disciplines*. It accomplishes our major goal: to be a forum for discussion and debate about issues of concern to all of us involved in the enterprise of helping both students and professionals to learn the languages they will need for lives as good people, speaking and writing well.

Yet, the creation of this journal has proven to be a daunting endeavor, all the more daunting because the conversations we have had (both between ourselves and with other colleagues) about the journal's shape, goals, and primary emphasis has illustrated the rather -- how shall we say -- *eclectic* opinions about what interdisciplinarity is, what WAC is, what discourse communities are, and even what counts as worthwhile, publishible research in each of these areas. Though we initially found this diversity quite troublesome as we tried to define our goals for the journal and identify its prospective audience, we gradually began to suspect that diversity and eclecticism were what the journal should actually be *about*..

As we see it, the current theoretical interest among scholars in our field in issues concerning interdisciplinarity, situated discourse communities, and writing across the curriculum programs indicates a pressing need for a forum in which these issues can be explored in detail and disseminated to scholars and others with similar interests. In that sense, we envision *LLAD* as a scholarly journal in the "traditional" sense.

But we also see a need to include work on classroom practice. Pedagogy is, ultimately, at the heart of much of what we do. When we question the ways in which students, members of diverse professions, and even we, ourselves, navigate the multitude of language contexts and communities that we encounter every day, we are, in fact, questioning

how we *learn*, *teach*, and *are taught* the rules of situational discourse. To ignore -- or even slight -- pedagogy in this journal seems, to us, to be both myopic and illogical. At first we thought of dividing the journal into sections on "theory" and "practice," but these categories aren't quite symmetrical and might have led some readers to misinterpret *LLAD*'s particular focus. To clarify: we are particularly interested in the implications of theory and research on practice (and vice versa) rather than in the errata and details of practice itself. In other words, we hope to see reflective thinking (and writing) about how language theory and/ or research results might impact the structure of a classroom, a course of study, or an entire program; we are less interested in seeing daily lesson plans.

The same general credo holds for issues of administrative practice. We see the need for much discussion of the social, intellectual and political locations of WAC programs, and descriptions of specific programs may contribute to that discussion, but we want to focus, for the most part, on the larger issues. How can theory inform program design, and how does it do so at particular institutions? What is the relationship between discourse practices and administrative concerns? We envision a journal with articles that explore the general issues of language use, administrative practices, classroom practices, curricula, learning theory, critical thinking, composition theory, and educational technology.

We see a need to invite in all those who participate in today's writing programs: those who teach, whether in the disciplines or in interdisciplinary studies, or who specialize in rhetoric and composition studies; those who conduct research in any of these areas; administrators, however they may fit the other descriptions; and students, too, especially undergraduates whose reflections on discipline-specific language practices may provide some useful insights and fresh perspectives.

We see the need to draw upon diverse critical stances including, but not limited to: ethnographic research, cognitive approaches, feminist and gender-based perspectives, rhetorical theory, genre theory, and cultural and international studies.

We worried, too, whether we were attempting too much for a fledgling journal, taking such a big bite out of such a huge pie that we would end up choking ourselves rather than savoring the taste. It could be easier to focus on specific issues traditionally thought of as WAC issues and the scholars who have been associated with that movement

for a long time. We think about the politics and wonder whether, in principle, it would be easier and better to have one journal for the most traditional approaches to disciplinary writing, and another dedicated to the most radical anti-disciplinary stances.

But what we want to read and think about must, in some way, take place in a language of public discourse. What that language is, or will be, is a question the journal will address. That is why we call it a "forum," and focus on the space in which we all come together. That is why the name is *Language and Learning across the Disciplines*. And that is why our editorial board is so extensive and diverse. We want manuscripts and readers from people like all those on the board, to join the debate as we have represented it by asking these specific speakers to take a leadership role in the project.
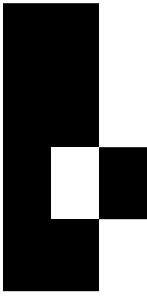
In this issue you will find Paul Prior's article "Girl Talk Tales, Causal Models, and the Dissertation: Exploring the Topical Contours of Context in Sociology Talk and Text," a piece of discourse analysis which studies the language(s) of a discipline, finding there much that the discipline has not said about itself, and that we would surely never know without disciplined inquiry.

You will find a written version of our favorite presentation at the Conference on College Composition and Communication in San Diego last March, Cheryl Geisler's "Literacy and Expertise in the Academy," a critique of modern schooling, as it prepares students to be producers and consumers in the culture of professionalism.

You will find Russell Durst's reflective investigation of students studying history, "Coming to Grips With Theory: College Students' Use of Theoretical Explanation in Writing About History."

You will find Art Young's plenary address to what may turn out to have been the first ever national "Writing Across the Curriculum" Conference in Charleston (February 18-19, 1993). We name it last because it seems to bring us back to the goals we named at the outset. In his address, titled here, "The Wonder of Writing Across the Curriculum," Art told the audience that he uses writing-to-learn in the classes he teaches because that keeps him honest, makes him, he believes, a better person. Maybe even a good person, we suggest, speaking and listening well.

And speaking of good people, we'd like to thank our willing and able editorial board. We chose them so as to include the many visions of writing, teaching, and learning the languages of our time. That, we think, is an excellent piece of work.

Girl Talk Tales, Causal Models, and the Dissertation: Exploring the Topical Contours of Context in Sociology Talk and Text

Paul Prior
University of Illinois, Urbana-Champaign

Since the early 1980s, composition studies has arrived at a broad consensus that it is important to understand how social contexts relate to the cognitive processes and individual behaviors involved in writing and reading texts, although within this broad consensus are various notions of context and of how contexts relate to processes and texts. Drawing on both structuralist and everyday accounts of discourse and society, composition theory and research have generally conceptualized the contexts of writing in terms of abstract, unified constructs. Whether defined globally (culture, language, history, discourse community, genre, ideological state apparatus) or locally (institutional setting, communicative situation, task demand), context has typically been construed as a static, unified given, something that both frames and governs literate activity.

Sociohistoric theories question such unified constructs, viewing discourse as the concrete, historical, socially mediated actions of individuals (e.g., Bakhtin, *Dialogic* and *Speech Genres*; Becker; Duranti and Goodwin; Lave and Wenger; Lemke; Tannen; Vygotsky; Wertsch). In these approaches to discourse, contexts are dynamic, dialogic, negotiable constructs that participants achieve in interaction by drawing on socially-sedimented and emergent resources. Instead of asking what is the context of a particular communicative action, sociohistoric approaches would ask:

1) What are the practices through which contexts are nominated, displayed, ratified, and contested by particular participants in interaction?

2) How does the emergent situated action of the moment articulate with past and future chains of events, chains which are, in effect, streams of micro- and macro-histories?

How contexts are conceptualized and studied is a key issue in composition studies, particularly in understanding the complex relationships

between discourse, knowledge, and social formations. From a sociohistoric perspective, contexts are in effect emergent, dialogic histories generated as sedimented practices and resources are dynamically employed at a local intersection of multiple histories (personal, interpersonal, institutional, and sociocultural). One way to trace this unfolding interaction of histories is to explore the *special topics* (Aristotle; Miller and Selzer; Perelman) participants employ in talk and text. In this paper, I will illustrate this approach by presenting a case study of topics in the talk and texts of a sociology seminar.

Topics: Connecting Rhetoric to Sociohistoric Approaches

In Aristotle's rhetoric, the common and special topics were places rhetors could go to generate lines of arguments and to find material for those arguments; topics formed a fixed terrain of established concepts, propositions, and narratives. Miller and Selzer's examination of special topics among transportation engineers decentered and expanded Aristotle's notion in two key ways. First, following the modern rhetorical stance (see Perelman) that rhetoric is ubiquitous, Miller and Selzer treated scientific concepts, which Aristotle had treated as arhetorical first principles, as topics. Second, they formulated a more explicitly multidimensional view of topical terrains, suggesting that the texts they examined were shaped by the intersection or interpenetration of three topical domains:

- the generic—implicit and explicit models and expectations for the form and content of particular types of texts;
- the institutional—concepts, procedures, values, issues, and narratives connected with particular institutional bodies or forums; and
- the disciplinary—concepts, procedures, values, issues, and narratives connected to specific disciplines.

The notion that special topics are associated with particular institutions brings Miller and Selzer's view close to sociohistoric approaches because it clearly situates topics in concrete, local sociohistoric worlds as well as in abstract, unified discursive domains.

Miller and Selzer's notion of special topics brings rhetoric close to sociohistoric notions of sense (Vygotsky, Wertsch; Wertsch and Minick) and thematic content in speech genres (Bakhtin, *Speech Genres*). Sociohistoric theories, however, would suggest further decentering and expansion of topical dimensions as discourse is fully grounded in the concrete, situated activities of people rather than in abstracted terrains.

Concretely situated, topics become dialogic, varying locally with situation, activity, and participants. In other words, topics must be situated in what Bakhtin called speech genres, highly flexible and heterogeneous types of situated discourse (utterance) linked to the varied spheres and differentiated roles of human activity. To take a general example relevant to this paper, the topic of gender might be infused with content from a range of discursive domains, from everyday experiences of gender in particular settings (e.g., a classroom or a doctor's office) to highly theoretical domains like the role of gender in the construction of biological knowledge. The sense of gender as a topic will vary as the speech genre (situation and activity) varies (e.g., a private conversation at a coffee house versus trial testimony in a courtroom). It will also vary according to the persons who are sources and recipients of an utterance: the sense of gender will be shaped by social categorizations (male/female, boss/employee, lawyer/witness) and by individual biography (to use well-known examples, Jane Fonda versus Barbara Bush, Cindy Crawford versus Gloria Steinem, Clarence Thomas versus Jesse Jackson). Rather than imagining gender as a stable location on a single, abstract topical terrain, gender becomes a dynamic network of place-times, generating multiple interpenetrated topical terrains. In this view, topics emerge as indexical expressions linked to social and affective as well as linguistic and propositional contexts. Topics are seen as spaces where affective and conceptual attention might accumulate, a continuum of spaces ranging from widespread, deeply sedimented, well worn sociocultural ruts to highly transient, local and emergent currents in a particular stream of communication.

Connecting Topics to Contexts

How can topics point to contexts? In an earlier ethnographic study, I explored disciplinary discourse in a graduate seminar in second languages education. An analysis of the special topics rehearsed in classroom sessions and course materials revealed a complex array of disciplinary topics, originating in two kinds of spaces. First, the course rehearsed topics like communicative competence, the writing process, cultural schemata, text parsing, foreigner talk, and so on. These special topics represented concepts and issues drawn from particular disciplines (e.g., second language education, linguistics, psychology, and composition studies), that is, from public spaces intertextually constituted by disciplinary publications and cycles of credit. Second, the course rehearsed topics like randomness, validity and reliability of tests,

sample size, connection of hypotheses to measures, and replication. Here the course drew on a different public intertextual space, the apparently transdisciplinary issues of experimental design and analysis.

By examining how these special topics were (or were not) employed by students in their writing and how they were treated by the professor in his written response, I was able to explore how discourses and roles were negotiated in that course. One writing task in the course was a critique of a research article. Some students closely matched prominent course topics in their critiques. For example, in a single paragraph Barbara, a Ph.D. student, noted that a researcher had problems with sample size, randomization, and design (lack of a control group, inadequate observation time) and had failed to provide sufficient information on subjects, experimental conditions, and tests (i.e., reliability and validity). In addition, she questioned the researcher's definition of "communicative competence," arguing that it failed to consider meaning, a key criterion in the field. In his written responses to this critique, the professor underlined these key topics and praised the writer for her analysis in the margins of the paper. However, Pat, another Ph.D. student, offered a critique employing very different topics, drawn from everyday and political discourses (i.e., self-interest; critiques of technocratic society and the decontextualized nature of empirical social sciences). The professor accepted Pat's use of these topics in her critique, displaying agreement in his marginal comments. However, when Pat employed the same kinds of topics for a second writing task (a practice dissertation research proposal), the professor rejected them, asking (in his marginal comments) for her to provide citations to support her claims and details to clarify her research plan. (See Prior for further details of these cases.) These students' use of special topics and the professor's responses to those topics traced not only the multiple, sedimented contexts available to participants, but also pointed to the local negotiation of relationships and the local construction of the discipline.

In analyses of classroom talk, Wertsch has examined how teachers' and students' asymmetrical negotiation of referential content and perspective works to privilege certain sociocultural voices (or discourses or speech genres) over others (see also Wertsch and Minick). For example, Wertsch analyzes how an emergent topic in a conversation (a piece of lava an elementary student brought to class for share-time) fluctuated between multiple discourses as referential content and perspective were negotiated. Over the course of a 41-turn exchange, the

lava appeared as a physical object connected to the personal history and experience of the child, as an object subjected to formal/scientific taxonomies like light-heavy and smooth-rough, as a sign defined in terms of other signs in a dictionary, and as a sign/object subsumed within geological narratives of volcanic activity. In this brief interaction, the teacher introduced the formal, scientific, sign type-sign type exchanges, pushing the students to reconceptualize (and recontextualize) the lava outside of the personal history of the child. Wertsch notes how such microdiscursive exchanges fit into macro-social and historical patterns as the teacher is seen initiating and privileging a particular sociohistoric discourse, the Western "voice of rationality."[1]

These examples from textual and conversational exchanges suggest that topics can trace contexts in two senses. First, topics index the biographical and social histories (or contexts) that, in part, shape emergent interactions. In this sense, topics represent sedimented resources that can be used in communication. Second, topics are dynamic tools used by participants to nominate, sustain, and challenge emergent constructions of context as part of the general activity of managing the intersubjective grounds of meaning, configuring participants' identities and relationships, and fabricating goal-oriented actions.[2]

The Research

The research presented in this paper was undertaken as part of a broader ethnographic study of how writing was cued, produced and responded to in four graduate seminars at a major midwestern university. Data was gathered from multiple sources, including:

1) observation and audiotaping of seminar sessions;
2) collection of students' draft and final texts (often with professors' written responses); and
3) semi-structured and text based interviews with professors and students.

In analyzing and presenting these data, I have sought to integrate multiple research inscriptions (texts, interview accounts, field notes, and classroom transcripts) to produce a situated, documented narrative of literate activity in talk as well as texts.

One of the seminars I entered offered particularly rich data that sharply framed issues of context. *Sociology*, a seminar organized by Professor Elaine West, was a topical offering without a title.[3] It counted toward a departmental requirement for advanced research, but was only

offered pass/fail. The seminar, in fact, appeared to be an institutional extension of other activities. The seven Ph.D. students in the seminar were all employed as research assistants in the Study, a longitudinal survey of high school students and their parents that examined relationships between social and psychological variables. Professor West was the principal investigator of the Study, and her two co-investigators, Professors Lynch and Harris, regularly sat in. Five of the seven students were also West's advisees. At least four had decided to use the Study's data for their dissertations. Three students had already (when the seminar began) been listed as co-authors on one or more of the 15 conference papers or journal articles generated from the Study. The salience of these other contexts (the Study, the departmental program, and disciplinary forums) was reflected in the fact that West, Lynch, Harris, and five of the students had met biweekly as an unofficial seminar the previous two quarters.

The seminar provided a forum for the students to present and get responses to their individual projects, all of which used the Study's data. As an intact research team with an established agenda, the seminar opened with West suggesting that students should produce more developed versions of the work they had started the previous two quarters and reviewing what students planned to present. After this first meeting, most sessions were devoted to discussion of one student's written work and research. In the seminar, students presented drafts (some rough, some near completion) of dissertation prospectuses, preliminary examinations, conference papers, technical reports, and journal articles. Discussions focused on substantive issues of theory and research design as well as the texts themselves.

To explore the topical contours of contexts in *Sociology*, this paper will focus on one case, a dissertation prospectus written by a student I call Sean. I chose Sean's case for two reasons. First, the data I collected on it were particularly complete. The data presented in this paper are drawn from a corpus of materials consisting of:

    1) six drafts of Sean's prospectus, including the final version;
    2) a transcript of a two-hour seminar discussion of his draft
       prospectus (the raw data is over 20,000 "words" long);
    3) semi-structured and text-based interviews with Sean, in which
       the prospectus and related work are discussed; and
    4) semi-structured and text-based interviews with Elaine West
       (Sean's employer/advisor/professor), in which his prospectus
       and other work are discussed.

Second, as I analyzed how Sean presented his draft prospectus, how it was negotiated in the seminar conversation, and how it was finally revised and implemented, I was struck by the topical and contextual heterogeneity I found, and especially by the differences between the topics invoked in interviews and seminar talk and the topics displayed in Sean's texts. In this paper, I examine how contexts and contextualizations were implicated in the negotiation of Sean's prospectus by tracing three key, interwoven topical threads in this microhistory of disciplinary response and revision: *girl talk tales, causal models,* and *the dissertation.*

Negotiating Sean's Dissertation Prospectus: A Microhistory of Topical Trajectories

Sean was the most advanced graduate student in the Study/ seminar. As the Manager of Data Analysis, Sean had played a key role in the Study, a role reflected in his co-authorship on ten of the sixteen articles or conference papers the Study had generated over a two-year period, a total that placed him second only to Professor/Principal Investigator Elaine West (fifteen out of sixteen) and just ahead of Professor/Co-Investigator David Lynch (seven out of sixteen). In addition to several third and fourth authorships, Sean had first authorship on one conference paper that had been submitted to a refereed journal for publication and second authorship on four other papers (at least one of which had been submitted for publication).

Figure 1 provides three accounts of how Sean selected depression as the issue for his dissertation. (See Appendix A for conversational transcription conventions.) Much as Gilbert and Mulkay found in their discourse analyses of scientific accounts, Sean's interviews point to more local, personal, contingent influences (his work in the Study, variables available in the Study's data, his need for a dissertation topic), while the textualized account in his prospectus points more to the public contexts of the discipline, particularly the professional literatures of sociology and psychology (his central citation is his own preliminary examination, a 64-page document that cited 132 sources). Much as Knorr-Cetina found in her study of how research articles on plant proteins related to laboratory work, Sean's text appears to reverse history. In the interviews, the Study appears to be the origin of the research, institutionally providing Sean with *depression* as a researchable issue, while in the text it appears that the literature is the origin that has prompted and authorized *depression.*

1) Interview #1

...I've been working on this project for about 2 1/2 years as the data analyst and **I had to come up with a dissertation area and the study was designed to um investigate the effects of adolescent work experience on psychological functioning and I knew that there were 5 main indicators of psychological functioning and I just decided to pick one of them and that would be my dissertation topic,** ok, ...So anyway I just said you know "I'm interested in depression." Well, as part of the project we had a prototypic analysis, it's a standard way we have of looking at each of the 5 outcomes, so Elaine just said, "Well, good, why don't you start the prototypic analysis on depression"

[asked if he had an initial interest in depression]

...i**t was more of looking at the five variables and deciding what I was going to do.** Basically the three biggies as far as I could see were self-esteem, self-efficacy, and depression. **Self-esteem I know first hand was just a very complicated literature, it's gigantic, and there are some very serious complications with the whole idea of self-esteem, so I didn't want to get into that**...and also there's a lot of good work that's been done on self-esteem, so it would be difficult for me to make a contribution in that area, not only in terms of getting on top of the huge literature, trying to circumvent the fundamental problems, but also in trying to come up with something new and that you know people would be interested in, very difficult variable to work with I think. **Self-efficacy was actually a very good variable, but someone already took it, ... Professor Lynch, he already had self-esteem, er self-efficacy, and so I felt as though depression would be my best shot....**

2) Draft prospectus: Introductions

   The preliminary examination was suggestive of several profitable areas of research into adolescent depressed mood. Because my current research has focused on adolescent work experiences and depressed mood, I have chosen to pursue a project which both reflects this interest and extends the findings to date. The hypotheses to be explored by this dissertation concern how social support from different sources affects the relationship between work characteristics, self-concept, and depressive affect; emphasis is especially placed on gender differences.
   These expectations will be further specified in the first section of this prospectus. The second section considers issues relating to operationalization and analytic strategy, which necessarily entails discussion of the data to be used. The final part of this prospectus considers the specific contributions that can be made by this dissertation, as well as limitations.

