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MESSY CONTEXTS

RESEARCH AS A RHETORICAL SITUATION

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In this chapter, I argue that the required methods course for graduate students in composition and technical communication should be the location of learning not just about research methods, or how to critique them, but how to use and apply them rhetorically in increasingly complex and intricate situations, particularly in the newly technologized sites of research in which writing is being done and studied. I suggest that we—both emerging and established scholars—adopt a situated, contextualized, rhetorical approach to conducting research that might better prepare us to conduct, critique, and teach research in the digital age.

REQUIRED RESEARCH COURSES AND DIGITAL TECHNOLOGIES—WHAT A MESS!

In the spring of 2005, I conducted a pilot survey examining the required methods course in graduate programs in Composition, Rhetoric, and

Technical Communication (TC), in which 68 professors from across the United States answered questions about their experience with this course.[1] The responses were evenly divided between MA- and PhD-granting institutions, ranging from straight Composition to Composition/TC programs. Ninety percent of the respondents offered a research methods overview course, and 75% of those who participated noted that this course was required. Less then 20% of the respondents offered any other research courses in their programs. Thus, for the majority of graduate students, the overview course in research methods was the only course focusing on methods that these students would take. Most participants (85%) noted that the primary goal of the course was to provide graduate students with knowledge of and familiarity with the research methods used in our field. A slightly lower percentage of the respondents (75%) noted that another goal for the course included reading and assessing formal research in our field. Other notable goals included an opportunity to create a literature review (57%) and an opportunity to gain experience in conducting research within the confines of a course (54%).

The required research methods course, it would seem, must be vast and contain multitudes. It should prepare students to know and choose methods wisely; to design, conduct, and report on research; to read and assess existing research critically; and to conduct a literature review to precede and inform a research project. Graduate students who have taken such a course should feel comfortable in the library, in the field, and anywhere in between; they should also feel confident, in any context, determining a research problem/question, selecting and employing various methods, analyzing data gathered, and writing up the results.

Obviously, I'm overgeneralizing, but to make a point: With a few notable exceptions, the required research methods overview course is often the *only* opportunity, outside a thesis or dissertation project, that a graduate student has to learn, criticize, or apply research methods. Because of the increasingly complex subject matters and sites we deal with in our research, students need to learn—early in their graduate careers—how to situate themselves in relationship to the sites (often technological) that they study, as well as how to select methods, how to apply them, and how to analyze the data they gather. And it appears that only slightly over half of our required research methods classes are providing the opportunity for graduate students to do all of these things. As mentioned, nearly half of our required methods courses do not provide students opportunities to apply methods, focusing instead upon reading and analyzing methods. Because this collection focuses on the conduct of research in the age of digital writing technology, we must wonder whether the old ways of viewing, teach-

ing, and learning research methods are sufficient. Has our research situation changed significantly, and with it, the research methods necessary to study digital writing? How about instruction in research methods? Should it change along with the digital contexts we now study? What should be the core of the one required research methods course that graduate students take?

It is my feeling that not enough attention is paid to the actual practice of conducting empirical research, especially in the required course, and that when attention is paid, it is often done so in a formulaic, container-like fashion. In this chapter, I argue that these typically linear, rigid methods aren't appropriate for conducting research in the newly technologized sites of research in which writing is being done/studied now. The required methods class should be the location of learning not just about research methods, or how to critique them, but how to apply them rhetorically in increasingly complex and intricate situations. I end by suggesting that we—both emerging and established scholars—adopt a situated, contextualized, rhetorical approach for the conduct of research that might better prepare us to conduct, critique, and teach research in the digital age.

COMPLEXITIES OF RESEARCH AND THE TEACHING OF RESEARCH

Research conducted today—particularly research involving complex subjects (and subjectivities) dealing with technology—demands a more thorough, comprehensive, and yet localized understanding and application of research methods. Technological contexts are not easily categorized—that is, they involve different materialities, different subjectivities, different situations. So, too, the methods we use should be less static, less rigid, and more malleable. John Law (2004), in *After Method: Mess in Social Science Research,* articulated the complexity of research sites: "Events and processes are not simply complex in the sense that they are technically difficult to grasp (thought this is certainly often the case). Rather, they are also complex because they *necessarily exceed our capacity to know them*" (p. 6). We can easily see how technology compounds the complexity of a situation involving writing, an already complex phenomenon. Early research involving technology and writing first recognized this complexity; initially, computers were seen as a boon to writers, allowing them to revise as they composed on the fly and to collaborate with those next to them in a lab or

classroom setting (see, for instance, Bridwell, Nancarrow, & Ross, 1984; Halpern & Ligget, 1984; Rodrigues & Rodrigues, 1984; Schwartz, 1982; Selfe & Wahlstrom, 1989). Later, as chat programs allowed for increased collaboration and the Internet brought even more people together, early scholars heralded an era of egalitarian discourse (Cooper & Selfe, 1990). Soon, however, scholars began to question the egalitarian nature of technologized discourse, looking at race, gender, power, and other materialities in computers and writing (see, for instance, Kolko, Nakamura, & Rodman, 2000; Hawisher & Selfe, 2004; Monroe, 2004; Rickly, 1999; Sullivan & Takayoshi, in press; Wolfe, 1999). Building from these earlier critiques, we continue to acknowledge that the realities of learning, teaching, administering, keeping up, and even simply using technology in writing scenarios has grown increasingly complex.

