# Chapter 2

## A Rationale for Studying Peer Response Group Talk and Revision

### Overview

This chapter outlines how peer group pedagogy in the writing classroom is theoretically grounded in social constructivist thought. Regarding composition theory and practice, social constructivism has a natural extension into collaborative learning and the classroom use of peer writing groups. This discussion is limited to peer response groups, student groups whose purpose it is to read and respond to each other's writing, as opposed to those that also meet to discuss readings and general ideas. An examination of the assumed benefits and deficiencies of this pedagogy and the reasons that teachers hold these views makes clear why research needs to align better the presumption that peer talk is helpful in writing development with the question of whether and how that talk actually affects the writing. The early part of this literature review necessarily deals with the traditional oral classroom environment, as that is where peer groups historically have gathered; much of the scholarship focuses in this medium alone. The theoretical grounding for peer writing groups that employ computer-mediated communication (CMC) technology is similar to, and builds upon, that of the traditional oral peer groups; however, CMC has inspired varied theoretical interpretations, complicating the discussion somewhat. Finally, this chapter considers the research accomplished in both communicative environments specific to the nature of peer talk and the influence of peer talk on revision. For the most part, researchers have addressed the effects of non-interactive talk, or simple comments, on writing-in-progress. However, the inherent potential that peer response groups have to talk interactively calls for a new examination. Further, previous research reveals that while researchers have considered the

need to describe peer talk itself and to determine whether and how the talk influences the writing, these two issues have been approached in separate, unconnected, and often non-specific ways. The general lack of clear connections between such research has created a somewhat disjointed body of knowledge. Finally, although peer response groups are used in both the traditional oral and the newer CMC environments, little research has attempted a direct comparison between these two media. This dissertation addresses the need for research that more closely builds on and extends some of this earlier scholarship and attempts to address more systematically and clearly the interactive nature of peer talk and its influence on revision when peer response groups meet in the oral and the CMC environments.

**Peer Response Groups and the Social Constructivist Epistemology**

The use of any form of peer groups in the writing classroom is strongly rooted in the social constructivist epistemology, wherein knowledge is understood to be dynamic, provisional, and developed and mediated socially as people operate within various communities of knowledge. In these knowledge communities, conversation is an important way that people generate thoughts, test ideas, and determine what they believe to be true. One of the appeals of the social constructivist view is that it is cross-disciplinary. Such diverse thinkers as psychologist Lev S. Vygotsky and scientist Thomas Kuhn are frequently cited contributors to the current understanding of social constructivist epistemology.

Vygotsky, in *Thought and Language* (1962),[1] observes that young children understand the relationship and development of inner thought to language. He finds that social experience is critical to externalizing thought to language. Vygotsky distinguishes among inner speech, verbal (social) speech, and written speech. Contrary to Jean Piaget's early work on which he draws,

[1]Written originally in Russian and published posthumously in 1934, *Thought and Language* gained popularity with American humanist scholars shortly after its 1962 translation.

Vygotsky finds inner speech to be an internalization of, and a developmentally higher step than, egocentric speech, the verbal speech from which all children begin and which is “speech for oneself, intimately and usefully connected with the child’s thinking” (133). Egocentric speech requires a social situation for its use; when a child is separated from a person or group who might derive understanding from her speech, she internalizes her thoughts (137). Without other people to hear, then, even the most egocentric of talk is no longer of use verbally; externalized language is encouraged and developed through social encounters. Vygotsky stresses, however, that inner speech is not a step backwards developmentally. The internalization of thought is part of the language learning process and later becomes part of the process of written language, which again needs a social situation for its use. Written speech, he explains, “requires a high level of abstraction,” partially because our motives for communicating via writing “are more abstract, more intellectualized, further removed from immediate needs. In written speech we are obliged to create the situation, to represent it to ourselves. This demands detachment from the actual situation” (98-9). Writing, then, is a deliberate act that must be accomplished on a conscious level because it is more closely related to inner speech than to verbal speech. Developmentally, it is more challenging than oral speech, which “precedes inner speech in the course of development, while written speech follows inner speech and presupposes its existence (the act of writing implying a translation from inner speech)” (99). Thus, Vygotsky believes it is in response to the presence and absence of social relationships that people develop and use language to express their thoughts. He further stresses the social nature of language growth when he explains the crucial nature of imitation in speech learning; the child learns in cooperation and collaboration with others; having been instructed either directly or through observation and imitation, when the adult isn’t there, the child will continue to solve problems through the other’s

invisible, internalized presence (104,107). Writing teachers extrapolate from Vygotsky and encourage social encounters in the form of peer groups to assist students in developing their own "internal editors."