I. Formulation of the Hypotheses
   The central focus of this dissertation is the examination of how social support from various domains impacts on the relationship between work characteristics and depressed mood among adolescents. **A literature search failed to identify any research, using adolescent samples, which has examined the role of social support in the workplace.**
   Yet there is reason to believe that social support may play an important role in the adolescent workplace. **As indicated in the preliminary,** adolescents draw on social supports from various domains of involvement; indeed, adolescent mood and self-concept are quite responsive to social support. **Previous research** has also indicated that features of adolescent work, including stressors, significantly predict variation in depressed mood. Among adults, indicators of social support have been found to lessen the effect of depress-ogenic qualities of the workplace. Thus, **several pieces of evidence from adolescents and the literature on adults** both suggest that social support may be integral to models depicting the relationship between adolescent work experiences and depressed mood.

Figure 1: Accounts of Sean's dissertation in talk and text

In Sean's interviews, his texts, and, as we will soon see, the seminar talk, the dissertation is topicalized. However, while the dissertation appears to be a marginal, backgrounded topic in his texts, it assumes a more central role in the talk. For Sean, the dissertation is a multiply charged topic, a contextual confluence tied not only to projected research and writing and departmental evaluations (his upcoming prospectus meeting; his dissertation defense), but also to his work in the Study, which is the source of his data; to interpersonal relationships, particularly the key relationships with Lynch and West; and finally to career plans (such as the fact that he has just accepted a position and must successfully defend his dissertation within six months). Thus, the first topical thread we encounter is *the dissertation*.

Seminar/Study Participants attending
Elaine West: professor of record, Principal Investigator of the Study, advisor to Sean, member of Sean's prospectus committee.
David Lynch: professor sitting in on seminar, Co-investigator of the Study, chair of Sean's prospectus committee.
Sean: ABD Ph.D. student, Data Analyst for 2 1/2 years, West's advisee.
Thomas: Ph.D. student, data coder for the Study, not West's advisee.
Moira: Ph.D. student, Data Collection Manager for the Study, West's advisee.
Linda: Ph.D. Student, data coder for the Study, West's advisee.

Sean's hypotheses from the text of his draft dissertation prospectus	**Sean's hypotheses from the text of his final dissertation prospectus**
(1) Girls will utilize social support more than boys.	(1) Girls will utlize more social support than boys
(2) Girls will be more responsive to expressive social support than boys.	(2) Girls will be more responsive to expressive social support than boys.
(3) Boys will be more responsive to instrumental social support than girls.	(3) Boys will be more responsive to instrumental social support than girls.
(4) Expressive social support will have negative implications for depressed mood especially among girls; among females, these effects will be more pronounced among same-sex dyads.	(4) The negative, causal relationship between instrumental support and depressed mood for boys will be stronger than the negative, causal relationship between expressive social support and depressed mood for girls.
(5) Instrumental support will have positive implications for negative mood, especially for boys.	(5) The difference between the magnitude of the negative causal relationship between expressive social support and depressed mood for boys and the magnitude of the negative, causal relationship between instrumental social support and depressed mood will be negligible.
(6) Level of depressed mood will affect subsequent, perceived social support.	
(7) Different sources of social support will have differential influence; support from parents, teachers, peers and work supervisors will be examined.	

Figure 2: Seminar participants and Sean's hypotheses

As the seminar discussion of Sean's draft prospectus began, Professor West suggested discussing first conceptual, then measurement, and finally analytic issues. Conceptual issues essentially referred to the hypotheses and their justification. Figure 2 provides a list of participants to refer to as extracts from the seminar discussion of Sean's prospectus are provided and then displays the hypotheses from Sean's draft prospectus on the left and his final prospectus on the right. As the changed hypotheses suggest, conceptual issues were a central and contentious focus of the seminar conversation: after two hours of seminar talk, only the first three hypotheses emerged intact. Hypotheses four and five had undergone major revisions, and six and seven had been dropped.

In the seminar, Sean began by reviewing his preliminary examination, saying that the key issue he had identified in the prelim was: Why do adolescent girls (and women) suffer from greater depressed mood than adolescent boys (and men)? Arguing that the literature suggests that girls and boys occupy basically the same structural positions in society and that both share the same basic human information processing system, Sean concluded that the differences in depressed mood might come from gender-related differences in the contents of thought, what he called "the sense-making aspects of the gender role identity." After Sean had reviewed this argument, West prompted him to discuss his specific hypotheses.

Figure 3 provides examples of Sean's arguments from his seminar talk and from his draft text. Episode 1 presents Sean's reasoning for his first hypothesis. His depiction of girls as "more emotional" (lines 7) and his immediate self-repair (lines 7-10) foreshadow what is to come as participants appear to draw on everyday and specialized discourses to debate Sean's hypotheses. In Episode 2 in Figure 3, Sean presents the core of his argument for hypothesis 4 in a series of truncated narratives. In lines 13-14, he introduces the issue as "what happens when girls get together and engage in social support," a double-voiced topic, a hybrid construction (Bakhtin, *Dialogic*) combining the everyday world of *girls getting together* and the disciplinary world of *engaging in social support*. Lines 17-20 present the first premise in Sean's argument, and his basic story of girl talk. Lines 22-24 present the second premise, a *someone* story depicting the interpersonal theory of depression. Lines 24-29 then represent a narrative conclusion drawn from the two narrative premises, Sean's combined tale of how girls' talk leads to girls' depression. Sean's tale of girl talk is immediately challenged by

Thomas; however, before turning to the challenges (many of which are framed in counter-narratives of girl talk), I would point to the way Sean presented the same argument in the draft prospectus. In the

Seminar Episode 1
1   Sean: ...um just picking up on the idea of the differences
2   in the sense making aspect of gender roles, because girls are more-
3   are thought to be more communal and social support is
4   inherently a communal phenomenon, the first hypothesis then
5   that girls will utilize more social support than boys, um,
6   also though, part of the- the sense making difference is
7   that **girls are more uh emotional, [.5 s] and, um, [1.5 s] uh**
8   **ex- expressive is a better word,**
9   **boys have emotions, just different types of emotions, um, [.5 s]**
10 **that they're more expressive and so uh** social support in the prelim is
11 conceptualized as being either expressive or instrumental,

Seminar Episode 2
12 Sean: [talking] ....hypothesis 4 is the most controversial one, um
13 and it's based on some speculation about uh **what happens**
14 **when girls get together and they engage in social support**,
15 expressive social support, and it- it's thought that-
16 it's argued that, there's a lot of evidence that
17 girls ruminate more than boys do and that **if they get together**
18 **and engage in expressive social support**
19 **then the content of that is going to be, it's going to be like**
20 **vocal rumination, it's going to be very negative,** and then there's um
21 also an interpersonal theory of depression that says that
22 **when someone expresses negativity, the other person is much more apt**
23 **to deny its legitimacy, which increases the seriousness**
24 **of the person's negativity** and so, **when you get two girls together**
25 **engaging in expressive social support, uh one is going to express**
26 **some negative things, they're going to ruminate out loud,**
27 **the other one is likely to deny that, that those feelings are**
28 **legitimate in some way, and that could increase the negativity of**
29 **that person**, but=

Draft of the dissertation prospectus
1   These relationships could explain gender differences in the process
2   by which adolescent depressed mood is determined. **Research suggests**
3   **that females internalize their problems and ruminate more than males**,
4   who engage in distractions and externalizing behaviors (Nolen-Hoeksema,
5   1987; Conway et al., 1990; Patterson and McCubbin, 1987; and see fn. #7
6   in preliminary). **For females the affective quality of expressive social**
7   **support will tend to be negative, reflecting this rumination.** Coyne's
8   (1976) interpersonal theory of depression further suggests that **expressions**
9   **of negative affect will tend to be rebuffed, as not legitimate feelings**.
10 This denial enhances negative mood.[1]

[*footnote at the bottom of same page*]
11 (1) **Thus, ego (seeking support) expresses negative feelings.** Expressive
12 social support becomes a forum for further rumination.**Yet alter, from**
13 **whom support is elicited, disconfirms ego's feelings. This denial leads**
14 **to greater negativity. This dynamic is most pronounced in a female**
15 **dyad engaged in expressive social support.** In such cases, **alter not only**
16 **negates ego's expressions, but imbues the exchange with her own**
17 **negativity as well.**

Figure 3: Why are girls more depressed?
Sean's argument in talk and text

textualized support for hypothesis 4, Sean cites the literature more prominently and also deploys his argument in terms of abstract, synchronic relationships between variables rather than narratives of girls talking, the only exception being the somewhat obscure, footnoted narrative (lines 11-17) of *ego* and *alter* that is explaining the interpersonal theory of depression. I suggest that Sean's tale of girl talk and the round of conflicting stories that it generates are strongly double-voiced narratives, connected intertextually to both everyday sociocultural stereotypes and disciplinary discourses of gender. *How girls talk*, in any case, becomes a second key topical thread in this seminar conversation.

Figure 4 presents two challenges to Sean's arguments for his fourth hypothesis; both are stated primarily as counter-narratives. In

Seminar Episode 4 : Thomas challenges Sean's story
1   Thomas: **I mean, that doesn't seem to make sense to me.** I mean, yes,
2   I expect that- that **girls are getting together** and ex- and **engaging in**
3   **expressive support**, but **I wouldn't expect** that they would-that they would
4   um [1s] dismiss um **negative feelings**
5   Sean: What would you **expect**?
6   Thomas: **I would expect the opposite**
7   Sean: /**why**?/
8   Thomas: /because/ I would **expect** that they would be getting together in- uh
9   **to listen to each other's feelings** and not necessarily just dismissing it,
10   as I would **expect** boys to do that, because they **would try to move away**
11   **from emotion**, [1 s] to well, **"Ok, you have- you have this problem**
12   **now what can you do about it"** whereas I think girls are
13   much more likely to be comfortable...

Seminar Episode 5: West challenges Sean's story
14   West: Can I say something? When I read the first version of this,
15   I suggested that maybe this one be-be dropped /'cause/=
16   Lynch: /yeah/
17   West: =it seems like **the critical issue is what's happening**
18   **in these interchanges** and if in fact it does generate kind of you know [1 s]
19   **mutual gloom and /negativity/**
20   Sean: /umhm/
21   West: **you know you tell me about your problems, and that makes me**
22   **more depressed and I'll tell you about mine, and you'll get more**
23   **depressed and then I'll say "I'm depressed" and you'll say [laughing]**
24   **"there's no reason to be you know"**
     [8 seconds of West and others laughing; several short fragmented voices]
25   West: and and you know but- but that may not happen, and then you know
26   in a lot of cases um, you know, **people do want to sort of let off steam**,
27   and that is cathartic and uh- but we have no idea **what's happening**
28   **in these dyads**,
29   Sean: uh, well, we have, we- we can look at it to some degree, [1 s] so
30   West: well, well you can try it, but I think that of all your **hypotheses**,
31   this is the one that's really **the most controversial** and also the one
32   that's **least amenable to test in the kinds of data that we actually have**

Figure 4: Counter-narratives:
Challenging Sean's story of girl talk

Episode 4, which immediately follows Episode 3, Thomas challenges Sean's tale of girl talk, stating that it "doesn't seem to make sense" (line 1) and that he would "expect the opposite" (line 6). Thomas first intertextually echoes Sean's double-voiced formulation, agreeing (in lines 2-3) that *girls get together* and *engage in social support*; however, as he contests Sean's story of denial, his naming of the topic shifts toward everyday discourse: "negative feelings" (line 4), "feelings" (line 9), and then "emotion" (line 11). Finally, animating the voice of a boy presented with a problem (lines 11-12), Thomas presents a fragment of *constructed dialogue*, a conversational device that Tannen (1989) argues is intended to enhance listener involvement.

It is interesting that Thomas simply elaborates on his expectations in response to Sean's question ("Why?" line 7). My question is: Why does Thomas' story represent a legitimate, even effective challenge? Thomas does not cite sociological literature, research or theory; he simply restates his expectations, yet Sean's response to Thomas' challenge was essentially to concede the point. Recalling a technical distinction between clinical depression, which the interpersonal theory addressed, and everyday depressed mood (or depressive affect), which the Study's data queried, Sean conceded that denial might not make sense in discussing depressed mood.

After his concession on denial, Sean went on to reaffirm that the basic linkage between expressive social support, rumination, and negativity still held. David Lynch, the professor who would chair Sean's upcoming prospectus committee, then entered the conversation. Arguing that Sean needed some empirical support for his claim, Lynch concluded that "it" should either be substantiated or dropped (though whether he was referring to just denial or hypothesis 4 as a whole was not clear).

Elaine West, the principal investigator and Sean's advisor, then enters the conversation with her comments in Episode 5 of Figure 4. West identifies the central issues as "what's happening in these interchanges" (lines 17-18). West then shifts into a more informal, everyday discourse, signalled first by her decidedly non-technical term "mutual gloom" (line 19) and strengthened by the sing-song prosody of lines 21-24 ("you tell me" and "I'll tell you" and so on). Climaxing in a constructed dialogue carried on laughter, West's ironic retelling of Sean's story is punctuated with 8 seconds of loud laughter and multiple voices, after which West regains the floor to suggest that expressive

support may allow "people" to "let off steam" (line 26).

At the end of Episode 5, West returns to disciplinary topics. In lines 27-28, referring back to the critical issue identified in lines 17-18, West suggests that the data does not provide evidence of what happens "in these dyads." In lines 31-32, she assesses hypothesis 4 as "the most controversial" and (again) the "least amenable to test in the kinds of data" the Study collected. With these comments, West has opened up the third key topical thread, the issue of *causal models and measurement.*

From this point on, the extended debate over Sean's fourth hypothesis bounces back and forth between two main topical threads, *tales of girl talk* and discussions of *causal modelling*, while the third topical thread, *the dissertation*, is a powerful subtext, only occasionally surfacing. Here I should highlight two key patterns in the negotiation of these topical contours. First, the conversation is proceeding in a multidimensional space where topics may suddenly jump from one discursive surface to another or may in a sense be suspended between surfaces, dialogically invested with multiple senses. Second, words (lexical selection) appear to play a key role in nominating, sustaining, and contesting these topical terrains. For example, the topic of girl talk appears to invoke multiple discourses in this conversation. Sean attempts to evoke girl talk as a variable in an abstract disciplinary domain, as a potential mechanism connecting depressed mood to social support. However, Thomas, West, and Lynch contextualize Sean's argument in more concrete domains. All three refer to girl talk as the concrete interactions of girls. West and Lynch also contextualize Sean's argument in terms of the concrete measures of the Study, the questionnaire items that underlie Sean's psychological and social constructs. In other words, girl talk is a discursive shifter in a dialogically contested space, and the words participants select work to reconfigure the topics and the space. Are girls "emotional" or "expressive?" Do girls "engage in expressive social support" or do "I say, 'I'm depressed.'" In short, the sedimented senses of words (the different discourses they invoke) make them key forces in a dynamic representational conflict over how to contextualize Sean's hypotheses.

Responding to West's comments, Sean argues in Episode 6 (Figure 5) that his use of the Study's measures for his model does make sense. His argument seems to work on three levels. First, Sean is making a theoretical point about modelling, arguing that because linkages between his variables are being estimated in the Study's

statistical model, the meaning of those linkages should be considered. Second, the theoretical argument seems to have everyday overtones of opportunity and waste ("We have it, shouldn't we use it?"). Finally, Sean constructs a narrative of scientific activity (cf. Myers). With almost kaleidoscopic deixis (e.g., the varied uses of "I," "you," and "we" in lines 4-7), Sean's tale of pursuing unpopular hypotheses in the face of skepticism (animated in line 4) appears to be an appeal for identification and solidarity. Sean's narrative of science seems to be deployed to reestablish the social-discursive fabric of science that became frayed in West's parody of his story and the laughter that followed.

After Sean's narrative, West continues (in Episode 7) to question Sean's hypothesis; however, Sean's topical nominations apparently rekeyed the conversational context, at least for a time. The topics shift to disciplinary issues (relations between measures and hypotheses, the

Seminar Episode 6: Sean shifts to modelling
1   Sean: ... that the way I see it, I- ih, um you know um [.5 s] **you want**
2   **to try to specify the model as fully as possible** and you're never able
3   to fully test any model especially using secondary data, so just, I-
4   **the argument that "well this is speculative and you can't test it that well."**
5   **well, you can say that about many many things,but we can follow it up**
6   **somewhat, so why not?** particularly given, I think, that what we're talking
7   about here when a hypothesis is offered, what you're saying is, "I think that's
8   there's a relationship here that should be looked at," now when you look
9   at the model that's going to be specified, you see that **whether or not**
10 **we pay attention to this hypothesis or not, those linkages will be estimated**
11 **in the models,** so what you're really talking about is, **should we,** you know,
12 **look at that number and- and try to give substantive meaning to it or not?**

Seminar Episode 7: West questions Sean's models and measures
13 West: /but the problem is/ that **if you set forth the hypothesis and**
14 **your measures aren't very good, if you don't confirm your hypothesis,**
15 **you don't know if it's because your measures or the hypothesis is wrong,**
16 so so you know, not that it hurts to look at anything, /uh/
17 Sean: /yeah/
18 West: **to uh you know not really develop it as a major contribution and-**
19 Sean: yeah
20 West: **of, you know, of this study** because I think what's (clear you're)
21 going to find is that **closeness and you know /these/**=
22 Sean: /**closeness**/ [sotto voce]
23 West: =variables will have **positive effects** on lots of outcomes, just like
24 they always seem to do in the **literature**, and uh and it could be that it's
25 because the **literatur**e is right, that **warmth** in parent-child relationships
26 you know is very important and you know **this keeps coming up** [laughing]
27 as- as important, then **our measures** probably tap **warmth** here, [laughing]
28 they're **the same measures** that are used in **many other studies** that have
29 found**positive relationships** between **closeness** in both boys' and girls' uh
30 outcomes now if **we had /more/**=
31 Sean: /yeah/
32 West: =**finely tuned measures that really got into the kinds**
33 **of interactional dynamics that you're talking about we might find um**
34 **you know the negative effects of social support**

Figure 5: Of measures and models and many things

literature, the nature of the Study's variables), and the conversational organization and tone shift to a serious, well-regulated two-party exchange. West repeatedly mentions "measures" in general (lines 14, 15, 27, 28, 32) and refers to the Study's measures, which Sean has glossed as indicators of social support, as measures of "closeness" (lines 21, 29) and "warmth" (lines 25, 27). She alludes directly and indirectly to the literature on the measures (lines 24, 25, 26, 28) and characterizes the outcomes associated with them as "positive" (lines 23, 29). Finally, she contrasts this discussion of measures with Sean's, representing (in lines 32-33) Sean's story as one of "finely tuned measures ... of interactional dynamics" and emphasizing the contrary nature of his negative expectations for outcomes. Contextually, it is important to recall that West established the measures and to note that the variables Sean has been describing as "social support" are derived from question- naire items like, "How close do you feel to your best friend of the opposite sex?" As this stretch of talk continued, Sean's turns continued to be mostly short, although at one point he attempted to defend his use of the Study's measures. When Sean finally appeared to agree that his use of the measures was problematic, the topical subtext of the disser- tation resurfaced as West noted that "the whole thing doesn't stand or fall on that particular hypothesis."