For example, consider a relatively "simple" MOO discussion that occurs on a regular basis in the online MA and PhD Technical Communication and Rhetoric courses at Texas Tech University (TTU); several studies have examined MOO discussions,[2] so this is a site that has been researched frequently. Yet the interactions, the technology, the material conditions, and the subjectivities are all intricately interacting and are constantly in flux. In the TTU MOO discussion, the instructor often leads the discussion via an agenda, perhaps one posted on a Web page, shown via a projector in the right side of the screen, or pasted into the discussion itself. The students don't know that the instructor is also operating from Microsoft Word notes written well in advance as she cuts and pastes questions, thoughts, and points she wants to make into the discussion. She seems prepared, quick, and efficient, yet she is constantly questioning herself: How directive can/should she be? What does this act do to the "timing" of the class discussion? How will she handle tangents that inevitably arise?

Consider also that the instructor doesn't know that, during the discussion, one of the 10 students (who is also a working technical writer) is multitasking—working on a job-related deadline—one that relates to the discussion, so the student sprinkles references to it as he participates on the MOO. The student is seen by the instructor as intelligently able to apply the theoretical concepts under discussion to his real-world situation, but in fact, he is missing most of what is being discussed because of this work. The discussion is saved and posted later that evening; yet is reading a transcript the same as participating? I could continue with this scenario for the rest of this chapter, but the point is that even during this familiar, regularly scheduled, seemingly transparent graduate discussion, the complexities are such that we could never hope to know exactly what is going on: it

exceeds our capacity to know, in the same way that traditional face-to-face oral discussions have done for decades—only more so.

The traditional classroom can be complex as well, as anyone who has observed teachers will know. Robert Brooke's (1987) underlife is alive and well in almost every classroom context. How do we begin to capture this complexity as we research these sites? What lenses or approaches are best? Are traditional research methods sufficient to capture the complexity when studying writing/writing scenarios? What happens when we add technology to the mix? Are traditional methods (or our understanding and/or application of them) enough, or do we need new ones? Before we can answer these questions, we need to revisit how methods are taught and understood in most research methods courses.

STATIC RESEARCH METHODS

In my pilot survey, I asked participants which books have been used in the required research methods course offered at their institutions. I supplied a list of nine common titles, and I also listed "coursepack" and "other." Over 60% of instructors surveyed required a coursepack, dominating the use of any other coherent, commonly used text. The three most common texts (ranging from 32–35% use) were, in descending order, Gesa Kirsch and Patricia Sullivan's (1992) *Methods and Methodology in Composition Research*; Janice Lauer and William Asher's (1988) *Composition Research: Empirical Designs*; and Mary Sue MacNealy's (1999) *Strategies for Empirical Research in Writing*. Texts listed as "other" ranged from social science or educational research methods texts to texts on conducting library research.

The first aspect one might notice about the most commonly used texts is that none of them were published in this century, and only one within the last 10 years. That's not to say that these texts have outlived their usefulness—far from it—but certainly the contexts we are studying have changed, in some cases significantly (for instance, the MOO discussion I describe above wasn't an instructional or technological choice—even a reality—when the first two texts were published). Only two of the books listed (both in my list and in the "other" category as noted by participants) are specifically directed at Comp/Rhet/TC and have a publication date of 2000 or more recently: Cindy Johanek's (2000) *Composing Research: A Contextualist Paradigm for Rhetoric and Composition* and Laura Gurak and Mary Lay's (2002) *Research in Technical Communication*. What allows for these top

three texts to remain so popular, particularly the ones published in the late 1980s/early 1990s? The first answer might simply be that the instructors teaching the research methods course now first became acquainted with the texts as graduate students in a similar class. The books are known, they are familiar, and they are proven entities—after all, the former grad students are now professors teaching their own graduate students.

Another answer might be that the books are simply the best ones for the required research class, given the audience and subject matter. The earlier publications may well still be the best overview for a broader, Comp/Rhet/TC audience. The survey bears this hypothesis out somewhat. I asked participants to rank how useful these books had been on a scale from 1–3 (with 1 being most useful and 3 being least useful), and all three of the most commonly used books were seen as at least somewhat helpful (with scores ranging from 2.0 to 2.2). The only artifacts to score better were the coursepack (1.5) and the "other" book (selected by the instructor), which was usually not related to Comp/Rhet/TC (1.6).