Scientist Thomas Kuhn's articulation of the social nature of scientific communities also has influenced scholars' understanding of knowledge development. In *The Structure of Scientific Revolutions*, Kuhn explains why and how scientific communities are responsible for, and inseparable from, scientific paradigms. Such communities, he believes, consist "of the practitioners of a scientific specialty" (177). To a large degree, within each specialty, scientists share like educational backgrounds, hold similar scientific beliefs, and pursue "a set of shared goals, including the training of their successors" (177). Within their specialties, scientists find themselves in agreement on a great many matters and because they share general beliefs and language, they are able to shape contestable terms with relative success. Outside of their immediate communities, however, "professional communication across group lines is sometimes arduous, often results in misunderstandings, and may, if pursued, evoke significant and previously unsuspected disagreement" (177). Kuhn demonstrates that scientific knowledge, far from being static, apprehensible fact, is developed within limited social groups of like members. When we understand scientific knowledge to be socially constituted, then we can more easily consider the notion that all communities develop their views of the world within the context of those communities. In this light, college students and their teachers can be understood as members of separate communities, with the teachers working to acculturate their students into the academic community at large.

Kenneth Bruffee (1984, 1993) is perhaps the most vocal advocate for putting into practice the social constructivist epistemology in English classrooms. In "Collaborative Learning and the

'Conversation of Mankind,'" Bruffee encourages teachers to employ in their classrooms what he calls collaborative learning strategies and to learn to use them "appropriately and effectively" (636). He connects students' failures to learn to think and write critically to the failures of "traditional classroom teaching" and believes that "[t]o think well as individuals, we must learn to think collectively—that is, we must learn to converse well" (637, 640). Bruffee clearly develops his thinking from Vygotsky regarding the relationship of inner and written speech development to verbal speech. He says: "If thought is internalized public and social talk, then writing of all kinds is internalized social talk made public and social again. If thought is internalized conversation, then writing is internalized conversation re-externalized" (641). It follows, then, that students need a social context for writing; peer tutoring and peer groups provide that context. In *Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge,* Bruffee explains that for these groups to work well requires that students be able to engage in constructive, reacculturative conversation," a conversation that allows one to cross the boundaries of one's current knowledge community into the unfamiliar community of another. For this task, students need "willingness to grant authority to peers, courage to accept the authority granted to one by peers, and skill in the craft of interdependence" (24). Students practice interdependence when they rely on each other rather than the instructor's exclusive authority to accomplish their learning tasks, but they must learn this skill because they are used to the traditional classroom situation where the teacher has the authority for transmitting or depositing knowledge. For Bruffee, peer work is best accomplished without the teacher participating as part of the "consensus" group (29); students should write to other students and talk about their writing to one another, thus depending on and learning from each other (58). It is the job of "a good college education," he says, to nurture and support the "willingness, courage,

and skill" in interdependence (24). Like Kuhn, Bruffee argues that: "Knowledge is maintained and established by communities of knowledgeable peers. It is what together we agree it is, for the time being." Further, "collaborative learning models" the knowledge-making process among knowledgeable peers, enabling students to develop more fully their thinking as constituents in communities of the Kuhnian sense ("Collaborative Learning" 646). A humanities teacher's job, Bruffee believes, is to "perform as conservators [of established knowledge] *and* as agents of change, as custodians of prevailing community values *and* as agents of social transition and reacculturation" (650). He argues that only through interdependent peer work may we make progress toward these lofty goals.