This dialogue between West and Sean ended equivocally as David Lynch re-entered the conversation. Lynch and Sean engaged in a dialogue over 50 turns, divided into three main sections. In the first 30 rapidly exchanged turns, Lynch and Sean revisited the issue of Sean's measures.   Seconding West's argument, Lynch first suggested that Sean's "story has to do with interactions among girls as the expressive interaction; we don't have any measures of that." When Sean pointed to the questionnaire items he had planned to use as measures (apparently reversing his agreement with West five short turns earlier), Lynch insisted that they were not measures of interaction, pointing out that they did not get into the quality or amount of interaction or in some cases even say much about who was interacting.

In Episode 8 (Figure 6) Lynch disagrees with Sean's argument on modelling from Episode 6 (Figure 5). In a kind of mini-lecture, Lynch reviews basic concepts of causal modelling (lines 1-14), thus, continu- ing the disciplinary conversation West and Sean had established. However, at the end of his remarks (the 39th turn of this stretch, lines 16- 19), Lynch renominates the topical thread of girl talk and begins to

Seminar Episode 8: Lynch on models and girl talk
1   Lynch: **in anoth- I think there's a sli- a little misperception of modeling**
2   **here too, I listen to your s- your comments on- that is, you're right**
3   **the numbers are out there,** but by that we mean the correlations are
4   out there, the question is what do you do with those, if you take uh say (aw)
5   the simplistic but nice little typology, we have causal and non-causal aspects,
6   and inside the causal we have direct and indirect effects, well if we don't-
7   **if we don't choose to look at this, it doesn't mean we have to put it**
8   **in a causal path, we just leave in a non-causal path, it's an error term,**
9   **or it's non-causal**=
10   Sean: =umhm=
11   Lynch: =**association**, so even if it's out there, **you're right in a sense that,**
12   **yes, it's part of the correlation matrix, but that doesn't mean**
13   **we have to look at it, because if we can't specify the process, (then we'd**
14   **say) we may misspecify the process (ok?), we'll get faulty /conclusions/**
15   Sean: and uh/ yeah I see your point
16   Lynch: and uh, [2 s] but- b**ut my main count[er] on that**, this is more in
17   terms of the measurement, I- I- I agree, **I also have to think of why-**
18   **why would someone— if you're if you're in this dyad or relationship**
19   **or just an expressive relationship like this— why would you stay?**
20   **why would you react that way, knowing, after some experience doing this,**
21   **that in fact these things deteriorate, that would argue for a woman**
22   **not being in situations like that,** and I think- which is Thomas' /(count)[er]/

Figure 6: From models back to girl talk

question its reasonableness, particularly focusing on the motivations of Sean's characters. His question "Why would you stay?" in line 19 invokes powerful, long-standing cultural notions connecting motivation to probable action. Such notions can be found in Aristotle's Rhetoric and their continuing power was illustrated some time after this session when the same question was repeatedly directed at Anita Hill in her testimony against then Supreme Court nominee Clarence Thomas. It is also worth noting that in this narrative, as in several others that contested Sean's story, Lynch offers another kind of recontextualization, maturing the characters from *girls* to *women* (line 21).

After a short discussion of what the literature says about social support, the three topical threads converge in Episode 9 (Figure 7). Lynch and Sean (lines 5-11) jointly construct the problematic relationship between Sean's models and the Study's measures. Sean concludes in line 11 that he will drop "that" (presumably referring to the hypothesis). At this point, West offers an alternative to dropping the hypothesis (lines 15-20), suggesting for the first time that a subset of girls may fit Sean's story. Sean agrees that West's alternative may be the way to test his hypothesis, but concludes "not with the dissertation" (line 22). Thus, in this short series of exchanges, the three topical threads converge as Sean moves to jettison hypothesis four.

Seminar Episode 9: Sean tries to drop his hypothesis
1   Lynch: /I-[clears throat]/ I think you might be able to tighten
2   the theoretical stance to make the point, but I don't think there's- you know,
3   there's- it's going to be real tough testing with anything here
4   Sean: yeah=
5   Lynch: =**I think the more you tighten up the idea, the less well**
6   **any of our data is /going (to)/**=
7   Sean: /yeah/
8   Lynch: =**substantiate it**=
9   Sean: =**because it's essentially an interactive**=
10   Lynch: =yeah=
11   Sean: =**type of**- yeah, **I think we'll just drop that** [laughing]
12   West: oh, you know, what he might do is to=
13   Lynch: =the first part is still fine
14   Sean: yeah, good
15   West: you know I mean **in your analysis you could separate**
16   **the cases ( ) and separate out the cases who really seem to be quite**
17   **depressed and see if for them the closeness has a (more) negative effect**,
18   because then that might indicate that they're, you know, they're engaging in
19   that kind of depressive uh rumination and interaction, I mean that's what-
20   that's kind of indirect and it's uh by implication and it's not as=
21   Sean: =well I think but uh yeah, **that would be the- maybe a way to do**
22   **it, but not with the dissertation**

Figure 7: Hypothesis 4 is dropped. Or is it?

   Although the hypothesis had apparently been dropped, Thomas next reentered the conversation to raise a "theoretical issue." Thomas asked Sean: "Are you saying that the ways girls support each other is dysfunctional, the ways boys support each other is more functional?" Sean first answered "no," but by line 4 in Episode 10 (Figure 8), he has apparently talked himself into accepting Thomas' characterization of his argument.   In his question, Thomas again renamed the topic, switching from Sean's use of the abstract, agentless terms "expressive and instrumental social support" to the concrete terms "the way boys (girls) support each other." This renaming, combined with his use of the term "dysfunctional" (as in "dysfunctional families") again seemed to shift the conversation toward everyday discourse.

   Sean's acceptance of Thomas' representation of hypothesis four as suggesting that girls' social support is "dysfunctional" triggers more questions and is shortly followed by another intense round of narratives and counter-narratives of girl talk. However, first West reenters the conversation to offer another alternative to hypothesis four (which had, remember, apparently been dropped). In Episode 10 (Figure 8) from lines 7-11, West begins to reformulate hypothesis four, suggesting that support is beneficial for boys and girls, but is somewhat less beneficial for girls because some girls are enacting Sean's story of mutually reinforcing rumination. Sean asks how to state this hypothesis and then

Seminar Episode 10: Sean gets a new hypothesis
1   Sean: ... **we should assume that social support has positive effect**- that
2   would explain hypothesis 5, **but in the case of girls it doesn't because it's-**
3   **because it's expressive** it's- and because they ruminate,
4   **it's just another occasion for them to ruminate and so it's dysfunctional**
5   West: well maybe /you could/
6   Thomas: /that so-/ go ahead
7   West: now **maybe you (could) state this in a somewhat weaker form**,
8   and to **just say** that you would expect that **the uh positive implications of**
9   **social support or uh (effect)would be weaker- would be less for girls**
10 **than for boys because some girls may be engaging in these processes**
11 **that you don't- you don't expect so much for boys**
12 Sean: how do you- the positive aspects of expressive support will be
13 greater,
14 West: no /what you say is/=
15 Sean: /will be less for/
16 West: =is that- is that, you know, **you're expecting (that) social support**
17 **will have a negative effect on depressive affect, you could say that**
18 **that negative effect would be stronger for boys than for girls**

Figure 8: Girl talk reconsidered

West restates it (lines 16-18), shifting from the everyday use of "negative" as "bad" that Sean had employed in his draft hypotheses to a more technical, mathematical phrasing in which "negative" means numerically lower. As can be seen in the final version of hypothesis four (see Figure 9), a somewhat more elaborated version of West's reformulation becomes the final word in Sean's revision of his prospectus. The debate over this hypothesis continued for some time (with girl talk the primary thread and modelling a secondary one), but we will leave it at this point.

Figure 9 provides a side-by-side comparison of hypotheses four and five and their support in the draft and final versions of the dissertation prospectus. The final prospectus was rewritten with each hypothesis or pair of hypotheses stated, followed by a paragraph or two justifying the hypothesis (a structure Lynch proposed later in the conversation). Having read selections from the transcript of the seminar response, you can see the major effects it had on both Sean's formulations of hypotheses four and five and on their accompanying support. The bold print text, indicating revision, shows that little remains of the draft text (basically two sentences, Draft, lines 14-25; Final, lines 25-35).

The first effect seen in Figure 9 is the reversal of hypothesis four. The original hypothesis had suggested that expressive support was bad, increasing girls' depressive affect; the revised hypothesis suggests that it is good, decreasing their depressive affect, although this decrease is less than the decrease instrumental support provides for boys (the

(Areas of revision are marked in bold to show what was dropped or changed.)

[Hypotheses 4 and 5 from page 8 of Sean's draft prospectus, excerpted from a paragraph in which all seven were listed.]

1 **(4) Expressive social support will**
2 **have negative implications for**
3 **depressed mood, especially among**
4 **girls; among females, these**
5 **effects will be more pronounced**
6 **among same-sex dyads.**
7 **(5) Instrumental support will**
8 **have positive implications for neg-**
9 **ative mood, especially for boys.**

[Support for hypotheses 4 and 5 was found on pages 5 and 6 of the draft prospectus, starting with the second paragraph of a section headed "The Subjective Appraisal of Support."]

10   **These relationships could ex-**
11 **plain gender differences in the**
12 **process by which adolescent**
13 **depressed mood is determined.**
14 Research suggests that females
15 internalize their problems and
16 ruminate more than males, who
17 engage in distractions and
18 externalizing behaviors (Nolen-
19 Hoeksema, 1987; Conway et al.,
20 1990; Patterson and McCubbin,
21 1987; and see fn. #7 in preliminary).
22 For females the affective quality of
23 expressive social support will **tend**
24 **to** be negative, reflecting this
25 rumination. **Coyne's (1976) inter-**
26 **personal theory of depression**
27 **further suggests that expressions**
28 **of negative affect will tend to be**
29 **rebuffed, as not legitimate feel-**
30 **ings. This denial enhances neg-**
31 **ative mood.**[1]
32   **In developing an instrument to**
33 **assess adolescent coping (A-**
34 **COPE, Adolescent Coping**
35 **Orientations for Problem Exper-**
36 **iences), J. Patterson and**
37 **McCubbin (1987) present data**
38 **which bears on this argument.**
39 **"Developing social support," a six**
40 **item factor, five of**
[footnote at bottom of same page]
41 **(1) Thus, ego (seeking support)**
42 **expresses negative feelings.**
43 **Expressive social support be-**
44 **comes a forum for further**
45 **rumination. Yet alter, from**

[Hypotheses 4 and 5 with accompanying support as presented on pages 4 to 6 in Sean's final prospectus.]

1 **(4) The negative, causal relation-**
2 **ship between instrumental support**
3 **and depressed mood for boys will**
4 **be stronger than the negative,**
5 **causal relationship between ex-**
6 **pressive social support and de-**
7 **pressed mood for girls.**
8 **(5) The difference between the**
9 **magnitude of the negative causal**
10 **relationship between expressive**
11 **social support and depressed mood**
12 **for boys and the magnitude of the**
13 **negative, causal relationship be-**
14 **tween instrumental social support**
15 **and depressed mood will be**
16 **negligible.**

(In Sean's final prospectus, support for hypotheses 4 and 5 was presented in the two paragraphs immediately following the two hypotheses.]

17   **These hypotheses acknowledge**
18 **the often observed, negative re-**
19 **lationship between social support**
20 **and depressed mood (e.g.,**
21 **Friedrich et. al., 1988; Cohen et.**
22 **al., 1985; Dean and Ensel, 1983).**
23 **However, the salutory effect is**
24 **greater for boys than girls.**
25 Research suggests that females
26 internalize their problems and
27 ruminate more than males, who en-
28 gage in distracting and externalizing
29 behaviors (Nolen-Hoeksema, 1987;
30 Conway et. al., 1990; Patterson and
31 McCubbin, 1987; and see fn. #7 in
32 preliminary). For females the
33 affective quality of expressive social
34 support will **sometimes** be negative,
35 reflecting this rumination. **While**
36 **such rumination could be bene-**
37 **ficial, operating as a catharitic**
38 **release, it could also contribute to**
39 **further rumition, which would**
40 **detract from its beneficial effect.**
41 **The instrumental support received**
42 **by boys assists them in changing or**
43 **reacting to their stressful cir-**
44 **cumstances. Hypothesis 5 reflects**
45 **the speculation that the less-salient**
46 **type of social support will have**
47 **roughly the same effect between**
48 **the genders.**
49   **Thus the proposed model posits**

(figure continued on facing page)

46 whom support is elicited, dis-
47 confirms ego's feelings. This
48 denial leads to greater negativity.
49 This dynamic is most pronounced
50 in a female dyad engaged in
51 expressive social support. In such
52 cases, alter not only negates ego's
53 expressions, but imbues the
54 exchange with her own negativity
55 as well.
[page break to page 6]
56 which reflect expressivity (e.g.,
57 "talk to friend about how they
58 feel"), was positively correlated
59 with cigarette, beer, wine and
60 marijuana use among girls, but
61 not boys. Similar results were
62 obtained for two other factors,
63 "Ventilating feelings" and
64 "Investing in close friends," for
65 both boys and girls. These
66 correlational patterns, plus some
67 regressions, lead the authors to
68 conclude that, particularly for
69 girls, coping which involves
70 investing in close friends,
71 ventilating feelings, and de-
72 veloping social support facilitates
73 substance use.

50 that: the protective effect of social
51 support is greater for boys than
52 girls; and the magnitude of social
53 support received by girls does not
54 offset this difference.

**Figure 9: Comparison of Hypotheses 4
and 5 in Sean's draft and final prospectus.**

formulation West offered in Episode 10, lines 16-18). The complex language about magnitudes in the revised hypotheses reflects a pragmatic puzzle that followed the debate over girl talk (i.e., how to reconcile more support with less efficient support so that the result is still more depression).

A second obvious effect is what has been deleted in the final from the support for hypotheses four and five. The interpersonal theory of depression, with its tale of denial, is gone, as is the detailed description of the relationship between support and drug abuse (Draft, lines 32-40, 56-73). And, of course, gone too are citations to these sources. In the final text, several key additions also appear. The first sentence (Final, lines 17-22), with its three new citations, documents the beneficial effect of social support, a point West repeatedly stressed (e.g., see Figure 5, Episode 7, lines 23-29). Another addition (line 34), the explanation for the weaker influence of expressive support among girls, follows West's argument that Sean's story only "sometimes" applies (see line 10 in Episode 10) and also mentions (lines 35-38) the potential cathartic value of expressive social support, a point West made in lines

Seminar Episode 11: Hypothesis 6 gets dropped
1   West: [discussing the confounded nature of the data]...there's a lot of issues
2   in here that are /difficult to deal with/
3   Lynch: /it wou- **you'd be/ hard pressed to convince me without data**
4   **that uh that that's- that's a linear effect** also [1 s]
5   Sean: yeah, why's that?
6   Lynch: because I- me- th- th- **the more depressed mood you get,**
7   **I think the more effect it's going to have on your perception of support,**
8   **and it's really non-linear**
9   Sean: yeah, I (need) to get that too, /I think it gets-/
10   Lynch: /**yeah, and you don't want/ to get into nonlinear models in your**
11   **dissertation, not at this point,** [7 s] **you have a- but that's a great stand-**
12   **alone** [2 s]
13   West: that would be something you could write a paper on later

Figure 10: Avoiding non-linear models in the dissertation

26-27 of Episode 5 (Figure 4). Although West had initially suggested dropping (Figure 4, Episode, 5, lines 14-15) or downplaying them (Figure 5, Episode 7, lines 18-20), hypotheses 4 and 5 ironically end up playing a more prominent role in the final draft because they stand in a reduced field. In relatively short exchanges in the seminar talk, Sean agreed to drop hypotheses 6 and 7 (See Figure 2) because they presented difficulties of measurement and modelling, difficulties that would complicate the speedy completion of his dissertation. Episode 11 in Figure 10 presents the conclusion of a brief exchange on hypothesis 6. Lynch's unanswered statement in lines 10-11 that Sean would not "want to get into nonlinear models" in his dissertation evidently sealed the fate of hypothesis 6. It also provides an example of how a disciplinary topic, nonlinear models, can be repositioned in another topical terrain, in this case being associated with Sean's practical concern to finish his dissertation quickly so that he could take the job he had accepted. With hypotheses 6 and 7 removed, hypotheses 4 and 5 appear to be the key contributions of Sean's dissertation.