Are the methods as presented in these texts sufficient grounding for research in a digital age? Sullivan and James Porter (1993) noted that the predominant view in publication is one "that sees methodology as a static and conventional set of strategies (even when 'socially constructed') for observing practices and thereby generating 'knowledge' about practice" (p. 220). Kristie Fleckenstein, Clay Spinuzzi, Rebecca Rickly, and Carole Papper (2005) also criticized the way methods are perceived in writing studies, noting that the metaphor for their representation is

> predicated on a container image, one that locks research activities into hierarchical, step-by-step, disciplinary actions and erases the situatedness of empirical knowledge. In so doing, it creates out of writing—the object of study—a phenomenon that is similarly hierarchical and decontextualized. (p. 2)

Metaphors are vital to our ability to understand complex phenomena; although they don't always portray things accurately (something we need to remember), they almost always lead to some form of understanding or meaning. Kenneth Baake (2003) discussed how metaphors help create meaning in scientific discourse. Some metaphors, he maintained, not only prove to make understanding ineffective, but actually limit understanding. Yet metaphors are vital in science—without them, not all of the various associations would be heard by other scientists. Metaphors "generate harmonics that transport meaning across terms. These force the scientists to either modify or reject the original theory so as to accommodate the har-

monics" (Baake, p. 218). These metaphoric associations, or harmonics, allow for theory to develop. Dissonance, or associations that are held differently, can be part of the harmonics—yet if the dissonance becomes paramount, the metaphor breaks down and meaning becomes more and more incoherent.

The Comp/Rhet/TC research process can be understood metaphorically as well. Often portrayed as a series of steps, research is conducted according to rules, into which specifics can be inserted: epistemology, methodology, research question, research design, and methods. Similarly, each of the particular components has an accepted procedure or definition, often located in a particular discipline (ethnography as methodology comes from cultural anthropology, for example, and students who engage in ethnographic research must study texts from anthropology to learn to conduct ethnography in an appropriate fashion). Each component must be addressed logically and linearly so that the research might be seen as rigorous. Generally, graduate students are told to identify a problem and from this problem, to generate a research question. The research question should suggest methods and methodology as most appropriate to address and answer the question. The various methods will dictate tools or techniques. And guiding all of this is the researcher's undergirding epistemology. The process sounds simple enough: linear, logical, and neat. Or so it would appear.

These containers might be a bit more permeable than we first recognized, and each individual component a bit more fluid. Let us begin with Sandra Harding's (1987) distinction between method, methodology, and epistemology. A method is a specific tool or array of tools for collecting and analyzing data—a "technique for (or way of proceeding in) gathering of evidence" (p. 2). A methodology is "a theory and analysis of how research does or should proceed" (p. 3). And an epistemology is a theory of knowledge that answers questions about "who can be a 'knower' . . . what tests beliefs must pass in order to be legitimated knowledge . . . what kinds of things can be knowledge . . . and so forth" (p. 3). These distinctions are important as we look at an individual research situation and note how they are applied. But it is equally important to acknowledge that, even defined as distinctly as Harding has distinguished these terms, they nonetheless do *not* allow for neat, orderly, logical containment. Consider, for instance, ethnography, which originated from cultural anthropology as researchers devised a systematic, rigorous means of studying indigenous cultures. Ethnography as a methodology can employ a variety of techniques for gathering data, such as participant observation, interviews, surveys, and so forth. Yet it can also be a paradigm, a way of knowing. Social construction theory is based, in part, on the paradigm of understanding cultures through

their social interaction, including communication. Contextual inquiry, a methodology used in the workplace, employs ethnographic techniques or focused ethnography to determine how or why a breakdown occurs in a particular situation, shifting it from methodology to method. How can ethnography be paradigm/epistemology, methodology, *and* method?

Fleckenstein et al. (2005) referred to these fluid options as "slippage: elements shifting up and down the hierarchy, up and down through the boxes" (p. 9). Law (2004) referred to them as method assemblages:

> the crafting or bundling of relations or hinterland into three parts: (a) whatever is in-here or *present*; (b) whatever is absent but is also *manifest* in its *absence*; and (c) whatever is absent but is *Other* because, while it is necessary to presence, it is not or cannot be made manifest. (p. 84)

Law believed that paradigms, the most theoretical and complex part of the hierarchical research schema (what Harding, 1987, would refer to as epistemology), are embedded in craft or skill. These method assemblages are then "entangled rather than constructed" (p. 42) and each component contains parts of itself, allowing us to see research not as an ordered, neat, linear procedure, but one that is integrated, messy, and nonhierarchical. In a sense, they are like atoms moving and creating energy on a table top that looks and feels solid. All sensory information would dictate that the table is not moving, not producing energy, yet atomic research has been able to break out of that container-like, metaphoric thinking to see the table in light of the smallest parts that constitute it.

Like the image of atomic energy given off by atoms moving at a microscopic level on a seemingly static, solid table, so our methods and our research projects are in constant movement when we apply them to localized contexts. Many of us learned methods as containers; I would like to see us re-envision these methods no longer in terms of static containers, but within ever-evolving contexts in which rhetorical applications of method are necessary.