**Collaborative Learning and Peer Response Groups**

The social constructivist epistemology has clear implications for composition theory and practice, of which one outgrowth is using peer groups as a form of collaborative learning. If knowledge is not some static entity to be deposited in the student, as in Paolo Freire's (1971) well-known banking metaphor, then teachers cannot teach students to write simply by telling them how to do it. Teachers cannot approach writing pedagogy as if they are keepers of the secret to developing good writing. Like Vygotsky, we must recognize the value of the group or other to the articulation of inner speech as written speech. Like Kuhn, we must understand the difficulties inherent in learning the language of a specific community of thinkers and then crossing the line into a foreign yet equally viable community. And, like Bruffee, we must offer students frequent opportunities to learn interdependence by encouraging them to rely on each other rather than on the teacher's authority alone.

Views of collaborative learning generally split into two strands: the ideologically-based strand encompassing civic ideology (LeFevre, 1987 and Clark, 1990) and the practice-based

strand encompassing composing theory (Moffett, 1968, reissued 1983; and Britton, 1975, 1982) and practical applications (LeFevre, 1987, Spear, 1988), with some scholars seeing a convergence of the two schools.[2] The first view of collaborative learning sees it as a means to engage students ideologically and often includes discussions of political and feminist theory; this view implies a discussion-based pedagogy wherein students talk to solve problems and it encourages students not to privilege consensus over dissensus.[3] The second strand views collaborative learning in a more practical light, implying a task-centered pedagogy; collaborative peer learning tasks include collaboration on a single task or joint document, inventing or discovering ideas, critiquing writing and suggesting revision strategies, providing a live audience, and discussing ideas and writing. While all or any one of these tasks might be the

---

[2]Anne Ruggles Gere (1987) details historically the use of peer response groups in composition classrooms in *Writing Groups: History, Theory, and Implications*. Although our common sense notion of peer response groups (or writing groups, Gere's broader term) may be that they were first introduced to college classrooms through the pedagogical practices of social constructivists, gathering students into groups to improve their writing has a long history. She explains that many eighteenth and nineteenth century college literary societies formed as public and social forums and were accompanied by a deep need to broaden and enrich the students' social lives, as well as to debate public issues (9-11). Students gathered in these societies to enhance their writing skills, but also to explore and refine their understanding of the world and society in which they lived. It is this social nature of writing groups that Gere defines as placing "language at the center of knowledge because it constitutes the means by which ideas can be developed and explored" (73).

[3]An example of this ideological strand comes from Gregory Clark (1990), in *Dialogue, Dialectic, and Conversation: A Social Perspective on the Function of Writing*; he implies a pedagogy of peer work when he argues that a democratic society needs to view and teach writing in a conversational model. Clark believes that "our students should learn from us that neither writing nor reading can be a private act, that every text is necessarily public and political as it contributes to the perpetual process in which the values and beliefs that sustain community life are modified and revised, that writing and reading are both public acts that carry with them significant social responsibility" (68). Employing peer response groups is one common way that composition teachers teach their students this public nature of the written text; when peers read group writing, there is a tension between what is on the page and what the writer may have intended. Writers learn in an undeniably realistic way that they have responsibility for what is on the page and that they must attend to a public audience.

focus of a peer group during any particular group experience, peer groups tend to be given either jointly-authored document tasks or collaborative review and discussion tasks. Because this study's primary focus is that of peer response groups (e.g., those groups that respond particularly to one another's writing), I will discuss here only the research that considers task-centered uses of collaborative learning theory, and primarily that which considers peer review and discussion of student writing.

Contemporary composition theory offers precedent for including peer writing groups in classroom practice. James Moffett's *Teaching the Universe of Discourse*, first published in 1968, has become one of the twentieth century's most enduring statements of the need to involve students in their own learning. A staple in many a teacher's theoretical cupboard, this book outlines what Moffett calls a structural curriculum in English and becomes one of the first in contemporary writing pedagogy to place peer groups at the center of learning to read and write. Moffett asserts that all of the issues of rhetoric lie in the relationship from the speaker/writer to the listener/reader (10). To elucidate his structural system, he borrows and refines Martin Buber's language regarding dialogic and monologic social relations (*I-You* and *I-It*). He believes that "in exploring all the shifts that can occur in the rhetorical relation of *I-You* and the abstractive relation of *I-It*, we will find sequences of activities that can be embodied in a curriculum doing justice to both learned and learner" (13). Moffett explores as kinds of discourse interior dialogue, conversation, correspondence, public narrative, and public generalization and inference. Critical to the learning activities he recommends are opportunities for students to meet in small peer groups. Peers become audience (12) and, as adolescents, are natural bearers of authority (194); the teacher's role "is to teach the students to teach each other" (196). Moffett followed his theoretical treatment of student-centered learning with a practical handbook, *A*