Before turning to concluding remarks, I should reinforce two points. First, I have suggested that the girl talk tales that Sean, Thomas, West, and Lynch offered drew on everyday sociocultural discourses as well as disciplinary discourses. The two seminar episodes and one extract from an interview with Sean in Figure 11 provide additional support for this claim. In Episode 12, as West is again arguing for her rewording of hypothesis four (offered first in Episode 10), she identifies a "kernel of truth" (line 1) in Sean's hypotheses. Evidently West is appealing to her everyday understanding of society since the hypothesis has not been tested. Her argument that Sean's story applies to a subset of very depressed *girls* but not *women* in general (lines 6-12) apparently

Seminar Episode 12: West's explains her rewording of hypothesis 4
1   West: because **I think that the kernel of truth in this**
2   **is that there are tendencies for girls to be somewhat more introspective**,
3   and you know **this comes out in the literature over and over again**, that
4   boys with problems kind of express them in an outward way, in behavioral
5   problems and so on whereas girls you know ruminate and they get depressed
6   and so forth, now **if you get two girls that are operating along those lines**
7   **that are kind of mutually reinforcing this negativity**
8   **you expect that to happen**, and for- for both perhaps to become
9   more depressed, because see the- **the way that I think about this is that**
10   **this is more a characteristic of a subset of girls**,you know, who are sort of
11   more depressed so that **while women in general** may have some
12   of these tendencies /that/=
13   Sean: /yes/
14   West: =they only uh lead to this uh-, you know, increase in depressive affect
15   for those who, uh you know, show them more strongly, or who are, you know,
16   already depressed for other reasons,

Seminar Episode 13: Sean argues that boys do not engage in expressive social support
17   West: [talking] ....**how would you consider just kids getting together and**
18   **hanging out and talking, I mean boys do this as well as girls**
19   Sean: Yeah, but they- the- um, the argument is that they engage
20   in distracting behaviors, so that you know, **something goes wrong at work**
21   **and then they** [i.e., boys] **get together after work, they're talking about**
22   **the baseball game and this that and the other thing, they're not**
23   **talking about what happened at work, whereas girls get together,**
24   **they'll be talking about work, what happened at work**, you know,
25   so, I think- there's a lot of empirical support for the fact that girls ruminate
26   more and that boys engage in distraction more, ok? so, I think we're on safe
27   ground there.

Sean Interview #2: Challenged that girls and boys occupy the same structural position, given issues like teen-age pregnancy, sexual harassment, and so on
28   Sean: ....**I'm really thinking about work** and uh, I still think your critique
29   applies, but maybe less so for adolescent work,we know that **girls make**
30   **significantly less than boys, not that much, but they do**,so there is
31   **some evidence that girls are treated differently** than-**I don't think it's,**
32   **you know, they're not being sexually harassed or anything at this stage**....

Figure 11: Connecting narratives of girl talk to cultural discourses

explains both her initial, unsuccessful attempt to reformulate Sean's plan (Figure 7, lines 15-20) and her final, successful attempt (Figure 8, lines 7-18). In Episode 13, Sean is arguing that boys do not engage in expressive social support. While the literature certainly supports the notion that boys engage in distracting behaviors, Sean's narrative of boys talking about "the baseball game" (lines 21-22) points again to the insertion of culturally stereotyped topics into a disciplinary argument. Finally, a short segment from Sean's interview provides additional insight into the grounds of Sean's argument. As an observer, I had immediately been struck by the oddness (from my perspective) of Sean's assertion that boys and girls occupied the same structural positions in society, an assertion that was never questioned in the seminar. When I assumed the role of devil's advocate with Sean about

this assertion in an interview, he indicated that I had offered a good critique, explained that it was a heuristic assumption, but then concluded with the comments in lines 28-32 (Figure 11). In an analysis of the rhetoric of sociology, Edmondson suggests:

> The deviations from conventional [sociological] methodology which are discussed in this book have a common character: they deal much more with personal events, attitudes, or reactions than their authors' theoretical positions would justify. Because of this, though not only because of it, I claim that the sociological arguing I investigate takes place in terms of 'personal communication.' This type of communication is not necessarily irrational, unscientific or unduly biased. It is simply more closely connected with the personal existences of author, subjects and reader than most current assumptions about academic writing imply. (p. 2)

Sean's suggestion in line 32 that adolescent girls are not being sexually harassed at work illustrates, I believe, the way a key assumption in Sean's argument is grounded in his everyday experiences and beliefs, just as my questioning of that basic assumption was grounded in my everyday beliefs, which would lead me to say that such harassment is likely.

Second, it is important to stress that *the dissertation* was also a highly indexed, multidimensional topic. The prospectus, at least theoretically, served as a kind of institutional charter document for Sean's research. This status was implicit in the fact that most of the seminar response to the draft prospectus addressed what Sean believed and what research he would do rather than what his revised text should say. However, in addition to its ties to canonical models for scientific research and institutional models for professional certification, Sean's prospectus had topical radiations to his status in the Study, his interpersonal relationships (particularly with West and Lynch), and his future career (especially the position he hoped to take in six months). In this sense, the draft prospectus represented just one element in a complex pattern of relationships and activities; response to the text provided an opportunity not only to revise the text, but in a real sense to revise that wider pattern of relationships and activities.

In Sean's final interview, the multiplicity and power of this first topical thread, the dissertation, is strikingly illustrated. In Figure 12,

Sean interview #2: Asked what results he had found, Sean laughs
1   Sean: [laughs] ...when you get down to the empirical business of it Paul,
2   **the very first thing you have to do is establish that there is indeed**
3   **an instrumental and expressive support.   There isn't.** [laughing]
4   So **the whole thing was blown out of the water within one week of analysis**
5   Paul: [laughing] so that's what you're writing up now, or did you do
6   something different
7   Sean: [Sean discusses what he did find and then returns to the prospectus]
8   ...but see **when the committee met to talk about the prospectus, the actual**
9   **committee**, what they sai-, the- **Ray Scott** is a statistician type of guy and
10   he **said, "You know Sean this argument is too well specified because**
11   **you know"** and like **he saw what was going to happen right away**, he said,
12   **"You know, at every step you're assuming that something will definitely**
13   **be true and that's not, that's not a good way to construct an argu-,**
14   **you should leave arguments open so one way or the other you'll be able to**
15   **do something"** so the committee, it was kinda weird, **the committee said,**
16   **you know, "The hell with this prospectus, you know, go do something**
17   **on social support, stressors, and adolescence,** [laughing] **we'll see you**
18   **in a couple months."** so I went out and sure enough it failed and I came
19   **in, told Elaine, she goes, "Ok, well, go back and do it, you know, keep**
20   **going"**

Figure 12: Making the dissertation work

Sean recounts how the plan laid out in his dissertation prospectus failed in the very first step (lines 2-4). He then goes on to explain that the third member of his committee, a statistician, had predicted the problem. In a stretch of constructed dialogue, Sean first animates Ray Scott (lines 10-11 and 12-15) and then the whole committee (lines 15-18) to the effect that they had anticipated that his analytic strategy would blow up, but had authorized him to just do something, or as Sean's account has it, "The hell with the prospectus...." (line 16). Finally, Sean narrates a discussion with West in which he announces that he cannot test his hypotheses and she tells him to "go back and do it" (line 19). I am reminded of a conclusion Knorr-Cetina drew from her research: "If there is a principle which seems to govern laboratory action, it is scientists' concern with making things 'work,' which points to a principle of success rather than truth" (p. 4). *Making*, in this case, *the dissertation work* appears to me to be the fundamental topical thread in this microhistory of talk and text, the theme around which other topical variations play.

Conclusions

First, a sociohistoric analysis of three key topical threads displayed in the seminar negotiation of Sean's dissertation prospectus and inscribed in Sean's texts points to the dynamic and dialogic nature of topics and to the kinds of practices involved in their contextualized use. Tracing the topical threads in the talk and texts illuminated, at least

partially, the sedimented contexts and discourses infused into this negotiation. Each thread appeared to be discursively multiple. Participants' tales of *girl talk* pointed not only to the disciplinary literature on adolescent girls and boys, but also to everyday sociocultural discourses. Discussions of *causal modelling* rehearsed concepts from experimental design and statistical analysis, but were also grounded in the local institutional contexts and relationships of the Study. Discussions of the *dissertation* invoked an overlapping matrix of personal, interpersonal, and institutional contexts (everything from Sean's history of work in the Study and the nature of the Study's data to his prospectus committee meeting scheduled for the next week and the job he had accepted for six months later). In other words, the topics were indexed in multiple discourses, shifting between different topical terrains, and, at least sometimes, dialogically charged with divergent senses.

As for the practices involved in using these topics, the topical analysis suggests that sedimented contexts did not simply enter this chain of events as static, inert elements: participants tactically employed these topics to nominate and display, contest and ratify discourses as they worked to achieve the emergent meanings and goals of their on-going interactions. Simply the act of switching to everyday discourses, as Thomas and West did in their early counter-narratives of girl talk, represented a tactical construction of the immediate context, a construction that not only directly challenged the disciplinary validity of Sean's arguments, but that also tacitly contested the disciplinary contextualization of that argument, the social-discursive fabric in which the argument was embroidered. In addition, participants' situated use of topics often reaccentuated the established discourses. Thomas' everyday commonsense expectations (Episode 4) were tacitly ratified *as* legitimate disciplinary arguments. In Episode 11, Lynch's comments illustrate recontextualization in the opposite direction, turning the abstract, "disciplinary" issue of non-linear modelling into a contingent issue connected to Sean's timeline and his institutional evaluations. Thus, I suggest that this topical analysis traced key contours of the contexts (sedimented and emergent histories) and the practices implicated in the construction, negotiation, and revision of Sean's prospectus.

Second, the dynamic and heterogeneous nature of topics, and particularly the gap between the topics in the seminar talk and those that appeared in, and disappeared from, Sean's texts, has important implications for our understanding of disciplinary enculturation. Sean's texts,

and his actual research, were not generated through the instantiation of canonical schemes of sociology, scientific research, and graduate education. Instead they were constituted as a historical trajectory through a dynamically configured, multidimensional space. In other words, Sean's texts were radically indexed in local activities and local histories. Yet, these local histories of textual production and reception were not overtly displayed in Sean's text: indeed, as we have seen, many were literally marked by their absence. Thus, this study of the topical contours of context in the negotiation of Sean's prospectus suggests that disciplinary knowledge and disciplinary membership are not contexts that we can simply assume and use in explaining discourse. Instead, they represent dynamic achievements that must be artfully constructed or displayed within (perhaps against) the heteroglossic, multiply determined ground of everyday life. As de Certeau argues, disciplines have no true autonomous space to operate in, no way to cut the cord of social and material historicity. As a complex of situated practices, disciplinarity is achieved through tactical movements back and forth between multiple possible worlds/discourses, translating all the time, and through the tact to sense how which topics may be appropriately nominated where. Clearly, as this microhistory of talk and text suggests, the practices of disciplinarity can only partially be learned through a study of its texts, for where the discipline is most purely displayed, its practices are most thoroughly obscured.

Notes

1) In another illustration of how topics connect to contexts, Lindstrom provides an interesting analysis from a very different setting, an oral debate on the island of Vanuatu. In the debate, the participants strategically employed topics, working to establish the truth of their positions by invoking or contesting different (sometimes contradictory) island discourses. For example, part of the debate focused on the issue of whether there should be a debate at all and, if so, who had rights to speak in it, that is, on whether it was an internal family issue or one involving the wider community. Another issue revolved around whether the death of a boy was connected to his grandfather's cursing him or to his parents' early resumption of sexual relations. I cite this example because it makes the cultural nature of topics more visible; topics can appear obvious and natural at home.

2) In saying that participants use tools, I do not mean that this use is always conscious and controlled. Indeed, I assume that use of these semiotic tools is largely tacit and normally involves unintended consequences (i.e., the

tools in a sense also use the participants). Bakhtin (*Dialogic*) vividly describes the conflicts that emerge as an individual's word encounters the alien words of others. Leont'ev, who developed Vygotsky's notions into activity theory, suggests that tools represent a crystallization of sociohistorically developed structures of labor practices and relations. In more memorable terms, the psychologist Abraham Maslow is reported to have said, "If the only tool you have is a hammer, you tend to treat everything as if it were a nail."

    3) Names of participants and institutions are pseudonyms.

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Appendix A: Transcription of Talk

Transcription symbols:
1)   = latching of speech, i.e., no perceptible pause across a turn
2)   / He /
        /No /   overtalk (i.e., simultaneous talk)
3)   ( )   unintelligible
4)   (yes)   uncertain transcription
5)   -   abrupt self-interruption
6)   [ ]   explanatory note
7)   [1 s]   note indicates a pause of over 1/2 second, estimated in
half-second intervals
8)   "Go ahead"   quotation marks indicate constructed dialogue
9)   ....   material deleted from transcript
10)   **Bold print**   Emphasis added to highlight points for analysis

Closer transcription was generally done for classroom interactions than
for interviews. In interviews, some backchannel talk may be deleted to
save space. Capitalization, punctuation and line breaks are included to
aid in reading the text. In some cases, line breaks might be related to
breath groups and intonation contours; however, line breaks were not
based directly on transcription.
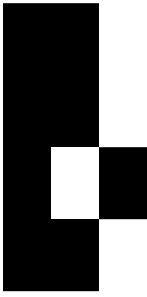
Literacy and Expertise in the Academy

Cheryl Geisler
Rensaeller Polytechnic Institute

The ability to read and write are usually regarded as a birthright in this country. The transmission of reading skills to the general public has been part of the agenda for American education since the initiation of the public school movement (Cook-Gumperz; Graff; Soltow and Stevens). As a result, we regularly espouse the ideal if not the practice of teaching everyone to read, and recent educational reforms have attempted to add writing to this agenda.

The concept of expertise, on the other hand, has a less egalitarian ring. Not being an expert in our society is seen as the default value, something of which no one is ashamed and some are even proud. In American culture, in particular, the figure of the "expert" invokes strong and ambivalent reactions as we, on the one hand, look to experts for guidance in everything from toothpaste to national fiscal policy, and, on the other, excoriate these same people for running roughshod over average citizens and using lucrative professional monopolies to give advice we no longer trust.

For these reasons, some readers may question my bringing them together in this study of literacy and expertise in the academy. Yet a growing body of research on literacy practices repeatedly points to the complex ways in which reading and writing have been transformed by the academic professions. In fact, reading and writing practices, which on the surface look open and easily available to all, may actually have become arcane practices restricted to just a few.

In this article, I attempt to untangle the complex relationship between literacy and expertise in the academy. Highlighting patterns in evidence reviewed more extensively elsewhere (Geisler), my main argument will be that the cultural movement of professionalization has used the technology of literacy to bifurcate expertise into two distinct components — domain content and rhetorical process — creating, in effect, a Great Divide between expert and layperson.

Expert Cognition in a Dual Problem Space Framework

At the end of the last century, American schooling assumed two functions with respect to expertise. First, the academy took on the task of certifying the cognitive expertise of a limited number of individuals who would eventually make up the core of the modern professions. Following an initial decline in the aftermath of the Jacksonian era, academics — like other professionals — emerged by the end of the century as far more numerous and far more middle class than they had been in earlier decades (Collins; Oleson and Voss; Veysey).

The changing fortunes of the academic professions were closely tied to changes in the credentialling requirements of the professions generally. At the opening of the century, the only professional career which had required a college degree was the clergy. Over the course of a few decades, this pattern was to be altered significantly as universities took on the central task of certifying professional expertise through the awarding of credentials (Freidson, Chapter 4). This credentialling system, in turn, both guaranteed academic professionals some life-time jobs in universities and colleges and mandated coursework in their areas of specialization.

The second task taken on by the academy at the turn of the century was educating the general public. As Larson has pointed out, the modern professions not only had to arrange the conditions for their own market advantage through a credentialling system, they also had to create the market for their professional services (Larson 8). That is, the general public had to be educated concerning those areas of activity which had best be left to experts. Paradoxically, this required inculcating a respect for expertise and delimiting its proper areas of operation — all without actually transmitting the expertise itself (Bourdieu and Passeron 41).

The American academy was thus faced with what I call the dilemma of expertise. On the one hand, it was charged with the task of producing experts — that is, producing the expert knowledge upon

which professionals would act and passing that knowledge on through certified educational programs. On the other hand, it was also charged with the task of producing consumers for expertise. In many systems, these two tasks would have been undertaken by a different set of educational institutions. In France, for example, students who will enter the professions branch quite early in their schooling from those who will not, and the content of their education is tailored accordingly (Collins 91). In the United States, however, these two sets of students were educated simultaneously. That is, at the same time and in the same classrooms, students who would eventually become experts in the domain content of the curriculum sat side by side with those who would become consumers of that expertise. Such was the dilemma of expertise.

The American academy appears to have responded to this dilemma by using the technology of literacy to separate expertise into the two distinct dimensions of knowledge. The first of these is the dimension of domain content; the second, the dimension of rhetorical process. This separation has transformed not only social institutions, but, as shown in Figure 1, the shape of expert thinking itself. In particular, the institutional forces of professionalization in this country have shaped and are shaped by a cultural practice of expertise which plays itself out, cognitively, in two distinct "problem spaces" in the sense Newell and Simon (1972) first introduced: a problem space in which experts explore the domain content of a particular field, and a problem space in which they consider a field's rhetorical dimensions.

For the most part, cognitive science has not seriously addressed the possibility that expertise might involve more than one problem space. The work of Bereiter and Scardamalia represent one notable exception however. In their 1987 monograph, these authors were the first to suggest that writers negotiate between the two different problem spaces of domain content and rhetorical process (Chapter 12). While Bereiter and Scardamalia did not provide a full analysis of how these problem spaces might interact, a simple example can be imagined. The content problem space of a third grader trying to write an essay on her favorite topic, for instance, might consist of domain content concepts such as "dog," "collie," and "dalmatian." Within this problem space, the writer might explore her domain content knowledge through such operations as class inclusion ("How many kinds of dogs can I think of?"), use ("What are dogs used for?"), and life cycle ("How long do
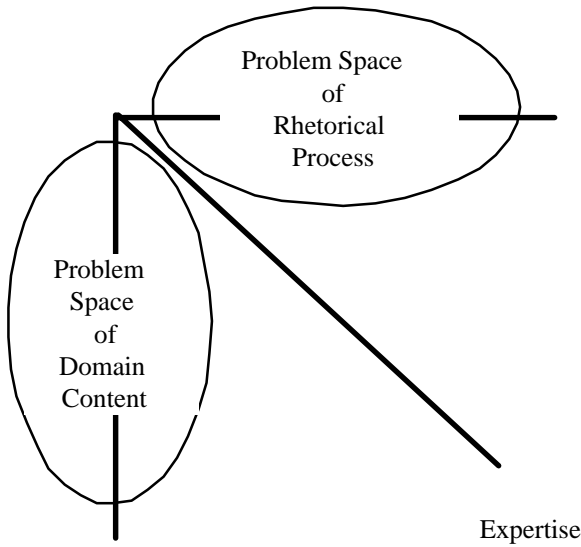
The dual problem spaces of expertise.

dogs live?"). The rhetorical problem space, on the other hand, would be shaped by the writer's relationship to the intended audience. Its objects might include potential readers who are examined in such terms as recent experience ("What have my readers heard about recently?") and general beliefs ("How do my readers feel about this?"). According to Bereiter and Scardamalia, successful writers must shift among these two separate problem spaces, allowing the results of exploration in one space ("We've all just seen *101 Dalmatians*.") to guide exploration in the other ("What are dalmatians used for?") and vice versa ("I know a lot about collies. Why would my readers be interested in collies?"). By doing so, writers engage in knowledge transformation rather than simple knowledge telling.