RESEARCH PROCESSES WITH/ON/OF DYNAMIC TECHNOLOGIES

Just as metaphors surrounding research can be problematic or enlightening, so, too, the metaphors that influence our understanding of technology can determine what we see. To understand the complexity inherent in technological contexts, we might first acknowledge how we perceive technological sites, looking at them from a variety of perspectives: material, intellectual, historical, social, political, and so forth. Our relationship with/to these sites must be articulated as well. Andrew Feenberg (1991), for example, saw humans and their technologies as existing in a variety of relationships ranging from instrumentalism (systems and techniques as mere tools) to technological determinism (technology having a life of its own). Within an instrumental world view, we retain human agency, but miss opportunities to design and redesign technology when technology is seen as static and finished in relation to society. Within a technological determinist world view, we lose agency, as system evolution is predetermined. What Feenberg argued for is "deep democratization" of systems, or a balance between the neutral instrumentalist and the agency-filled determinist: a critical, user-centered stance toward the ideologically charged world of technology. A user-centered stance, however, can be difficult to articulate, in part because technology and users are constantly changing, evolving, and shifting. Identifying and communicating our relationships with complex, mutable technologies takes practice, yet it is a necessary component of the ways we study these contexts that have, do, and will continue to impact our teaching, our learning, our writing, and our knowing. As a starting place, then, acknowledging our perceptions, our relationships, and our understanding of these technological contexts helps us to be aware of the multi-faceted nature of the sites we examine. By doing so, we engage what Baake (2003) called harmonics of understanding, which help us to select and apply the best methods for understanding a situation.

Technology does not exist in a vacuum, and neither do the methods we choose to study it. Both technology and our research methods mirror and even help construct the reality we perceive. Law (2004) maintained that "methods, their rules, and even more methods' practices, not only describe but also help to produce the reality that they understand" (p. 5). As researchers, we must be perpetually aware that we are constructing a reality as we articulate our understanding of technological contexts, as well as select and apply methods, analyze data, and represent results. In describing the aims of critical research practices, Patricia Sullivan and James Porter (1997) described methodology as heuristic, and noted that "research ought to situate itself ethically and politically, especially vis-à-vis participants and aims" (p. 109). The authors note that research practices in which method becomes primary often miss important contextual aspects. Methodology, according to Sullivan and Porter, "that is portrayed as a set of immutable principles, rather than as heuristic guidelines, masks the impact

of the situation—of the practice—on the study in ways that could uncon-
sciously reinscribe theory's dominance over practice" (p. 66). Drawing on
a range of postmodern and feminist theories and approaches, they advo-
cated methodology as critical practice, or *praxis*, in which the notion of an
objective researcher is challenged; methodological strategies are situated
and flexible, adapting practices to meet the needs of particular situations;
and in which the researcher is self-reflexive and critical. Sullivan and Porter
saw *praxis* as "a kind of thinking that does not start with theoretical knowl-
edge or abstract models, which are then applied to situations, but that
begins with immersion in local situations, and then uses epistemic theory
as heuristic rather than as explanatory or determining" (p. 26). Both pro-
cedural knowledge and situated action, *praxis* suggests an investment in
and understanding of local, contextualized situations.

One of few to acknowledge technological change and how it might
impact research practices, Sullivan and Porter (1997) noted that methodol-
ogy as *praxis* must be "sensitive to the rhetorical situatedness of partici-
pants and technologies and that recognize themselves as a form of politi-
cal and ethical action" (p. ix). However, in their desire to have us examine
critically our contexts and practices, Sullivan and Porter themselves
momentarily forget to note the shifting nature of technology and our rela-
tion to it when they declare "once oppression is identified, there can be
only one ethical stance toward it: Oppose it" (p. 122). If oppression is situ-
ated, then a particular computer interface might be seen as oppressive by
some, and it may be liberating for others—and without acknowledging a
static hierarchy of good/bad, we must be wary of labeling our contexts in
that manner. Law (2004) concurred, contending that we will need to

> unmake many of our methodological habits, including: the desire for
> certainty; the expectation that we can usually arrive at more or less sta-
> ble conclusions about the way things really are; the belief that as
> [researchers] we have special insights that allow us to see further than
> others into certain parts of social reality; and the expectations of gen-
> erality that are wrapped up in what is often called "universalism." (p. 9)

Gurak and Christine Silker (2002) also acknowledged the problematic
nature of studying complicated scenarios involving technology, noting that
"traditional research questions such as the selection of an appropriate
method, the need to obtain permission from subjects, and issues of private
versus public information become blurred in the cyberspace research site"
(pp. 230-231). The context we choose to study has a profound influence
on our research practices: our selection, application, analysis, and repre-

sentation of methods, and our choice of methodology. And technology
complicates these contexts. But are traditionally conceptualized research
questions and methods (i.e., as portrayed hierarchically and linearly) suffi-
cient to capture the intricacies of technology-related contexts? Traditional
academic methods of inquiry, Law (2004) maintained, don't capture the
"mess, the confusion, the relative disorder" of the contexts we study, some-
thing we should try to do if we are to fairly represent these contexts.
However, the acknowledgment of "mess" puts the researcher in a bind: if
we do try to capture the mess, our research may appear "messy" and thus
it is seen as poorly done. How can we apply the methods we know to
understand some of the realities we might be missing in the messy con-
texts we study? Law's answer is deceptively simple:

> If the world is complex and messy, then at least some of the time we're
> going to have to give up on simplicities . . . if we want to think about
> the messes of reality at all then we're going to have to teach ourselves
> to think, to practice, to relate, and to know in new ways. We will need
> to teach ourselves to know some of the realities of the world using
> methods unusual to or unknown in social science. (p. 2)

Although I agree in part with Law's assertion, I would suggest that it is not
only "teaching ourselves" new or unusual/re-articulated methods that will
help us see, know, and represent the mess; in addition, we must revise or
re-see how these methods might be adaptively applied in specific contexts,
particularly technological contexts. Adapting to specific contexts falls
squarely in the realm of rhetoric, so I'd like to argue that we need to see
them *rhetorically*. I begin my discussion of rhetoric and research—that is,
by arguing for a rhetorical application of research—by once more examin-
ing Sullivan and Porter's (1997) call for a rhetorical methodology, and then
situating practice in rhetorical contexts.

RHETORICAL RESEARCH REVISITED

If technology has changed one thing, it's the site of research, or our vision
of what counts as a coherent site upon which research can be done.
Previously, these sites were physical spaces (labs, classrooms, companies,
texts); now, however, a site of research can be a community of mutual
interest spread out over the globe (see, for example, Sapienza or Smith, this

collection). Most of our methodologies and methods were designed to observe and explain the former kind of site. Can they be adapted successfully to the latter, or do we need a new sense of methodology? In *Opening Spaces*, Sullivan and Porter (1997) posited a "'rhetorical methodology' based on viewing computer writing as a situated practice" (p. 9). They described their position as rhetorical, involving local/contingent knowledge grounded in local, situated practices, and they likened the methodology used to study these contexts to rhetorical invention. Rhetoric, for them, encompasses

> three elements: ideology (assumptions about what human relations should be and about how people should use symbol systems); practice (how people actually do constitute their relations through regularized symbolic or discursive activity); and method (tactics, procedures, heuristics, or tools that people use for inquiry). (p. 10)

Like those researchers advocating action research (see, for example, Stringer, 1999), Sullivan and Porter described methodology as "an intervening social action and a participation in human events" (p. 13). Although the sentiments are admirable, they tend to limit how pervasively this "critical methodology" can be practiced. As noted earlier, contexts, situations, and participants change, and although ethics and social action should ultimately should be part of our self-reflexive examination of a research situation, social action isn't always—nor should it be—the final goal of research.

I would like to begin with their idea, though, of linking research and rhetoric. Sullivan and Porter (1997) were among the first to associate rhetoric with research in an admirable fashion, and I would like to recast—to update, if you will—their position. I situate the terminology used in this recasting in Harding's (1987) definitions, though any attempt to define terms brings to mind the limiting container metaphor. As noted previously, a methodology—case study, for instance, a methodology which comes to us from cognitive science and is in that discipline practiced as a theory of how research should proceed—can also be used as a method, or a means of gathering evidence as a part of a larger methodology such as ethnography, for instance, or a contextual inquiry. According to Harding's definition, then, a case study can be both a method (a tool used in a larger ethnographic examination or a contextual inquiry) and a methodology (a theory and analysis of how research should proceed).

The slippage doesn't end there. The way any of these manifestations of case study is applied and analyzed will depend upon the researcher's epistemological stance. For instance, if the researcher defines her episte-

mology as social construction, in which meaning is socially created, her research will look and feel very different from someone who aligns herself with identity theory, in which each person (and her subsequent behavior) is influenced by the collection of identities associated with the various roles this person occupies. Law's (2004) concept of method assemblages makes increasing sense in increasingly complex scenarios. By locating the argument for rhetorical research in a permeable, situated definition, we can access the flexibility needed to study chaotic, changing environments. We can deal with slippage.

Rhetoric is also a slippery term, especially when we relate it to methods or methodologies. In *On Rhetoric*, Aristotle (1991) defined rhetoric as *techne*, or a body of knowledge used for a particular end. *Techne* deals with concrete ideas and circumstances (as opposed to dialectic, which deals with logical order and deals with general/philosophical questions), thus it lends itself to contextual study. The goals of rhetoric are to advance the cause of justice and truth, and to persuade. Aristotle maintained that "persuasion is clearly a sort of demonstration, since we are most fully persuaded when we consider a thing to have been demonstrated" (book 1, part 1). If rhetoric is a demonstration that persuades us, we can begin to see how research might be seen as rhetorically persuasive. Is the question appropriate, given the problem? If so, that question was persuasive. Does the method applied actually answer the question? If so, that method was persuasive. Are we convinced that the method was applied appropriately and with rigor, given the context, the question, the purpose, and constraints? If so, application was persuasive. Is the way of proceeding—the methodology—appropriate for the question, context, and methods? If so, that methodology was persuasive. Is the analysis thorough, accurate, and epistemologically consistent? If so, it was persuasive. Is the representation of the research accurate, effective, well-wrought, and appropriate? If so, it was persuasive. Therefore, if we are persuaded that all aspects of the research have been conducted, analyzed, and presented effectively for the specific question, context, and audience, the research is rhetorically sound.