*Student-Centered Language Arts Curriculum, Grades K-13: A Handbook for Teachers* (1968). Designed to help interested teachers put his theory into practice, this text provides an expanded rationale for student-centered classrooms and a graduated curriculum illustrated by sample assignments and writing.

Peter Elbow's *Writing Without Teachers* (1973) provides a classic example of a classroom environment that carries out Moffett's ideas. In a text directed both to students and teachers, Elbow proposes revolutions to the classroom, making it one where students form the class and help each other to write without the assistance of a teacher in the traditional model. While Elbow offers advice regarding listening and talking to each other, students join together, select a leader, and then make their own decisions about classroom procedures. Most critical to the success of a teacher-less writing class is the response that writers give as readers of each other's work. It is the collaboration of reading and response, question and answer that offers the writer views outside of his or her own sense of the writing.

James Britton (1975, 1982) is another who privileges peer groups in his theory of writing development. He includes writing groups in the system of audiences that he inferred from his study of adolescent writers, *The Development of Writing Abilities (11-18)*. Britton's sense of audience categories highlight different levels of relationships that writers can have with their readers, beginning with the self (often expressed textually as pre-writing) and moving outward to wider audiences (from a teacher-student relationship to the peer-to-peer relationship(s) to the unknown public audience). Britton acknowledges the peer-to-peer relationship as an important opportunity for school children to learn about audience; it is a role in which peer response group readers operate when reading and discussing a group member's writing. Indeed, in *Prospect and Retrospect* (1982), Britton connects the use of small group workshops that foster talk to the

organic structure of a child's learning habits; small groups are particularly important as part "of the sea of talk on which all our school work should be floated" (109-10). Because "[r]eading and writing and talking go hand in hand," he recommends that small group work accompany individual and other communal work (110, 165).

Karen Burke LeFevre (1987) views the belief that knowledge is socially generated and moderated both ideologically and practically. She argues in *Invention as a Social Act* that the generation and development of ideas is "not merely socially influenced but even socially constituted" (2). Invention, she believes, is "powerfully influenced by social collectives, such as institutions, bureaucracies and governments, which transmit expectations and prohibitions, encouraging certain ideas and discouraging others" (2). Thus, understanding the social nature of invention is crucial to the ability to function responsibly and well in society. Because invention, as the creation and development of ideas, is best aided by interaction with others, "[t]he principal role of others is to help the individual to generate and evaluate ideas and information" (68). Drawing on Vygotsky's theory that inner speech is derived from outer, socially-focused speech, she believes that the inner "inventing 'self'" is "socially influenced, even socially constituted" (19, 33). Because invention occurs via interaction with others, peer group work is a natural medium for encouraging this interaction in the school setting. LeFevre explores the nature of idea generation as an act accomplished naturally and productively in social groups, which she calls "an 'interactive' type of collaboration" where the "principal role of others is to help the individual to generate and evaluate ideas and information" (68).[4] Like LeFevre, George Hillocks (1993) sees small peer discussion groups as having inventional properties; he calls this pedagogy an "environmental teaching" strategy. Talking together in these groups constitutes "a powerful

[4]LeFevre's work has extensions, as well, in discussions of workplace collaboration such as Duin and Hanson (1994), Lunsford and Ede (1990), and Spear (1988).

learning experience, one that enables them to deal with complex concepts in a far more sophisticated fashion than they can independently." This is because in groups students bring their outside knowledge to bear on the problem, and because the "give-and-take of discussion" enables them to explore and develop various "strands" of ideas (267).