Characterizing expertise as made up of dual problem spaces helps make sense of the complex pattern of expert problem-solving in ill-defined domains. The most obvious characteristic of the this problem-solving is the abstractness of their domain content representations (Glaser). This abstraction seems to emerge early in experts' training. Nearly all of the students in studies of cognitive expertise, for instance, appeared to use some kind of abstraction by early graduate school.

Such abstraction does not appear to constitute the whole of their expertise, however. Further training and experience were required

before these students developed the second characteristic of expertise in ill-defined domains: the capacity to adapt abstractions to case specific data. Without such adaptation, however, domain content abstractions seemed crippled. On the basis of the abstract sentencing precedents of the Australian courts, for instance, the aspiring magistrate studied by Lawrence produced sentences that ignored the issue of how to best prevent specific defendants from committing the same crime again. Based solely on their abstract models of patient anatomy, the resident radiologists studied by Lesgold and his colleagues produced misdiagnoses which ignored patient history and the radiological setting. With just social scientific abstractions to go on, the experts in Latin and South America studied by Voss, et. al. developed an analysis of the Soviet agriculture problem that failed to consider aspects of Soviet culture.

These results suggest that the ability to adapt to case specific data is distinct from and subsequent in development to the domain content abstractions on which they are based. This difference and sequencing can be accounted for, I am suggesting, by modelling expertise as the interaction of a relatively early developing problem space of domain content and a later developing problem space of rhetorical process. In the domain content problem space, experts develop the abstractions that enable them to go beyond everyday understanding. But it is through the rhetorical problem space that they develop the reasoning structures that enable them to bring those abstractions to bear upon the contexts in which they work.

Thus, as shown in Figure 2, the problem space of domain content and the problem space of rhetorical process — like all problem spaces — are both susceptible to either a naive representation fairly close to everyday understanding or a more abstract representation characteristic of expertise. In the problem space of domain content, expertise reconfigures naive and everyday objects into more abstract entities with different features and different relationships (Bundy and Byrd; Chi, Feltovich and Glaser; Clement; diSessa; Forbus; Gentner and Gentner; deKleer; Greeno; Larkin, 1981; Larkin, 1983; Larkin, McDermott, Simon and Simon; McCloskey; Williams, et. al.; Wiser and Carey; Young, as well as the review by Glaser). Thus, for example, physics experts see forces and vectors where most of us see carts and pulleys (Larkin).

In the second, or rhetorical, problem space of expertise, all the evidence points to the same pattern of transformation: novices appear to operate with a more everyday understanding of texts as repositories of knowledge, completely explicit in their content but utterly opaque in
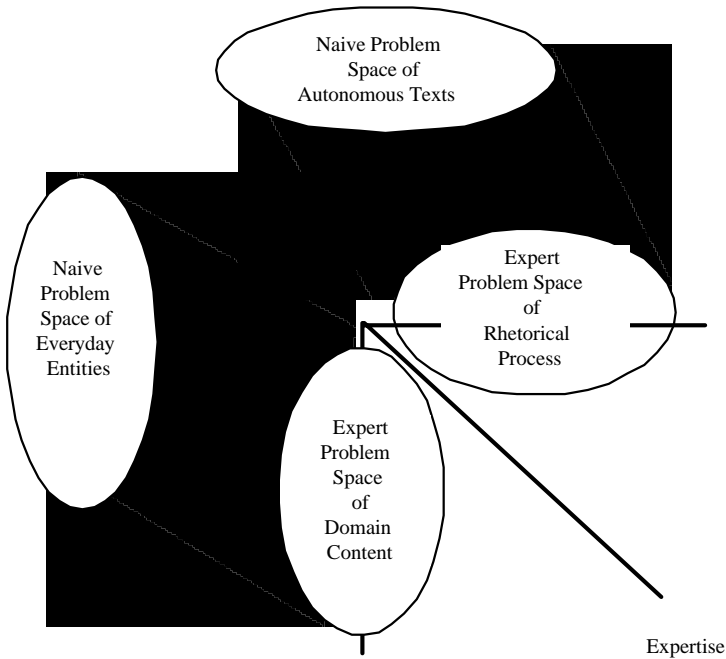
Figure 2
The relationship between naive and expert representations.

their rhetorical construction. Experts take these same textual objects and manipulate them in more abstract ways, attending to features the novices ignore and ignoring the features to which novices attend. The most obvious example of this is the way novices overlook the fact that texts are authored while experts cannot even begin to understand a text without knowing who wrote it (Bazerman; Charney; Geisler, Chapter 10; Haas; Haas and Flower; Lundeberg; Penrose and Fennell; Wyatt, et al.).

By describing the achievement of expertise as an interaction of two distinct problem spaces, we can provide a better account for the basic pattern of development in our schools. This process appears to fall into three periods. During the period of general education, as shown in Figure 3, roughly kindergarten through late high school, students appear to operate with naive representations in both problems spaces. As the research on physics problem-solving suggests, students by and large approach the domain content of the curriculum by assimilating informa-

tion into their everyday understandings or by maintaining distinct representations, one for the formal knowledge of the classroom and one for their everyday life. Participation in the IRF structures of schools teaches children that academic knowledge is different from and superior to the indigenous knowledge they bring from their home cultures (Mehan; Edwards and Mercer). The problem space of formal concepts becomes more extensive, as more and more concepts are added, but it remains a basically naive representation.

During this same period, the rhetorical problem space is relatively stable and underdeveloped. Students are encouraged to view texts as the totally explicit source of formal knowledge, as autonomous texts. In the first few years of elementary school, attention is paid to learning the reading procedures by which this knowledge can be read out of texts (Heap; Baker and Freebody), but from then on relatively little attention is paid to the text. Writing during this period is relatively rare (Britton, et al.; Applebee, 1981), but when it does occur it serves simply to reverse reading procedures: The text to be written is made isomorphic with the structure of the domain content as the writer understands it, using what Bereiter and Scardamalia have called knowledge-telling procedures.
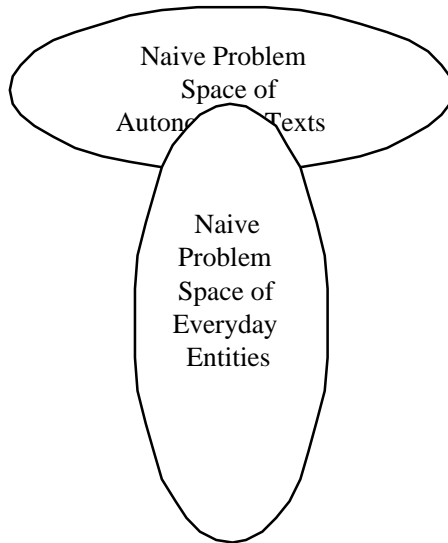

Figure 3
The collapsing of problem spaces in K-14.

Through these reading and writing practices, then, the rhetorical prob-lem space is almost entirely collapsed onto the problem space of domain content. Under this naive representation, texts are taken to be equivalent to what they say.

Sometime during the early years of undergraduate school, some students begin to work with more abstract representations of domain content as shown in Figure 4. Such development does not appear to be the result of any direct teaching but rather the result of hours of individual effort at hands-on problem solving. That is, students who acquire the abstract representations necessary to do expert work appear to do so tacitly. Their textbooks and classroom lectures seldom acknowledge the existence of these abstract representations or give directions in how to use them. Nevertheless, some students do begin on their own to think about the domain content in more abstract terms.

During this intermediate stage, the rhetorical problem space remains distinctly naive however. Textbooks, still the mainstay of the curriculum, are interpreted as containing the domain content upon which students will be tested. Writing, on the rare occasions it is used, serves to duplicate the knowledge structure of these texts (Applebee,
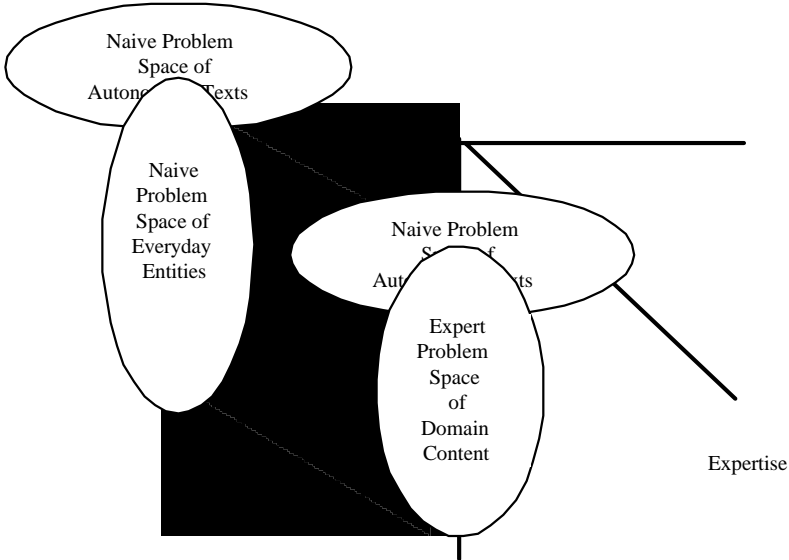

Figure 4
The emergence of the expert representation
of domain content in undergraduate school.

1984, Chapter 4; Brown, Day, and Jones; Garner et al.; Sherrard; Nelson). Students know intuitively that to do more would jeopardize their mastery of content knowledge they will be required to demonstrate on tests (Penrose; Schumacher and Nash; Langer and Applebee). It is only the occasional academic researcher, wandering into the school, who is surprised by what they do. Knowledge still has no rhetorical dimension.

Beginning in late undergraduate school for some, graduate schools for others, this naive representation of rhetorical process undergoes a major reorganization and abstraction. As shown in Figure 5, the rhetorical dimension of expertise is suddenly revealed as something distinct from the domain content. Texts are now seen to have authors, to make claims, to be acts that can be understood only within in a temporal and interpersonal framework (Haas; Penrose and Fennell). Some issues are hot, some issues irrelevant, some issues settled. Some authors are credible; some discredited; some irrelevant. People write texts not simply to say things, but to do things: to persuade, to argue, to excuse.
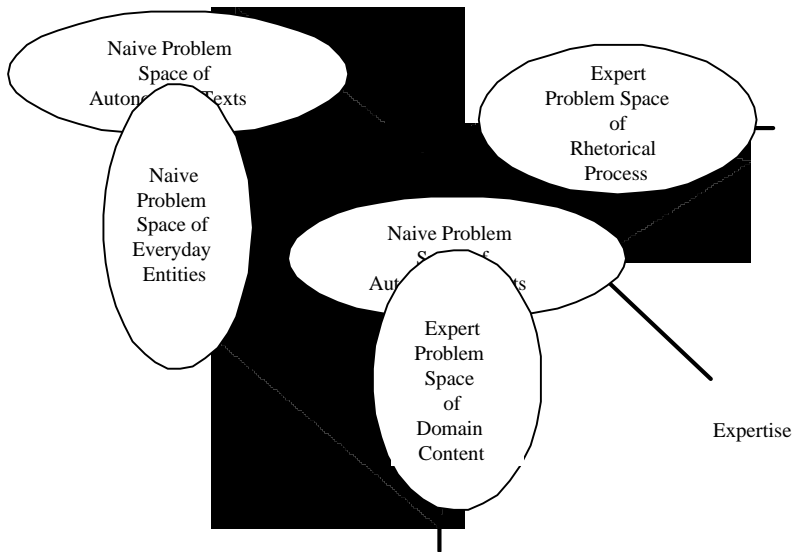

Figure 5
The emergence of the expert representation
of rhetorical process in graduate school.

This emergence of an expert representation of the rhetorical problem space is the final stage in the acquisition of expertise. For it is only when both the domain content and the rhetorical processes of a field are represented in abstract terms that they can, together, engage in the dynamic interplay that produces expertise. Teachers, who once remained remote lecturers on issues long dead to their fields, now come alive as mentors in cutting edge research. The oral discourse and accompanying hands-on activity of knowledge construction start to restructure the basically flat formal domain content abstractions learned earlier. Rhetorical knowledge and domain content knowledge, as Bereiter and Scardamalia first suggested, come into dynamic transformative interplay. Expertise, then, is recovered whole, becomes a *knowing that* linked to a *knowing how*.

Literacy and the Great Divide

The cognitive tradition — the source of the concept of "problem space" used in the above discussion — can rightly be understood as part of the movement to open up expertise, to make it explicit and more available to those who aren't born to it in apprenticeship training. Consistent with this goal, nearly all investigations of cognitive expertise have accounted for expertise as a complex skill which, if better understood, could be made more freely available to more students earlier in their careers. Bereiter and Scardamalia, for example, clearly hoped to encourage students to abandon their simplistic knowledge-telling model of writing and instead adopt a more reflective dual problem space model.

But in order to actually meet the goal of opening up expertise, we cannot afford to remain blind to the sociological dynamics by which cognition has been used to support accounts of school failure. Dual problem spaces, for example, could be understood simply as the way experts handle the complex tasks of expertise. Simon has noted in connection with ill-defined problems in general, for example, that experts tend to decompose a problem into subproblems each of which can, to some extent, be solved independently (Simon). This decomposition, he further suggests, follows the naturally-occurring weak boundaries among entities in a system. Thus, a good decomposition is supposed to keep entities with strong bonds together and separate those with relatively weak bonds.

Using this explanation, we might assume that experts operate in the dual problem spaces of domain content and rhetorical process

because of naturally occurring bonds and boundaries among concepts. That is, by operating in the problem space of domain content, experts could be simply keeping domain concepts with domain concepts; by operating in the problem space of rhetorical process, they could be simply keeping rhetorical concerns with rhetorical concerns. This interpretation of the dual problem space framework would be a dangerous one, however, for it accepts as "natural" what is actually the outcome of social arrangements and cultural power. In particular, it might suggest that academic expertise is so cognitively complex that we can reasonably expect only some students to master it.

We must avoid this interpretation. Some kind of decomposition may be inevitable given the limitations of human information processing, but no particular decomposition is itself inevitable when the entities involved are cultural objects. Instead, we must consider the ways in which culture can influence not only the deployment of material resources and the development of institutional structures, but also the structure of thinking itself. The development of the dual problem spaces of expertise simply dovetails too well with the institutional requirements of professionalization to be accepted as simply the outcome of processing limitations. Thus, in building a dual problem space framework, we need to ask: Why these bonds? Why these boundaries?

The answer to these questions appears to be that the separation of expertise into the distinct problems spaces of domain content and rhetorical process is an important mechanism by which our society delivers expertise to some while withholding it from others. Expertise, which was restricted in the late nineteenth-century to the indigenous culture of the upper-class Eastern elites, appears to have been taken over by the middle-class professionalization movement (Collins; Haskell, Chapter 4; Bender; Higham) and divided into two distinct components: a formally explicit knowledge of domain content which became the mainstay of a universal education aimed at producing laypersons, and the more informal and tacit knowledge of rhetorical process which remained the more or less hidden component of advanced training aimed at producing a new class of professional experts.

As a result, our current educational sequence provides all students with a naive understanding of the more formal component of expertise while withholding an understanding of this tacit rhetorical dimension. In this way, as suggested in Figure 6, a Great Divide has been created — not a great divide between orality and literacy as literacy scholars originally suggested (Goody and Watt; Havelock; Olson), but rather a
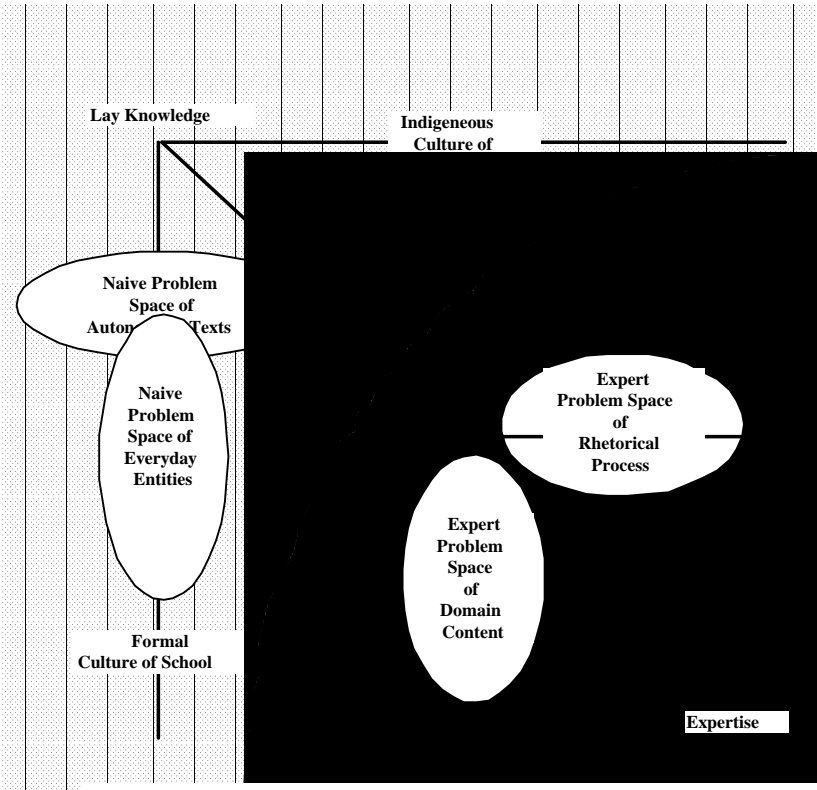
Figure 6
The Great Divide between expert and lay knowledge

great divide with experts on one side with a complete if disjoint practice of expertise, and laypersons on the other side facing what seems like a choice between buying into the formal culture of the schools or remaining loyal to their indigenous home cultures.

This Great Divide has been maintained for the most part through the literacy practices of the academy. Literacy in the early years is predominantly concerned with building a naive representation of the domain content problem space. Stripped of metadiscourse (Crismore), texts neglect the rhetorical dimension of expertise, making the problem space of rhetorical process absolutely indistinguishable from the problem space of domain content. As a result, students may be able to use textbooks to perceive that their everyday understandings are inconsistent with formal knowledge (Alvermann, Smith, and Readence). But they do not seem to be able to use them to gain insight into the context-

bound processes by which such formal knowledge can be integrated with personal knowledge brought from their indigenous home cultures.

At this level, then, the literacy practices of the schools help to create a layperson attitude. In textbooks, knowledge is packaged in exactly the way that it will be most likely to be ignored or misunderstood by students. When these students grow up to be laypersons, they will be well educated in what Halloran (personal communication) has called *professional incompetence*. That is, they will already know that domains of knowledge exists which they do not and cannot understand, and they will thus will be willing to look to professionals in these domains and thus guarantee them their livelihood.

Persistence beyond this level of the system is the key to the acquisition of expertise, and the literacy practices of the schools are the key to that persistence. Taken at their face value, school texts appear to be lifeless artifacts which, by their very autonomy, invite little by way of further interaction. Interaction, indeed, seems to be beside the point. Rather than engaging students on grounds where their personal experience and beliefs might be relevant, reading and writing in the schools seem to require an abandonment of indigenous home culture, a trading of everyday concepts in favor of the formal culture of books. Students unwilling to make this trade will not pass over the Great Divide.