Carl Herndl (1991) analyzed the rhetorical nature of the ethnography that Stephen Doheny-Farina (1989) published, noting the amount of "rhetorical work" that goes into legitimizing "through socially maintained conventions" (p. 326). Herndl noted that other studies in other contexts "might organize their descriptions around different *topoi* but they will be no less embedded in the discourse of their research community" (p. 326). The representation of research has always been somewhat formulaic (consider, for instance, the IMRAD formula—Introduction, Methods, Results, And Discussion—for publishing in the sciences/social sciences).

Researchers have some choices, depending on where the data is to be published, but they must be aware of the rhetorical situation surrounding publication. If the analysis and representation of a study must be portrayed according to the conventions of a particular discourse community—a specific rhetorical situation—when and how should the selection of methods and their application be affected? To answer that question, we need to readjust our view, seeing the rhetorical situation as encompassing the conduct of research as well as its analysis and representation.

A larger perspective might be to treat rhetoric as "the faculty of observing in any given case the available means of persuasion" (Aristotle, 1991, book 1, chapter 2) as Aristotle ultimately defined it in *On Rhetoric*. Both rhetoric and dialectic are categorized as *organum*, or tools, which have no subject matter of their own, yet can be applied to other subjects. If we look back to Harding's (1987) definition of method, we note that "tool" can be seen as "method" or part of a method. And if we are able to apply these "tools" to other subjects, it makes sense that some slippage may occur—thus what once was a "mere" tool may actually slip into art or *techne*, creating a body of productive knowledge that can be used for a particular end: to understand something better, to answer a question, and so forth. Methods, methodologies, and epistemologies are all forms of *techne* that deal with particular, concrete situations and circumstances. *Techne* is ultimately contextual, and may be reconceived in any context so that the situation may be persuasive, just as methods, methodologies, and epistemologies may shift according to context.

"It is clear, further, that [rhetoric's] function is not simply to succeed in persuading," Aristotle (1991) noted, "but rather to discover the means of coming as near such success as the circumstances of each particular case allow" (book 1, chapter 1). So, too, is it with research. A researcher must be intimately familiar with the site, or context, of research, with persuasion as a goal inherent in that familiarity. Given a problematic situation, a researcher must determine a question (or series of questions), then consider the best possible way to answer that question. Data collection must be thought through, designed carefully (considering the context and participants), and then systematically and appropriately applied. Data that has been collected must be analyzed, then examined in light of the original research question(s). Finally, findings must be presented in a manner that the researcher's community will find legitimate. Ultimately, then, the goal of research is to persuade an audience that the initial question has been answered sufficiently—and thus research associated with a particular context becomes the available means, the tool employed to create a body of knowledge for a particular end. And although I have articulated the process

above as somewhat linear and inflexible, I argue that knowing the context as a means of persuasion requires the researcher to consider not just a step-by-step process, but the entire rhetorical situation, context, and persuasion: the method assemblage.

Research located and conducted rhetorically is an attempt to acknowledge and account for the individual, changing complexities of research sites—particularly research sites that involve technology. And research conducted rhetorically can have structure, rigor, and validity. Most traditional methods have standard operating procedures associated with the discipline and/or the methodological tradition they come from. For instance, quasi-experimental methodology dictates that a site of study must identify controls, independent variables, and dependent variables; the groups must be as uniform as possible; and so forth. In traditional ethnographic research, the researcher must spend time identifying her background, her experiences, her belief system, and so forth as a means of negotiating researcher bias. These standard operating procedures are valuable—they offer us the opportunity for rigor, reliability, and validity. Although uniform application of these methods can theoretically lend itself toward replicability, in most technological sites, the situation is so localized and complex that replication in the strictest sense is impossible because of the inability to control variables. Acknowledging the changing, complex nature of these contexts means applying methods appropriate for the context and question, rather than for the methodological tradition. The rigor associated with these methods becomes rhetorical and contextual; that is, it draws on activities related to the application of the method, to the verification of results, or the overlay of data/perspective. Rather than rely on methodological rigor in the application, analysis, and representation of research, the rhetorical nature of the research can provide new forms of rigor, which make the research more persuasive.

Following is a list of eight procedures drawn primarily from qualitative methods that John Creswell (1998) advocated to verify results and add rigor. He encouraged researchers to include at least two of these as a means of rigor:

1. *Prolonged engagement* and *persistent observation*: Building trust with participants, learning culture, and checking for misinformation with participants.
2. *Triangulation*: Using multiple methods, sources, investigators, or perspectives.
3. *Peer review or debriefing*: Allowing for an external check on the research process.