Learning how to use peer groups to good advantage is the necessary subject of various fields of study. Many factors influence the success of peer group work. When students are put together to work in groups, they carry with them the experiences and attitudes engendered by previous group experiences. Teachers, too, influence group work with their preparation, or lack of it, for grounding, selecting, and tasking groups in their classrooms. Karen Spear's *Sharing Writing: Peer Response Groups in English Classes* (1988) offers guidance to teaching and learning the interpersonal skills necessary for "fruitful discussion of writing" (Preface). She deals with such practical matters as how to understand, prepare for, and mitigate the conflicts that arise with the interpersonal work necessary in peer groups, training students to become peer collaborators rather than teacher surrogates, the how-to's of starting a class that uses peer groups well, and the give and take of feedback, to name a few. Spear's work is both a theoretical and practical discussion of the values and concerns connected to using peer groups for writing workshops. She believes that it is essential to understand why students behave as they do in peer groups before we can "influence the behavior itself. Research into the composing process has begun to do that for writing. Much the same approach needs to be taken to diagnose group behavior" (26). She undertakes in this book to analyze such group behavior and to systematize some of the elements of peer group talk as it affects the group's work. For example, she reprints and analyzes a transcript of what she terms a successful group revision session (71-83) and demonstrates why this group has succeeded in guiding the writer to new and more detailed views of her subject, a

three-week unit plan for her educational methods course; they have had an inventive chat about this student's ideas. However, Spear does not present, analyze, or discuss this student's next draft of the lesson plan, leaving readers unaware of whether the writer actually used any of the specific ideas which were raised. Without this analysis, unfortunately, it is impossible to know to what degree the peer group chat actually affected the writing or whether the inventive discussion was usefully applied to the revision.

**Extensions and Critiques of Peer Response Groups**

Like Spear's book, most of the research that extends the basic understanding of peer response groups in English classes focuses primarily on using peer groups productively to improve writing and secondarily to help students to grow as individuals—a blending of the practical and ideological strands. Erika Lindemann (1995) prescribes tactics for strong peer group use because she believes that peer group workshops do the following: ensure stages of composition, provide a venue to exchange solutions to writing problems, develop self responsibility for learning, provide an audience beyond the teacher, "immerse students in a community of readers and writers," and offer many models of writing, giving students the opportunity to learn "what good writing is" (199). Barbara E. Fassler Walvoord (1986), writing to teachers of all disciplines, distinguishes between peer response groups and task-oriented or collaborative groups. She offers guidance for making groups work, suggesting that teachers determine whether the groups will be permanent or spontaneous, offer clear instructions regarding the peer work, engage in trust building exercises, remain available for conferences, provide feedback to the groups, and require attendance (111-16).

Diana George (1984), interested in learning more about the nature of peer groups, audio taped over one hundred group sessions. Her analysis reveals three basic categories of groups,

each having particular strengths and weaknesses: task oriented, leaderless, and dysfunctional (321). Although she pinpoints several failings of the group work (lost ideas where the writer does not hear or attend to certain commentary, peers not knowing how to read each others' work helpfully, and the general failure of some groups to interact productively (322)), George believes that employing peer groups is a helpful pedagogy that can be even more successful if teachers would audio tape the sessions for students to hear and critique (324). To understand better and to mitigate the kinds of group problems that George describes, researchers Susan Wyche-Smith (1995) and Wei Zhu (1995) each examine the value of training in peer groups. Wyche-Smith believes that some form of peer group can succeed in any course, but to do so, the teacher must "acknowledge the power that variables have in shaping group experience" (63). Such variables include size of group, membership, procedures, task assignment, media, and timing. Zhu stresses the importance of training students in interactive skills necessary for strong peer work (495). Her research reveals that it is insufficient simply to give peers opportunity to work together; training fulfills the teacher's duty "to promote negotiation and interaction among students so that they can indeed enjoy the cognitive and social benefits of peer interaction" (517). Suggesting more research on peer response to further refine instructional uses of peer groups, Zhu believes that studying the conditions and factors under which these groups commonly meet would be useful (520, 518).