As an ideology of privilege, professionalization does seem to induce some individuals to make this trade, however. One group of students who seemed eager to make this trade in the late nineteenth century were those motivated by the prospects of upward mobility. In the early decades of the professionalization movement, educational credentials did appear to be effective in creating a fairly sizable redistribution of income from the upper-class to the newly emerging middle class (Collins 189). Once the surplus wealth of industrialization had been redistributed and absorbed by this emerging professional class, however, upward mobility no longer seemed assured (Collins 4). Groups might cling to the professional ideal as a prospect but it was often at variance with the reality of a stratified society in which only some professions attained the full complement of professional privileges and, within the same professions, only some individuals reaped unusual economic advantages (Friedson 88; Larson xviii). At this point, then, professionalism was transformed into more of an ideology shaping individual aspirations than an actual reflection of reality. It is still, however, an ideology that can motivate some students to persist in school.

By and large, however, most students who persist with literacy in the schools are relying on what Bourdieu and Passeron have called the "cultural capital" they bring from home (Bourdieu and Passeron 32; see also Collins 9; Gouldner 20). As Heath's research has indicated, students from middle class Anglo-Protestant homes bring to school a whole host of interaction patterns with texts that are not common in the other indigenous cultures. These early literacy events appear to be a powerful determinant of students' later success in school (Wells). Such interactions, Scollon and Scollon have suggested, enable children to recast themselves as textual agents, thus rehumanizing autonomous texts and understanding them as a part of their everyday lives. Such an advantage, in effect, initiates students' development of a problem space of rhetorical process years ahead of those who do not bring comparable cultural capital from home.

If, for whatever reasons, students persist in school, they will move on to undergraduate school where they will be exposed for the first time to the problem solving contexts in which abstractions about domain concepts are valuable. This is the boundary with expert practice and, not coincidently, it is here that differences are the greatest between what experts do and what laypersons do. Laypersons solving the well-defined problems of textbooks struggle with laborious means-ends analyses to come up with the right answer (Larkin, McDermott, Simon and Simon). Experts in the same situations, by contrast, call on highly routinized forward-search procedures in which the solutions are built into the very way they represent the problems (Chi, Feltovich, and Glaser). At this boundary with expertise, knowledge is in so little dispute that everyone has agreed to archive it in textbooks; solutions are so pat they can be made available at the back of the book. Articulate problem solving in the rhetorical problem space is thus unnecessary, and knowledge takes the highly tacit form most difficult for experts to articulate and therefore most difficult for students to learn.

Only after students declare their majors, select professional schools, or apply to graduate school will they be allowed to move on and reap the rewards of professional expertise. By this time, students will have demonstrated a decided aptitude in their chosen area of specialization, almost single-handedly developing the more abstract representations characteristic of the expert problem space of domain content. In addition, they will have passed through two years of general education aimed at inculcating the virtues of an upper-class liberal culture. Only with these declarations of cognitive and sociological affiliation in place will they be invited to cross the Great Divide.

Once at the cutting edge — where knowledge is most contingent and problems are by definition ill-defined — students find the reasoning procedures experts use to explore the problem space of rhetorical process more explicit and accessible. Experts don't simply see the solution to more ill-defined problems but explore extensive chains of reasoning aimed at being informative and persuasive (Lesgold, et al.). Texts, reconceived, are central to this activity. Now metadiscourse, instead of appearing to be a bothersome or irrelevant aspect of the text, becomes the source of important clues: how certain is this author's claim? did this researcher do the right thing in the lab? does this guy know what he's talking about? Texts, which used to be read straight through are now taken apart for clues.

A process of rhetorical recovery is initiated. And what is recovered, strangely, is the temporal and human aspects of indigenous culture that students once thought they had to leave behind. It is the details of lived experience, in the lab, in the conference room, in the funding agencies, that must be recovered. But it is a reconfigured indigenous culture, one more abstract in which the "career" of a professional serving humanity, uncovering truth, and contributing to progress takes on a public significance. Professional identity becomes part of personal identity (Larson 227-229). The abstract temporal dimensions of cultural progress, the getting and using of knowledge, become the temporal rhythms of the professional's daily life.

From a sociological perspective, however, we need to ask why such bonds and boundaries appear to be so natural. For what purpose has such complexity been sustained? In whose interests has this bifurcated practice been developed? Any complete answer to these questions must admit that expertise is not simply a developmental phenomenon. It is simply not the case, for example, that students in the general curriculum are taught to read in a way that must only be further developed when they go on to the university. After fourteen years of being taught that the text has all the answers, is it any surprise that some students find it hard to understand that they must read rhetorically, that they must ask about the author's purpose and context in order to use knowledge productively? Even those who operate as experts in one domain resort to relatively naive strategies in other domains and take texts at face value (Bazerman; Ackerman). In each area of specialization, then, students must actually be untaught the distrust of personal opinion and contextualized understandings that has been drummed into them through the period of general education.

We might argue, of course, that this lack of rhetorical interpretation arises out of these laypersons' absolute lack of knowledge. That is, perhaps students can only draw on background knowledge if they *have* such knowledge. While such a statement looks eminently reasonable, we must recognize that it can only be made once we have *already* discounted all knowledge outside the academic framework. After all, experts are not the only ones who can make connections between specialized content and experience. They are simply the only ones whose experience counts.

The contrast between the neat developmental sequence suggested by Figure 2 and the complex transitions diagrammed in Figure 5 is a telling one: The development of the two problems spaces of expertise does not take place along two independent and straightforward continua as Figure 2 suggests. Instead, obscured by the myth of the autonomous text, the rhetorical problem space is only allowed to emerge, as shown in Figure 5, within the context of an already abstracted representation of domain content. In this way, the processes of cognitive development have become heavily intertwined with the sociological dynamics legitimizing professional privilege. That it, the circuitous development of rhetorical process practically guarantees that experts will be the only ones able to use a field's texts in any kind of sophisticated manner, will be the only ones who can sustain serious interaction or invite serious response on specialized content.

The Problem of Reflection

In closing this brief and too rapid survey, I would suggest that we simply can make no real sense out of the literacy practices of the academy unless we understand institutional forces of professionalization that create a society made up of experts on one side and laypersons on the other. In a similar manner, however, we can get no purchase on the sociological phenomenon of expertise unless we see how it is played out on the minute practices of reading and writing of individual agents. This is what I have referred to elsewhere as the problem of reflection (Geisler, Chapter 13).

For, in one way or another, *we* are those individuals. Simply by virtue of being at home in these texts, reading and writing these texts, *we* are involved. Even those of us in the academy who do not see ourselves as implicated in the professionalization project must come to terms with the way the academy has been shaped by that project. It is all too easy to view expertise as the outcome of monolithic institutional

forces over which we, as victims or innocent bystanders, have little control. But as long as research on expertise is written as the account of what other people do, the account will be a false account. Only once we engage with the problem of reflection, seeking explanations which ring bells with our own experience, with what we ourselves do, will we be getting closer to the truth.

The stake for involvement are high. As long as students think that they have to abandon the resources of their home cultures in order to succeed in school and in the professions, a significant portion who refuse to make the move will be forced to drop out; a significant portion who do make the move will be crippled. Much is made today of school reform but in most cases, academic practitioners make these calls for the reform of others and never of themselves. The argument made here, however, is that some of the persistent inequities in American schooling began with the academy's alliance with the agenda of the professional movement. So long as this alliance persists unquestioned, so long as the university functions primarily as a credentialling wing for the professions, we will continue to construct and reconstruct the Great Divide in every act of our daily reading, writing, and knowing.

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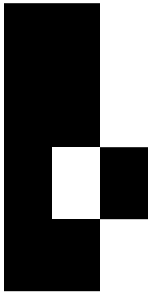
The Wonder of Writing Across the Curriculum

Art Young
Clemson University

The main reason I got involved with writing across the curriculum fifteen years ago was administrative and related to campus politics. The main reason I have stayed actively involved in writing across the curriculum for fifteen years is personal and related to my teaching. Quite simply, I am a better teacher because of writing across the curriculum. So while motivations and intentions are messy things to characterize, for me the combination of administrative and teaching responsibilities and personal and public desires have led to most of my professorial life being engaged in writing across the curriculum — in my own classroom and on my college campuses — first at Michigan Tech, and now for six years at Clemson University.

Fifteen years ago, as a new department head, I was called into the office of my even newer Provost and given a charge: do something about the lack of communication skills exhibited by Michigan Tech engineering students and recent graduates. I returned to my department, symbolically located, I thought, on the other end of campus, and met with colleagues to decide what to do.

Now doing something about the communication skills of engineering students was not at that time the battle cry of my fledgling departmental administration. We had established our own internal priorities around more traditional goals of creating a new undergraduate degree and thereby attracting more majors and of starting a graduate program. It was as if Bill Clinton, on being ushered into power on the promise to build an economically strong America, had been told that his first priority would be to build an even stronger Germany and Japan. To aid aggressive competitors in campus politics for market share and funding priorities. And not only to help them to achieve a better product, a more marketable engineering graduate, but to help them in an area that they themselves didn't deem very important to their mission or worthy

of their time — an area that they saw as a secondary one—communications skills. Kind of like the Japanese or Germans wanting U. S. advice on fashions — what to wear to a corporate dinner. Or so we thought. In some sense, very early on, we saw the Provost's charge as an opportunity, but to recognize how big an opportunity it really was took time, experience, and a new way of thinking about university priorities, about colleagues across disciplines, and about what being a teacher was really all about. So after about a year of study and discussion, a writing-across-the-curriculum project was launched at Michigan Tech.

Now, I hope you don't mind if I use the abbreviation "WAC" for writing across the curriculum. It has become a staple in my vocabulary, like GM, IBM, or GE. In fact, as long as I am drawing analogies to market competition, I might share an experience I had earlier this year. Conducting the second day of a faculty workshop at St. Thomas University in New Brunswick, Canada, I arrived to find an overhead transparency projected onto the screen — "WAC MAN: THE RE-TURN." It was a newspaper ad from a local electronics store in Fredericton — appropriately, perhaps, named "Wacky's." I will spare you the rest of the extended analogy I wrote about obtaining a WAC mobile so that the briefcased crusader could battle sentence fragments and comma splices in a never ending battle against language corruption.

What I have found in fifteen years as a WAC Man, is that being involved with WAC has kept the focus of my professional life on teaching. I realize that my teaching suffers if I allow myself to become isolated, to drop out of the WAC community of teachers at my school, that I lose the reality check on my own teaching and forgo opportunities for further growth as a teacher. That is why WAC, for me, is both a personal and institutional matter. For WAC to work, it needs both the commitment of individual teachers and a supportive interdisciplinary community and institutional commitment to nurture it. Thus, my remarks today will have this twin focus, the individual and the communal, the personal and the public, the teacher and the institutions that support teaching.

It has not been enough for me to get some good ideas about teaching at a conference or faculty workshop and then drop the conversation — go into my classroom and shut the door behind me. I need to find ways to sustain the conversation — with my own students as junior colleagues in the enterprise of teaching and learning — and with each of you. I need them and I need you to keep the teaching conversation going within me, and together we must find ways to keep the faculty

workshop going—with long breaks and with good food, of course—but a continuing workshop nonetheless.

Writing across the curriculum, when it works well and thrives, conceives of students, teachers, our various disciplines, and our administrative programs as one interrelated system (Herrington and Moran ix). This is something I could not or did not imagine sixteen years ago — when I viewed faculty in different disciplines as competitors for market share — ones who talked a disciplinary language I could not understand and did not want to understand.

Writing across the curriculum has its beginnings, for me, in the important work of James Britton, Nancy Martin, and their colleagues at the University of London's Schools Council Project. Theirs was a major effort to integrate and then study "language across the curriculum" in English schools in the 1960s and 70s. Their work demonstrated in theory and in practice that language was integral to learning as well as to communication in all disciplines. Most WAC projects in the U. S. in the late 70s, such as the one at Michigan Tech, were motivated by a desire to enhance student abilities in these two areas. First, they were concerned with students' ability to communicate, what was often called student literacy — functional literacy, critical literacy, academic literacy. Teachers, administrators, and funding agencies wanted students to read and to write better than they did. Second, they were concerned with students' abilities as learners — they wanted students to become more active and engaged learners, critical thinkers, and problem-solvers — and they believed that providing students with increased opportunities to use writing as a tool for learning would help meet these goals. In some sense, we might say that first-generation WAC programs founded on these premises focused on the cognitive development of individual students. They encouraged writing in all disciplines to enable students to become astute learners, critical thinkers, and effective communicators.

In the 1980s, teachers explored the social dimensions of written communication, an exploration that gradually shifted WAC theory and practice away from a cognitive emphasis to a more socially-based perspective on writing. This shift paralleled WAC's move from the individual classroom into the wider social arena of campus-wide and state-wide programs. Thus, to the first two premises for WAC programs, a third and a fourth were added. Third, writing is a social activity; it takes place in a social context. If we want students to be effective communicators, to be successful engineers and historians,

then we cannot separate form from content, writing from knowledge, action from context. We should not teach writing generically, in a vacuum, as if it were a skill unconnected to purpose or context. Student writers need to join a community of learners engaged in generating knowledge and solving problems, to join, even as novices, disciplinary conversations and public-policy discussions. WAC programs, therefore, began to stress the role of collaboration in learning, the role of audience in communication, and the role of social context in learning to write and writing to learn. Each new context makes different demands on a writer and requires different understandings about what is valued as expressions of knowledge in particular communities. Teachers began to change the social environments of their individual classrooms to nurture and challenge student writers, and they began to lobby for the institutionalization of WAC within their school or college.

A fourth premise, then, is that writing is social action; writers are advocates who write to further personal and social goals. If we want students to be effective communicators, we cannot continually ask them to practice at writing separate from any social or disciplinary community of shared knowledge and interests. Writers write to change their perceptions of the world and to change others' perceptions of the world. Thus WAC programs have added advocacy writing to their repertoire; students writing to audiences beyond the classroom, writing to audiences who want to hear what they know and what they think about what they know, writing on electronic networks to understand, monitor, and solve global as well as local problems, writing "where language can lead to action in the world" (Dunlap 213).

As we move through the decade of the 1990s toward the twenty-first century, WAC proponents understand more and more what is to be done. We do not replace the cognitive dimension of writing with the social dimension, but rather we continue to build on the knowledge and experience of others in both areas. Today, mature WAC programs attempt to use all four underlying premises as a way of empowering students as active learners and effective communicators: writing to learn, writing to communicate, writing as social process, writing as social action. Certainly, there are tensions and conflicts between teachers and scholars who prefer either cognitively or socially-based instructional strategies, but the stance of most WAC programs is to welcome competing viewpoints on such matters, to see WAC as an inclusive and evolving movement, one which seeks to encourage conversations about significant educational issues by teachers and other

interested parties, and then to listen for opportunities that may lead to communal action and educational renewal based on consensus (preceding four paragraphs adapted from the "Introduction"to Farrell, Gere, and Young's forthcoming *Programs and Practices*).

But as we all know, when we try to start and sustain WAC programs, things do not always run smoothly in practice. About four years ago, Toby Fulwiler and I were editing a book on this subject: *Programs That Work: Models and Methods for Writing Across the Curriculum*. We were just about finished, and it became time to write the introduction — an overview of the book and a response to the most frequently asked questions about implementing and running a WAC program. But something was bothering me. I knew from my personal experience as well as the experiences of the cross disciplinary faculty represented in the fourteen chapters before me, that something was wrong. We knew that WAC programs create a better academic environment for both students and faculty to learn and excel as teachers and learners, and yet we also knew that most WAC programs remain difficult to initiate, difficult to fund, difficult to sustain, difficult to institutionalize, difficult to integrate into the central role of the school or university. WAC " is still an adjunct program on most campuses, still on tenuous budgetary footing, still without administrative positioning within the academy, still, as it were, operating on the fringe of academic respectability" (287). Even though our book contained descriptions of fourteen exemplary and apparently healthy programs, I thought we needed to confront this darker reality. So Toby and I did what we often do when we don't quite understand what the other is talking about, he went his way to write the first draft of the "Introduction," and I went my way to write the first draft of what was to become the "Afterword" to the book — with the ominous title "The Enemies of Writing Across the Curriculum."

I elaborated on a long list of attitudes and practices that subvert WAC and its effort to improve education, what I called enemies of WAC and institutionalizing WAC— a list familiar to most of you, I'm sure:

— Academic instititutions are organized by disciplinary departments, and thus interdisciplinary programs, such as WAC, fall through the cracks of the academy, along with many of our students.

— WAC is identified as a remedial program, as a quick fix, as something temporary, so that once students again write better, as in the good old days, the program will be phased out.

— Unstable leadership: Writing faculty, often the most knowledgeable leaders of WAC on campus, are often adjuncts, part-timers, graduate teaching assistants, non-tenure track— subject to being rolled over and turned out in a few years.

— Resistance from English departments has many forms as well: reluctance to share responsibility for teaching writing with untrained faculty in other disciplines; reluctance to water down the main mission of the department, the literature program; reluctance to tenure and promote faculty in composition.

— The pressure at many colleges is for even larger classes, more students, but also more research. With large classes come standardized tests and the belief that such tests are objective and preferable to subjective writing assignments. This reinforces the myth that writing in educational settings should be used primarily to test students' knowledge rather than as opportunities to learn subject matter. In the nation's schools, the situation is even worse. Not only are the students labeled with a standardized test score, but so are teachers, schools, school districts, and states. Teaching to such tests subverts innovative teaching— and WAC thrives on innovation, just as mediocrity thrives on standardization.

— At the college level, the traditional reward system devalues undergraduate teaching and primarily rewards research, publications, grants. It also assumes that the teacher's job is to disseminate knowledge and that the student's job is to memorize what the teacher disseminates. If such a model is accurate, it makes perfect sense to videotape the professor's lectures, show them to ten or fifteen classes of students at the same time— or watch them in the library if you miss class— and have graduate students administer the scan-tron tests— to measure how much the students remember from the video lectures. It certainly does free up faculty research time— especially if the videotapes only need revising once or twice a decade (or a career?)

— The fear of student resistance is another key enemy: everyone knows students hate to write, so why turn them off and risk getting lower student evaluations at the end of the term? Teaching students to write about physics or horticulture is someone else's responsibility anyway. Our system of education has trained students to be like Skinnerian pigeons— to prefer things simple. Tell us what to say, when to say it, how to say it, and then give us our reward. But as every WAC teacher knows, students are not pigeons, and when given the opportunity, most prefer not to be treated as pigeons. Faculty are often pleasantly surprised when student evaluations actually go up.