4. *Negative case analysis*: Refining a hypothesis as inquiry advances in light of disconfirming evidence.
5. *Clarifying researcher bias*: Allowing the reader to understand the researcher's position, as well as any biases or assumptions that might impact the inquiry.
6. *Member checks*: Soliciting informants' views of the credibility of findings, interpretation, and representation.
7. *Rich, thick description*: Describing in detail the participants, setting, actions, etc. so that readers can make decisions regarding transferability.
8. *External audits*: Allowing an external consultant—an auditor—to examine both the process and product of the account to assess accuracy. (pp. 201–203)

I am advocating a localized, situated, rhetorical approach to conducting research. Sullivan and Porter (1993) argued for a similar approach, one that sees methodology not as "something we apply or select so much as something we *design out of particular situations and then argue for* in our studies" (p. 221). The discipline of Technical Communication—and, more broadly, the computers and writing community—has begun to do this. As every legitimate discipline should, it has begun to establish discipline-specific research methodologies that are rhetorically situated—that is, appropriate for the rhetorical situation under scrutiny. TC research has drawn from fields that operate in a similar manner, including human–computer interaction (HCI) studies (those concerned with design, evaluation and implementation of interactive computing systems for human use), human factors analysis (a focus dating back to the industrial revolution; the hardware version of HCI), software engineering (design, creation, usability testing, implementation, assessment, and so forth), and Scandinavian collaborative design approaches (arising from a socialist philosophy, this approach includes participants as designers of systems, software, etc.), and other associated fields. But instead of merely co-opting methods from these fields, Technical Communication has adapted them into standard user-centered design field methods: contextual inquiry, in which participant observation, interview, artifact analysis, and talk-aloud protocols can be used to identify problems and/or study problems in a particular context; participatory design, in which users and designers work together to design or redesign an artifact; and usability testing, which is the close observation of real users using real artifacts so that the usability of the artifact can be determined. These three methods have become staples in the field, both in the workplace and in more scholarly applications.[3] They have roots in

ethnography, educational methodologies such as participatory action research, feminist research, and what Robert Johnson (1998) deemed user-centered design philosophies. As a group, they are locally situated—usually designed to identify and/or solve a specific contextual problem (such as designing a usable interface for a software application, or finding out where a normalized corporate process breaks down)—and the research subjects are often co-investigators.

These more specific, local, and often collaborative methodologies are a positive step toward making all research local, contextual, and meaningful when applied in a rhetorical manner. These field methods allow for a focused, problem-solving, rhetorically situated, user-centered approach to research. They are not conducive for long-term study of a culture, and replication is not a normal goal; instead, they are localized, contextualized inquiries that allow for a greater understanding of a task, a situation, a technology, a design, a system, and so forth. Although not generalizable in the traditional sense, the results of such studies are often used generally to address problems in a specific locale, system, process, community, and so on. In other words, they are appropriate for the context studied, which makes them especially beneficial to technical communicators—yet I would argue that they have value elsewhere, too, if only as models of rhetorically adapted and applied research methods.

CONCLUSIONS: WHERE DO WE BEGIN?

Because research—particularly research involving technology—is situated, messy, unpredictable, and chaotic, we need to adapt existing methods to the specific (rhetorical) situation, idea, and research question(s) being explored. This doesn't mean, however, that we simply apply methods willy nilly; we must know about research methods; we must understand the relationship between method, methodology, and epistemology. We must think rhetorically about the audience, purpose, exigency, constraints, and context surrounding the sites of our research. From this we must articulate fit or appropriateness, the specifics in application, and how the research is rigorous. Finally, we must be able to portray our analysis and results in a representation sanctioned by a particular discourse community.

Yet how can researchers learn to do this? The answer, I believe, lies in how and where we prepare students to conduct research: in our required

methods overview courses, in what we require in our courses, in how we prepare students professionally, and in our textbooks. In an article overviewing the state of research in Technical Communication, Ann Blakeslee and Rachel Spilka (2004) cited that the participants in the 2000 Milwaukee Symposium[4] "bemoaned the inconsistency of what we cover and of what students learn in our research courses" (p. 81). Spilka (2005) continued this lament at the 2005 Council for Programs in Technical and Scientific Communication (CPTSC) conference in her keynote address, noting that few schools require more than one research methods course, and that course is often "inconsistent," resulting in graduate students ill-prepared to propose and conduct research. She presented her analysis of the last 3 years worth of ATTW and STC grant applications. Almost none of these, noted Spilka, were persuasive in their representations of methodology.

Although our programs are all different—Composition/Rhetoric students won't be expected to have exactly the same skills as Technical Communication/Rhetoric students—we nonetheless should be able to identify basic research skills and knowledge each graduate student should have. Given that most programs in rhetoric require at least one survey course, below I've delineated what might be taught so that students can read and conduct research rhetorically. I hope that such a list might inspire others into a dialogue regarding our teaching of research, eventually leading to model courses that achieve shared goals.

1. Early in their graduate studies, students should be **grounded in the methods used in their discipline**, as well as disciplines tangential to theirs. They should have a thorough understanding of the methods, the traditional application of these methods, and how to match method-to-question and question-to-method. A research methods book aimed toward disciplinary knowledge, such as Lauer and Asher's (1988) *Composition Research: Empirical Designs* or MacNealy's (1999) *Strategies for Empirical Research in Writing* might be appropriate vehicles—but so, too, I would argue, would be Creswell's (1998) *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.*

2. Students should be taught to **read research critically**, problematizing methods, procedures, and findings. Critical analysis of reading research should be integrated into a variety of classes so the one overview course isn't overburdened. Too often, I feel, this is one of the primary goals of the required research methods

class (given the focus on coursepacks in the required research methods courses), and, as a result, I think it warrants too much time and energy, time and energy better spent learning to apply the methods they've become familiar with in a heuristic, contextual manner. Through learning to apply these methods well, students are more likely to learn how to read critically the representations of others.

3. Students should be **given the opportunity—preferably within the "safe" context of a class—to conduct actual research studies** that will mirror the larger studies they hope to do for their dissertations and for publication. The actual conduct of research should be, I believe, one of the primary goals of the required research methods class—yet my preliminary research indicates only about half those teaching research methods now actually provide students such an opportunity.

4. **Support for conducting research** should be offered frequently, throughout a graduate student's career, in the same way that support for using technology is offered: in the form of workshops, one-on-one help, and so forth. Like technology, conducting research should become comfortable and known. Once a comfort level is reached in even one area, it can translate to other areas.

5. Through familiarity with traditional research methods, as well as conducting and critiquing research, students should be **challenged to look critically at their own sites for research**, problematizing the methods they've learned, and articulating the complexities of the specific, rhetorical situation. This type of identifying and communicating doesn't come easily to everyone, and must be practiced. The required research methods course is a place for students to learn to do this type of articulation.

6. Finally, students should be able to try their hand at **adapting research methods for their particular rhetorical situation**, indicating why they have adapted the methods they have, and how they have implemented rigor in their research. A series of micro-studies might be the means by which students try to adapt research methods to time, space, subject, and problem constraints. It is likely that students will fail at these microstudies by choosing a problem that is too broad or unfocused, a method not appropriate, and so forth—but often it is through failure that we learn best, especially when the failure becomes a teachable moment in the context of a class.

Students should also learn how to fill out an Institutional Review Board and other human subjects forms, as well as recognize what kinds of situations require consent, institutional approval, and so forth. Even though at most institutions student research conducted for a class (with no further publication intended) is often exempted from IRB approval, I still guide students conducting human subjects research through the process so they gain experience and have the necessary approval should they decide to publish their research. But in the confines of a semester, guiding students not only through the IRB process (if needed) and through the actual conduct of a study can seem a daunting task, and I imagine that teachers of the required methods course often feel underprepared to guide students in even a small-scale research study, and thus they choose instead to fall back on reading about and critiquing existing research. We must learn to learn ourselves and to embrace uncertainty if we want to grow as teachers (and as a discipline). Students will benefit from this experience, along with their classroom-based forays into research. The teacher's responsibility will be to see that research is conducted ethically, critically, and rhetorically; the student's responsibility will be to engage critically in the *praxis* of conducting research.

But not every program has a required research methods class. For those of us expected to conduct research without the benefit of more training, it might behoove us to consider research and technology as similar in terms of how we become proficient in them. We learn to use technology in a variety of ways: through attending workshops, through reading, through discussing it with others, through online references, and finally, through trial and error, and with practice. Eventually, our understanding of technology and our familiarity with it allows us to integrate various appropriate technologies into our everyday work. Similarly, we should think about research practices as something that we hope to integrate seamlessly and appropriately into our work. We cannot expect to do so without familiarity, practice, reflection, and feedback. Digital contexts provide us with a wealth of opportunities to conduct meaningful, exciting research; however, they also can prove to be overwhelming in their messiness. Our methods and our understanding of them needs to be able to capture the complex nature of this mess to provide helpful, positive information that will help us to understand situations, solve problems, and revise our practices. "My aim," Law (2004) wrote, "is thus to broaden method, to subvert it, but also to remake it" (p. 9). This should be our aim as well: to understand methods, subvert them, and to remake them by applying them rhetorically.

NOTES

1. This survey was intended as a pilot for a more focused survey. I sent the survey URL to the following email lists: techrhet, attw, wpa, and the consortium of graduate programs in rhetoric and composition. I asked people on the list who had taught the research methods overview to respond, and/or to pass the URL to those in their departments who had taught the research methods overview class. Sixty-eight people responded to the survey, which was live from November 2004 until March 2005.
2. See, for instance, Cynthia Haynes and Jan Rune Holmevik's *High Wired* (2001) and *MOOniversity* (2000), John Barber and Dene Grigar's (2001) *New Worlds, New Words*.
3. For an excellent overview of three field methods, see Spinuzzi (2000).
4. The goal of the 2000 Milwaukee Symposium, held at the University of Wisconsin–Milwaukee, was to identify problems of the field of Technical Communication and desirable/necessary directions for the future.