— And the final enemy I noted, faculty resistance: some faculty are apathetic, others insecure, others downright hostile to any program that offers to assist them with their teaching. They see such efforts as a subtle indictment of their current teaching and feel threatened by any attempt at collaboration centered on teaching. They believe that teaching is a matter between teacher and students, and any organized attempt to change their teaching strategies is an attack on academic freedom. At colleges, faculty have an even greater reason to resist — it is against their own self-interest. Time spent on teaching is time robbed from research. (287-294)

This is a depressing litany, isn't it? And this from a guy who is generally upbeat, optimistic, idealistic, forward-looking. The WAC Man. Fifteen years as a WAC advocate. I don't know what got into me — some midlife episode, I assume. My "enemies" essay has now been out for a couple of years, and it has been interesting to see some of the critical reactions from teachers in other places. Mostly, the reaction has been favorable, favorable in the sense that they concede that I commonsensically summarized a depressing situation. Some scholars have been more perceptive and have constructed arguments about how I missed the boat on such things as faculty resistance. Faculty resistance is actually a good thing, they claim, because out of such resistance comes the creative tension that engenders change. The post-modernist paradox: the need to be part of a community with stable traditions and conventions — and the concomitant need for dynamic change and resistance within that same community (Howard 49). For some reason, these arguments did not immediately lift my spirits from their mid-life depths.

And then I read an article by Willima E. Coles. Jr., of the University of Pittsburgh, with the engaging title "Writing Across the Curriculum: Why Bother?" After summarizing my list of enemies and the struggles that WAC programs face, he writes and I quote, "that the real wonder is not that the program has enemies. The wonder is that it has gathered so many friends" (23). And reading Cole's essay, my spirits began to soar. And thus the title of my talk today on the wonder of writing across the curriculum. Cole goes on to conclude his essay in this way:

> Why bother to work at writing across the curriculum? Finally, I suppose, because a student, as it turns out, is not the only focus of the process. For teachers, no less than for students, writing across the curriculum — given its insistence that one ask real rather than loaded

questions, the way it takes for granted the importance of dialogue and revisions as part of the writing process, and its emphasis on teachers rather than the supremacy of the Teacher — can be an expression of faith that can keep faith itself alive, faith in this case that real growth, real development, real change, are possible, even in an educational institution. This does, of course, demand a commitment of time and energy, but an unreasonable one only if I forget that, very simply, I'm a better teacher, a better student, a better preson, when I act as though I had that kind of faith. (25)

And thus the conversations we have at workshops, at colloquia like this one, and in print (like the one I had with William Coles), continue to work their magic for me. So with no apologies whatsoever, I'll tell you about one writing and learning process I have been using in an upper-level Victorian literature class I teach, and thereby share with you the joy I experience in teaching, a joy continually renewed not only by my interaction with students but with faculty colleagues who *bother* about writing across the curriculum.

I use writing to help students learn Victorian literature (the subject matter I teach), learn to read difficult texts, learn to talk and write about them, learn to pose questions that need asking, learn to make meaning in such a way that it is indeed meaningful to them and to others. Although our subject matter changes depending on our discipline, whether accounting or zoology, these are common goals among WAC teachers, ones we can adapt to the unique circumstances of our own teaching. By way of introduction, let me say that I learned about this strategy I'm going to share with you from an engineering colleague, Dan McAuliff, who used it in an electrical engineering course, and that it has been adapted and used by teachers at Clemson in various disciplines, including Melanie Cooper in chemistry and Robert Jameson in mathematics. Unless I am mistaken, all three of these teachers used it before I did. We learned about it from each other in our faculty workshops — which over 400 Clemson faculty have now participated in — and through articles we wrote for our local WAC Newsletter. Although my Victorian literature class enrolls about 35 students per section, it should be noted that Melanie Cooper's first-year chemistry course enrolls about 200 students per section.

The focus on this assignment is on a series of notes or letters students write to each other in pairs. They first write to a partner about the problems they've encountered in interpreting a difficult text — they construct and contextualize questions about it — and then write a return letter to their partner suggesting possible answers and perhaps raising

other issues to be discussed. In writing, they often surprise themselves with what they learn, and they are often gratified to help someone else understand — to make a difference through written communication.

Let me give you the context for this assignment: this was the last of six writing assignments students were required to do in the course, in addition to a midterm and a final exam. Two of the other assignments were formal critical essays on the literature, and three were more informal creative writing assignments, like writing a poem in the dramatic monologue form of Robert Browning. Students kept their writing in a portfolio, which was read and assessed by them and by me about midterm and at the course conclusion. For this final assignment, students had one week to read the novel *Heart of Darkness* by Joseph Conrad, to read the critical introduction to the novel by Cedric Watts, and to read one scholarly essay by China Achebe who argued that the novel is racist. Part I of this assignment, the first letter, was written before the novel was discussed in class; it could be handwritten and be about 200 words long; and Part II, the response letter,was written following the week's class discussion and needed to be typed and be about 500 words long. Students knew as well that there would be a final exam question on *Heart of Darkness.*

I present one letter of inquiry and one letter of response from the exchange between Emily and Alyson — as a way of centering our attention on students' texts.

> Alyson,
> On page 149, Marlow makes a general statement about women after having a conversation with his aunt, saying, "It's queer how out of touch with the truth women are. They live in a world of their own, and there had never been anything like it, and never can be. It is too beautiful altogether, and if they were to set it up, it would go to pieces before the first sunset." After reading the novel, I could see how Marlow would think that Kurtz's Intended fit into this stereotype. She really did seem to be totally out of touch with reality, and she didn't seem to have a clue about the man she loved. The question I want to ask is whether the African woman described near the end of the novel on page 226 fits into this stereotype. Actually, I would like to know where and how she fits into the novel at all, beyond the insinuations of being Kurtz's mistress. I think this woman must be symbolic of something, although I am not exactly sure of what. Is she a living, breating human embodiment of the "heart of darkness," the wilderness of the African Congo, as seems to be indicated on page 226?
> Emily

Emily,

In class, we discusseed the possibility that Heart of Darkness is a masculine novel. This idea seems supported by the narrator's reliance on patriarchal assumptions and Marlowe's unsympathetic view of women and, perhaps, by the subject matter which focuses on plotting, murder, intrigue, and male adventure. Based on these assumptions, the savage woman's role can be explained as a symbolic representation of the things to which this man feels alternately attracted and repulsed — woman and Africa.

Before the trip, Marlow has, as you mentioned, stated his demeaning and subordinating attitude towards women (that they're out of touch with the truth). But that description fits his Aunt and the Intended specifically, while this savage woman seems a striking deviation from this stereotype. When considering the savage woman in the context of Marlow's stereotype, I came up with several possibilities.

Some possibilities for the purpose of this woman were suggested briefly by Achebe. He believes that she serves as a direct contrast or opposite to the Intended. If so, I wonder why Conrad would deliberately draw this contrast with his own view of woman who is embodied in the Intended? When you consider the dichotomies presented (Thames/Congo, Africa/England, civilized/savage, good/evil), this contrast of the powerful, wild savage with the civilized, naive Intended is a fitting echo of the division made by Marlow. But does Marlow's image of women represent what he wants them to be? I think it does because he willfully hides the truth from the Intended by lying about Kurtz's last words.

Yet I think it's important that, to Marlow, truth is available to men only. It is a masculine concern. So if the woman represents Africa, which he suggests is the case by comments such as "... the whole sorrowful land... seemed to look at her, pensive, as though it had been looking at the image of its own tenebrous and passionate soul" (76), then she has a strong connection with the truth. As I see it, the primitive and the savage is the vehicle for truth in *Heart of Darkness*; therefore, this woman conveys, or threatens to convey, truth....

However, another purpose this woman serves is to help explain Kurtz. The implication that she was his mistress makes Marlow and the reader consider her as a real woman, one who is capable of having a relationship with a white man. It's interesting to consider whether Conrad created her to represent how savage Kurtz had become or to show us that our kinship with Africa is real. I think an important question is whether she represents a positive alternative to the deluded, meek Intended or whether she represents the darkness which lured Kurtz into madness. That question asks, I think, a major decision to be made about the novel.

Alyson

As I read the exchange of student letters, the first thing that struck me was the quality of the talk about literature that is exhibited in the letters: the questions and issues that were thoughtfully raised, the insight and agility with the process of literary interpretation, the quality of the writing and thinking, the impressive array of intellectual skills that was brought to bear in assisting another to understand the novel: analysis, synthesis, inference and speculation, integration of primary and secondary sources.

Why was I surprised by such engagement and sophistication by my students?— because these lettters contrasted markedly with the two formal critical essays they had written previously for me and to me in the course — ones which were not coherent or insightful — ones that were not a joy to read. Many of you know the kinds of critical essays I mean. I began to question what might have caused the difference: the shift in audience from the teacher as primary to fellow student as primary with the teacher as secondary? The shift in context, from a topic or question the teacher concocted to a question raised by a fellow student? The shift from the form and language of my profession — the specialized language of literary analysis in the critical essay — a language many students must do their best to invent — since it is not the language of their profession or of their experience — to the form of language of notes and letters — at once personal and familiar to the students?

Some other questions I muse about when I study and interpret the student writing:

— Why did the students claim to enjoy and learn more from the letters they wrote and received rather than the formal critical essays they wrote?

— Why did many students write inept and "just playing the game" critical essays and insightful and sincere letters about *Heart of Darkness*? And was I just playing the game when I earlier in the course assigned a critical essay on the role of love and marriage in Oscar Wilde's play, *The Importance of Being Earnest*?

— Why did the students complain about the restrictions on their creativity and their interpretive ability when I assigned the broad topic of love in Wilde's play for their critical essay, and not complain at all about writing a letter to a fellow student on a much narrower topic (such as the "role of the African woman" in *Heart of Darkness*, who appears for only a couple of pages) ?

— How come the students so easily integrated primary and

secondary sources into the flow of their letters, while quotes from such sources in their critical essays resembled patchwork quilts?

— And why, at the end of class, on the student evaluation form — did numerous students comment that the letters were the most difficult writing assignment of the term, and the most time consuming, and yet the one they found the most valuable and learned the most from?

I assigned these essays last semester — only three months ago — so I'm still musing — I don't have the answers to these and other questions. But I do have some initial observations that I'm willing to share with you — in the hopes that you will give me your ideas about these issues as we chat in the discussion period following this talk.

First, I think the social nature of the assignment was important. The students had interpreted my critical essay assignment as the familiar school assignment — show the teacher that you read the novel and can write some things about it — show your teacher you can think. You are not really helping the teacher understand the novel any better — because the teacher has read and taught the novel several times, read many professional books and essays about it, and you have spent a week reading the novel — while taking four or five other classes at the same time. The advantage of the letters is that they are written for a specific individual, a peer, who is asking real questions, asking for help, and for whom you can play the role of colleague and of teacher. The letters demonstrate students communicating to a real audience rather than practicing at communicating for a pretend audience: profesional scholars who read and write essays about *Heart of Darkness.* In addition, the letters are contextualized within the classroom community. As you can see from Alyson's response letter — and this was true of most letters — the classroom lectures, discussions, and readings are integrated into the letter writing — students synthesize and make sense of what they heard and read in class. The formal critical essays were written in the vacuum — as if to mention that you got some of your ideas from classmates and class discussion was a form of cheating. The letter assignment, I believe, was vital to the knowledge students were making, while the critical essay was perceived as an "add-on assignment" — an "out-of-class" project — and became, in practice, an isolated and isolating task.

Second, I think the problem-posing nature of the assignment was important. The students learned as much in Part I of the assignment as they did in writing the longer and more formal (it had to be typed) Part II. Fundamental to every discipline is figuring out how to ask important

and germane questions that continue the advancement of knowledge within that field. You've got to know a lot to ask good questions (and I found out my students know a lot), and good questions beget good responses. The person writing back to you knows that superficial generalities or a string of quotes from secondary sources will not do — will not answer your questions and address your confusion, will not help you understand a little more about *Heart of Darkness*, will not help at all. It asks the writer to take seriously the responsibility of a writer. It places responsibility on the writer in Part II — an obligation to teach, and an obligation to be sincere and honest. Reading this student writing made me question if I was being honest when I earler asked the students to write and essay on love and marriage in *The Importance of Being Earnest* — when I already knew most of the answers. I also note that Alyson, in responding sincerely to Emily, questions herself — and that these questions and the remarkable conclusion to her essay become an invitation to continue the conversation — not an attempt to provide definitive answers and thus end it.

In reading my students' writing — both the critical essays and the letter exchange — I not only learn about the students, about Oscar Wilde and Joseph Conrad, but also, and maybe most importantly, about myself as a teacher, who and what I value in teaching. I now realize I prefer my mirrored reflection, my own self image, as it is represented in the student letters — rather than the image of me I see represented in their critical essays. It makes me eager to read the writing my students this semester, in an entirely different course, are generating. And it makes me eager to listen to each of you talk about your teaching-- in the hallways and in the workshop sessions over the next two days of this colloquia. For doing these things, quite simply, makes me a better teacher.

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Coming to Grips with Theory: College Students' Use of Theoretical Explanation in Writing About History

Russel K. Durst
University of Cincinnati

This is an exploratory study of reading and writing within a particular discipline. It is also an investigation of critical thinking and an examination of engagement and resistance in using language to learn about new concepts. I looked at how college history students wrestled with and sometimes worked around issues of theory, specifically theories of the causes of the Civil War. Using analysis of think-aloud protocols, I investigated how students comprehended theoretical writing about the Civil War and how they used the theoretical material to take a position in writing about these same issues. My main purpose in this article is to examine the cognitive moves students make, their ways of thinking, when working with theory, an activity which many educators today are touting as particularly important in developing students' critical thinking abilities. I am especially interested in the stances students take toward their subject matter which *promote* critical reasoning, that is, which lead to engagement, as well as approaches which *circumvent* or stand in the way of such thinking, that is, which lead to resistance.

I will explain the study and discuss what I mean by theory, but first I would like to put a theoretical frame around the research. Why did I look at theory? Partly because we live in theoretical times. Many disciplines have seen efforts to make their work more explicitly theoretical, that is, more open about the underlying principles governing the work, and more consistent and rigorous about adhering to those principles. Theory can obviously mean many different things, but I take as my working definition James Britton's notion of theoretical writing: writing that builds and defends a systematic argument at a conceptual level, including implicit or explicit recognition that there are alternative perspectives. Such writing also involves the formation of hypotheses and deductions from them. The theoretical turn in academia has been

most evident in the areas of research, publication, and presentation, in the "public" conversations that take place within disciplines. In history, a book by Peter Novick (1988) has created an enormous stir, causing what distinguished historians are calling one of the important debates in the profession today, by naming and examining in depth a theoretical rift that has existed for over 100 years, between so-called objectivists and relativists, or fact people and interpretation people. In literature, published work is increasingly marked or named according to the type of theoretical analysis undertaken. In our own ways, we are all trying to come to grips with theory in our research and scholarship.

But theory is beginning to find its way not just into the professional publication, academic conference, graduate seminar, or scholar's library carrel. It is also starting to turn up in the classroom, as a challenge to the "culture of recitation" which many critics complain has dominated American schooling. Many teachers now try to be more explicitly theoretical in their teaching, using theory to inform and improve curriculum and instructional practice. Teachers are incorporating theory into their courses to help students develop richer, more conceptually-grounded understandings of subject matter and more powerful ways of thinking about material. To cite just one example, a popular American history textbook recently added a new section to each unit in which the competing theories of prominent historians are discussed and contrasted. In literature teaching, I have published a book with a colleague, George Newell, and there are other such books on the market which take developments in literary theory, such as reader response theory, and use them to formulate new ways of working with literature in the classroom. Similar examples abound.

Yet despite the increased significance of theory in academic work, and its growing importance in the classroom, we know very little about what happens when students are confronted with theory. Investigations focusing specifically on how students approach theory have not yet begun to emerge in the literature on writing in the disciplines. However, a growing number of studies in recent years examine the closely related issue of how students analyze and interpret complex subject matter in their academic writing. For example, Flower et. al. (1990) examined how college students approached an assignment to read and write about time management issues. They found that many students interpreted the task as requiring summary and little elaboration, more or less ignoring the explicit request to interpret and critique the subject matter. Nelson (1990) looked at ways in which college students in sociology, engineer-

ing, and English frequently took shortcuts in writing papers, and at how these shortcuts often allowed students to avoid the kinds of thinking and learning activities the assignments were expressly designed to promote. Walvoord and McCarthy (1990), working with faculty co-authors in biology, business, history, and psychology, looked in the chapter co-authored by Breihan, a history professor, at how students could be helped by explicit, step by step guidelines to deal more effectively with issues of historical interpretation in their writing. These are just a few examples of the body of literature that is helping us to understand how students summarize and analyze across disciplines and how instructors might best structure such writing instruction and assignments.

But moving up the abstractive scale, there has been virtually no work on how students deal with theory. We do not know how students attempt to comprehend theoretical material, how theory informs their broader understanding of subject matter, or what happens when students try to incorporate theory into their own writing. This issue of how students come to grips with theory seems particularly important in light of the current educational emphasis on developing students' thinking skills, since thinking theoretically is a major component of the critical thinking movement. McPeck (1990), Meyers (1986), and other critical thinking advocates argue that thinking skills are best acquired, nurtured, and developed *within* a particular discipline, rather than as a set of generic skills. McPeck argues that instruction should center on, quoting Schwab, "...what substantive structures gave rise to a body of knowledge, what the strengths and limits are, and what some of the alternatives are which give rise to alternative bodies of knowledge." Teaching the assumptions or the conceptual foundations of a discipline helps students develop a meta-understanding of the important issues and ways of thinking that hold the discipline together, as well as the ideas that divide people in the field. So, the attempt is to help make students more aware of the discipline as a way of thinking about and making sense of the world. History, then, is not just a collection of dates and facts, as most students conceive it to be, but a theory-based means of understanding the past and of connecting the past with the present and the future.

In this study I looked at a large lecture class, with about 200 students, Introduction to American History. I sat in on lectures, did the readings, and closely examined all course materials such as handouts, review sheets, and tests. I also talked with the teacher about the nature of the class, his goals, and how those goals related to the way he structured the course. I looked and listened carefully for mention of

theory or historical explanation in the class. That is, I looked for mention of specific interpretations of history, for the naming or discussion of different approaches or ways of looking at subject matter. This was a typical large lecture class for this particular university, and maybe for universities in general. It was a textbook example of the "culture of recitation." There were no discussion sections, and no assigned papers, just two in-class tests in which students were mainly asked to restate material from the readings and lectures. Essentially, the teacher just lectured, and the lectures generally were chronologically organized or else discussed the professor's view of the causes of particular events. The teacher did not model theoretical thinking by contrasting opposing views. He did not try to get students to form their own interpretations or to consider alternative views. He dealt with events and issues *as* events and issues, not trying to place them in a disciplinary context. As I said, this was a very typical history class. It did not at all stress critical thinking, questioning, reflecting about issues, forming and supporting one's own positions, or metacognition (thinking about, locating, and framing one's own thought processes and ideas, taking control of one's own learning). Those were not the professor's goals; his goals were entirely content related.

So it is within this context of a traditional, content-oriented history class that I asked students to do some more theoretical reading and writing, to read, think, and write about some contrasting theories of the Civil War. I wanted to see how freshmen at a large midwestern state university responded to a theoretical task. These students were not accustomed to operating at such a conceptual level; their teacher hadn't prepared them for this sort of work. But with the growing emphasis on theory and with the claims of critical thinking advocates that teaching contrasting theories or views on a subject helps develop students' reasoning powers, I thought it would be useful to see just what happens when students are asked to wrestle with issues of theory. The students were all volunteers who were told they would get extra credit. They identified themselves as average or good students of history in their previous courses. I did not want to work with people who would not be able to comprehend or write about the reading passage because they would have to be pretty deeply engaged with some rather abstruse material in order to complete the tasks I was going to give them. All of the students read a passage contrasting the two principal theories of the causes of the Civil War. The passage described the theoretical camps in some detail, naming particular historians and discussing their basic

orientations.   Some of the students wrote an analytic essay about the passage, while others wrote a summary. The two writing prompts were as follows:

1. Two points of view regarding the causes of the Civil War are expressed in the reading passage "The Causes of the Civil War." Please explain which point of view you feel is more valid and why. Be certain to defend your points with specific evidence and examples from the reading.

2. Write a summary of the reading passage "The Causes of the Civil War."

There was another reading passage, a non-theoretical, chronologically organized one, that students also read and wrote about, in contrast to the theoretical one. But this article focuses on the theoretical task. Both reading passages were from their textbook, but when I worked with them the class hadn't gotten to those sections yet. Students composed aloud, saying what they were thinking and doing as they wrote. But before they composed aloud, students spent one hour-long session practicing the technique until they became comfortable doing it.

Before I elaborate on what they did, I will discuss some of the limitations of the study. First of all, I used composing aloud, which has several real limitations. It turns the writing into a timed task, cutting out much of the possibility for invention, revision, multiple drafting. It also adds another layer of complexity and difficulty to the reading and writing process. The method has many strengths too, of course, and I used it mainly because I wanted to get a close, detailed look at how students handled the reading and writing tasks.   No other method provides nearly as much detail as composing aloud. Also, people who have compared composing aloud with other methods, like retrospective interviewing, have found their results to be very similar, so composing aloud apparently does not greatly distort the composing process, especially if writers have been trained in the method. So composing aloud was the right methodology for me, but it is far from perfect, and I need to acknowledge that.   Another limitation of the study is that I gave students tasks of my own devising. I would rather have looked at how students approached real school tasks. Unfortunately, I wanted to look at writing about history, and I could not find any history teachers, especially in survey classes for non-majors, which I wanted to look at, who had their students write, let alone write about theory. Most of the

teachers I spoke with thought the kind of writing I was talking about would be valuable, but they were so wedded to the "coverage" model of getting through the prescribed amount of material that they did not feel they could do this sort of thing. However, several have now expressed an interest in having their students write more and in possibly trying out some more theoretical kinds of writing—in the past when our history professors have had students write, it has been mainly book reports; that seems to be the departmental model. And a third limitation of the study is that I had students do a kind of writing that they were not accustomed to doing—writing about theoretical issues. So this is not a best-case scenario where we look at what well-prepared students are capable of doing. Again, my justification is that I wanted to see how typical college students, accustomed to being asked to summarize, would approach a more conceptual kind of task. But if I could have, I would have looked at students in a class where they were learning just such an approach.

For the above reasons, when I discuss my findings I will not be making claims about what students are capable of doing under ideal conditions. I can only say how they responded under timed conditions to a difficult task they were not used to doing. With that caveat in mind, I will now discuss my findings.

Engagement and resistance are Freire-ian notions which have been written about in some detail by Henry Giroux (1983); they describe different stances or ways of approaching aspects of schooling. Giroux uses these terms in a very political sense to describe the extent to which students buy into or reject the culture of schooling. That political sense is relevant to what I am looking at, but none of the students I worked with actively resisted or rejected the work I asked them to do. They all accepted the work and engaged with it, but a number of students found implicit ways to resist the kind of conceptual labor, the detailed thinking, the playing with ideas, which my reading and writing tasks asked of them. Critical thinking advocates and researchers such as Marzano (1991) argue that higher-order thinking requires certain dispositions or stances, habits or patterns of thought, all of which require intense engagement with one's subject matter: a metacognitive inclination to monitor and reflect on one's own thinking and problem-solving processes; a tendency to think critically about content, asking questions, exploring different positions, considering others' ideas, generally going beyond the information given; and a propensity to think creatively, to look at ideas and events in new, uncommon ways. Some students, when asked to, will throw themselves into these activities, will adopt these

stances, while other students almost seem to work equally hard to avoid having to engage in these kinds of thinking activities. Thus, notions of engagement and resistance, when applied to the analysis of student writers' composing aloud protocols, can shed considerable light on both the strengths and the difficulties of asking students to read and write about theory.

I found three basic patterns with the 20 students whom I asked to compose aloud while writing either a summary or an analysis of the theoretical passage. There were students who engaged with the task and evidenced the kinds of thinking which the task encouraged them to do. There were students who resisted, consciously or unconsciously, or for whatever reason didn't seem to adopt a critical thinking stance. And finally, there were students who both engaged and resisted, alternating between both stances. What follows are examples of the different types of engagement and resistance I observed; these examples show some of the ways students found to manage the difficult task.

The theoretical reading passage discussed the two primary inter-pretations by American historians of the causes of the Civil War. One camp has argued that the war was an inevitable conflict based largely on economic and political differences, that north and south differed so fundamentally on key issues that war could not have been avoided. The other camp has argued that war could have been avoided if politicians had acted more responsibly and not been swayed by extremists on both sides. I asked students to read and write about the Civil War because I knew they would have studied it in the past, would have some back-ground knowledge about it, and would probably have opinions as well. Of all subjects in American history, it seemed as likely as any to hold some interest for students. Ten students summarized the theoretical passage, and ten students analyzed the two interpretations, supporting one group's position. I would like first to discuss examples of engage-ment with the theoretical issues, instances of the kinds of critical thinking students engaged in when trying to write about theory. All student names are pseudonyms.

Types of Engagement

The most common and most general example of engagement I saw, listed below, involved attempts to form and support a position, that is, to make an argument or state an assertion, then to bring in evidence, specific details, and sub-arguments to back it up. Almost everyone asked to write an analysis of the theoretical passage attempted to do this.

All made an assertion, though several students did not specifically attempt to support their assertions. The example from Meg shows how one student went about putting together an argument. (The boldface segments indicate when she is writing as she speaks.)

a) Forming and supporting a position, bringing in evidence and sub-arguments to back it up (Meg)

Oh, let's see. You have to pick which side. I go with inevitable. It was an irrepressible conflict. Okay, **the Civil War was an irrepressible conflict in my opinion. It**, came about because, let's see, **was the result of moral, economic, cultural and ideological differences between the North and South which,** let's see**, centered around slavery. Morally, the free labor system of the North** opposed, er, **and the slave labor system in the South were nearly as** opposite as, incomparable, uh **dissimilar as two labor systems could be...** Where I'm going with this, whether I'm going to continue with the moral issue or go on to economic? Uh, I think I'll go on morally.

As can be seen from the example, Meg moves very quickly to a set position, suggesting a lack of deep engagement or consideration of alternatives. But she does take a position, gives reasons behind it, discusses cause and effect relations, and then does a kind of Aristotelian analysis, breaking the issue into parts: moral, economic, then later cultural and political.

Another way that some students engaged the material was to consider counter arguments, to think about potential problems with their position, possible strengths of the opposing view, contradictions in what they were saying, and also just complexities inherent in their subject matter. Many students glossed over complexities, but some lingered and tried to come to grips with them. This example is from Omar, an Egyptian student, son of a professor, brought up in Germany, who I was a little discomfitted to find knew more American history than the American students.

b) Considering counter arguments, contradictions, com-plexities, problems with a position (Omar)

I take the position of the irrepressible conflict because I think it was mainly a moral issue. And though the other side does have some valid points, such as economic and that the North and South were becoming

different people, I think the root of the problem of the Civil War was still slavery and that it was a moral conflict. Umm, I'm just trying to look for some points of the opposite side so I can disprove them and some points from my side so I can show they're true...

The fact that they say the war could have been avoided if there were more able leaders, I think is a pretty empty argument, because there were some of the most able leaders living at that time, like Lincoln, who led the war on both sides. And if there was a way to avoid it, I'm sure they would have wanted nothing better... Also, the argument that slavery was crumbling in the presence of 19th Century tendencies, that's pretty ridiculous because until the 60's black people were still considered second class citizens. I'm going to read the question one more time just to clear my head and then try to think of a thesis statement.

Here Omar takes a position; however, unlike Meg above, it is not all black and white but allows for more ambiguity. He concedes that the other side does make some valid points, but then attempts to expose some of the weaknesses in what he sets up as the opposing position. What he is doing is a crucial, fundamental part of critical thinking: he is examining arguments, subjecting them to close scrutiny. All my evidence from research and also from some years of teaching suggests that most students don't engage in this kind of activity, considering counter-arguments, unless they are specifically directed to do so and shown how.

A third way that students engaged the material was to relate reading passage content to their prior knowledge, opinions, and beliefs. Learning theorists contend that we construct knowledge by examining new information and ideas in light of what is already known, felt, thought, or believed. A number of students tried to make significant connections between the reading passage content and their background knowledge and views.

c) Relating reading passage content to prior knowledge, opinions, or beliefs (Scott)

When I was reading the essay, the section where it started talking about the different economic systems and morals, it made me think of how the Cold War started with communism, and then also where it says slavery was crumbling in the presence of 19th century tendencies." And communism today is crumbling and heading toward democracy...

Umm, I'm still trying to figure out what I want to say. In high school, we went over a lot the Civil War. In junior high we did too. We went to Gettysburg and everything for an 8th grade trip.

In these two examples, Scott tries to bring in his prior knowledge, but perhaps due to time constraints he doesn't take his comparisons far enough to do him much good on the paper. He is rather groping around here, exploring ideas, making tentative connections between points. In fact, sensing that these parallels he is making may not be that relevant to the task, he drops them and starts to consider only the Civil War material; he not only stops bringing in other historical events as possible parallels, like the Cold War, he also explicitly stops considering things he had previously read, seen, and heard about the Civil War, until he is entirely focused on the reading passage.

A final form of engagement I will discuss involves metacognition, the self-conscious consideration of thinking processes and management and monitoring of problem-solving strategies. This example again comes from Omar. Here he tries to keep tightly focused on his plan, not to go off on tangents, though as we've seen above, he is willing to spend quite a bit of time thinking over his points carefully and reflecting about them. The paradox here is that partly because he consciously directs his own thinking and writing processes, in a sense keeps himself on a tight leash, he's able to spend more time than most of the other students exploring ideas in depth, reflecting and speculating about the subject matter.

d) Metacognitive monitoring and directing of thinking and writing processes (Omar)

I guess I'm supposed to get my information from the reading here. I'll now try to use the specific examples to, to support my thesis by first showing that what I'm saying is correct and the opposite side is, is not correct...

Now, seeing that my conclusion is pretty much a restating of my introduction, I'll try, when I go through this again, try to give it some kind of a twist, some kind of thought, I guess, to leave the reader with, maybe by using an example to show what I'm saying, or by changing the introduction and leaving the conclusion like it is.

So we see that with each of these strategies of engagement, students were struggling to orient themselves in a complex body of material, to find a position of elevation. Let us look now at some other students who were given the same task but who approached it very differently. I would argue that the following examples show students who found ways to resist or finesse or approximate as best they could

under the circumstances the kinds of critical thinking exhibited in the previous examples. They formed goals or took stances which allowed them to simplify complex issues and avoid answering, exploring, and in many cases even considering difficult questions. It may be too much to say that these students were resisting. They were approaching the task in the ways they had been taught, ways they had used before in school writing, and which had been successful for them in the past. But in each case I would argue that there is some resistance, explicit or implicit, to critical thinking, a definite inclination not to mess around with complicated issues.

Types of Resistance

The most widespread form of resistance I saw involved sweeping complexity under the rug, ignoring it, or dismissing it. Often this strategy took the form of what I call "The Hermetically Sealed Essay," consisting of an assertion, three supporting points, and out. Writers who did this seemed to spend an inordinate amount of time on surface polishing, on correctness, on word choice and things like that. I include a short example from Kim.

a) Sweeping complexity under the rug, ignoring it, or dismissing it. Writing "The Hermetically Sealed Essay." (Kim)

Oh, let's see. 'Other historians... No, we don't want to get into that because I know already I don't like that side as well.

Here, while reviewing the reading passage, she encounters the position that she disagrees with, but like a bystander witnessing a mugging, quickly decides she doesn't want to get involved and moves on. There is a sense in which such a strategy is legitimate, perhaps even necessary, because Kim obviously cannot deal with every point. She has to be focused. But here, in the interest of focus and support and being on task, she misses the chance to get into some interesting issues and ultimately short-circuits her critical thinking.

Another common form of resistance involved allowing one's previously held views to dominate the consideration of new ideas. Certainly background knowledge and personal opinion play a key role in the assimilation of new ideas and information. However, sometimes, as in the following two examples, students let such factors keep them from even thinking about what might be conflicting material.

   b) Letting previously-held views dominate consideration of new ideas (Daphne and Martine)

> One thing to be expressed is that the Civil War was caused because of the conflict over slavery, but later, especially in the 1920's, people thought that it was, at least appeared to be, more economic. And it could have been avoided if they would have sat down and talked about it, because slavery was going to be, was already on a decline, on the outs. So that's what people, I don't think that they, umm, could have stopped the Civil War. But I want to work from the readings. But from what I've learned, I've just always believed that it was because of slavery. And then after reading this, I still do. So that's, that would be my point of the Civil War, as a cause. (Daphne)

> Okay, I'm having trouble thinking how to start. I guess my first idea is to pick a side. Let's see? I can't do this. Umm, what I want to say is that because they had dealt with the war, uh, it was always caused, no, I mean it has always been told to us as inevitable, like in our history books and stuff. That's the point I'm going to have to take because it's tradition, I guess. (Martine)

   Daphne's prior views on the Civil War allow her to dismiss without serious consideration a new interpretation of the conflict. She has the idea that slavery caused the war, she's comfortable and secure with this idea, and she's very reluctant to consider alternative visions. She even seems a little frightened by the possibility of other explanations. The second example, from Martine, is a little different. She appeals to tradition to justify her interpretation, and she almost makes her choice seem inevitable: "That's the point I'm going to have to take." It is a bit of an expedient, perhaps. She weighs her options and comes down on the side of tradition, a choice which conveniently allows her to avoid debating the issues at all.
   A third way that students resisted involved relying on commonplaces or cliches, taking the voice of authority and presenting an argument in such a way that ideas need not be examined or explored or supported, just stated. David Bartholomae talks about this notion of the commonplace in his essay, "Inventing the University." Commonplaces are culturally or institutionally authorized statements that carry with them their own necessary elaborations. Bartholomae argues that commonplaces aren't bad in themselves, that we all use them to orient ourselves in the world. But they become problematic when

students do not go beyond them. Critical thinking works against the commonplaces, engaging the contradictions and subtleties of received thought, unpacking the conventional wisdom and examining it. A number of students in the study began and ended with commonplaces; they did not seem to attempt to go beyond them or to question them in any way. Here is an example from Brad, a varsity baseball pitcher and an extremely successful student.

c) Falling back on commonplaces and cliches, taking on the "Voice of Authority" without supporting one's points (Brad)

Okay, after reading the essay, I've decided to go with the point of view which says the Civil War didn't have to happen. I want to basically go on the fact that anytime, I think, there's a conflict, it is avoidable if you find a compromise. I'll just begin by stating that fact. I want to note that there were differences between the North and the South, but they weren't big enough to cause a war. And I do agree that skillful leadership could have avoided the war, if people would have just sat down and talked and tried to come up with a compromise. I also agree with the writer that slavery was not the real issue, was on the way out anyway, so it's just a kind of cop-out...

So, I'm going to write something to the effect of that their impatience brought about the war, and if they'd maybe just waited a little longer, they could have seen the two sides were actually a lot closer than they thought. **It's human nature to rush in to things but a little waiting might have proved the difference here.**

Brad takes as his commonplace here the idea that anytime there is a conflict, it is possible to compromise. Interestingly, he does not really look for textual support for his position, but instead brings in other commonplaces about "human nature" and about "politicians" to flesh out his essay.

The students whose protocols and essays reflected resistance were all good students; they were successful at academic work. What they did, they did very well. Yet, at least in the limited examples I observed, they seemed to flee from serious thought. Perhaps that very strategy was a key component of their success. They knew enough not to get bogged down with complexity. They went with their strengths: organizational clarity, smooth phrasing, a kind of safe, genial superficiality. I believe that one of the great advantages of having students write about theoretical issues is that such assignments make it very difficult for students successfully to hide behind cliches and the facile restatement of subject matter from lectures and readings. Yet a great deal of the history writing

students are asked to do in both high school and college involves just such an emphasis on summary and restatement. And studies of the thinking processes students employ when doing such writing, that is, summarizing chronologically-arranged history narratives, reveal very little of the critical engagement—or resistance—evident when students write about theory. Thus, the present study demonstates that asking students to read and write about theory is one important way of encouraging reflection, questioning, speculating, metacognition, and other forms of critical thinking. But at the same time, the study shows that many students will work to find ways of avoiding rigorous thought. Therefore, those of us interested in using theory in our classes need to be aware of potential resistance to theoretical tasks, and to know that such resistance might be particularly strong where theory is concerned. We also need to develop ways of reducing that resistance, making theory less threatening, and encouraging the kinds of engagement that move students toward effective critical thinking.

That critical thinking is important has become a commonplace for a great many educators. We don't want students simply to memorize content. We believe they should ask tough questions of themselves, their teachers, and their subject matter. They should step back and reflect on what they hear and read. We want them not just to state their own views but to rethink, reformulate, and extend them. These ideas are almost items of faith. It's also a commonplace that current educational practice does not stress critical thinking sufficiently. But I would go even further and ask if, in many situations, students might actually be penalized for thinking too much and too critically. Stopping to ruminate and consider different sides of an issue can gum up the works when, as is so often the case, the goal is to get through content as crisply and efficiently as possible. In this view, an emphasis on critical thinking would seem to require not just the introduction of a few new activities, but a radically different educational agenda, one far less focused than much traditional curriculum on covering a prescribed amount of content or information.

This study suggests some challenges we face not just in designing new curricula, but in working with students who resist what for many will be very complex and unfamiliar acts of thinking. Having students "come to grips with theory" is a difficult but potentially very rich way of helping students go beyond and against the commonplaces. It is also an important way of challenging the notion that history, or any discipline, is merely a collection of facts and dates.

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