Robert Brooke, Ruth Mirtz, and Rich Evans, in *Small Groups in Writing Workshops* (1994), concentrate their use of peer groups in the upper level fiction classroom; they believe that since writing is a social act, group work is appropriate to the task (4). Their book combines theory, practical considerations, and study of group transcripts to argue for a wider use of small groups, which provide "time for writing, ownership over their topics and processes, ongoing response to

their writing, and exposure to the writing of others" (3). They discuss the nature of conflict in peer groups and value the effort of studying transcripts of student discussions for insight into group dynamics such as interaction patterns and diversity issues. Unfortunately, they do not offer a systematic, replicable instrument for studying such transcripts.

Harvey S. Weiner (1994), who also argues for peer work on the basis of social constructivist theory, agrees that teachers are responsible for the success of peer groups and to achieve greater levels of success, the discipline must develop new evaluative standards by which both teachers and students can measure the peer group work. In this essay, he asks us to consider how well collaborative learning really works, how we form our goals, how well we accomplish these goals, and how we pass these goals on to new teachers. His suggestions promote our need for a more systematic and fuller understanding of the peer group process and our uses of it.

Weiner, who calls for a clearer critique of peer group pedagogy, and George, who finds value in using peer response groups even when they are problematic, represent one cautious position regarding employing a socially dynamic pedagogy. Sharing the belief that group work is valuable, though often difficult and "risky," Hephzibah Roskelly (1994) sees a wide "gap between talk about groups and talk in groups" (141). Others more strongly question the value of peer response groups in writing instruction. When the discord is expressed theoretically, it seems to arise from a fundamentally unclear definition of what constitutes social constructivist thought and how such thinking translates into classroom practice. Lester Faigley (1992) reminds us that "no single theory or even two or three theories of the social have become widely embraced by writing teachers. Consequently, what is meant by 'social' and 'social constructionism' differs from theorist to theorist" (33). Such lack of agreement leads those who find fault with a pedagogy based in social constructivism to view the problems in divergent ways. Christina

Murphy (1994), for example, goes to the heart of the issue by critiquing this epistemological shift away from earlier pedagogies as both "enormously alluring" and one whose goals are difficult to question. She cites LeFevre's (1987) claim that inventing in communities is vital to the peaceful continuation of life on earth and says, "Simply put, what composition teacher wants to be opposed to goals like these?" (94). She grounds her discussion in cognitive social psychology where some researchers have challenged social constructionism on the basis that it "valorizes collaboration and cooperation while de-emphasizing the emotions" (95). Further, she questions this epistemological stance as it plays out pedagogically by citing Donald C. Stewart's (1988) concerns that introverts, who tend to prefer to work alone, may be unfairly judged and poorly served by collaborative peer work (96). Overall, her thoughtful essay cautions that a bandwagon approach is inappropriate, particularly with a pedagogy that has such strong social implications. Murphy's questions are useful because they encourage scholars to consider carefully their ideological stances; certainly further research is necessary to understand more fully the social impact of peer groups on the students who participate, not necessarily willingly, in what often is a required activity of a required course. David Foster (1997), too, criticizes what he calls "fault lines" in community group theory. A considerable difference exists between those who see classroom groups as "nurturing collaboration and commonality, and those who distrust such practices as diminishing difference and masking inequality" (326). Viewing classroom community as a trope in current professional literature, Foster believes that teachers must recognize the complexities of student subjectivities; students still need to develop "critical self-awareness," and this is best accomplished in "self-reflexive discourse" (336). He closes his argument with this concern:

> It must be asked for what purposes classroom groups are formed, what specific goals are set for them, how the teacher interacts with them, what connections they have with the larger learning goals of the class, and what sorts of ethnic, cultural, and socioeconomic variety are represented among class members. Only in this way can the real complexities of intentions and interactions in English classroom groups be better understood. (339)

Even those who criticize using peer groups in the writing classroom from a less theoretical, more practical viewpoint seem to lodge their differences in the fundamentally imprecise notion of how a social constructivist pedagogy should translate into classroom practice. What is supposed to happen in a classroom that uses the peer workshop format? Ultimately, who is responsible for what occurs? For example, Thomas F. Bertonneau (1996-97) believes that peer response groups are reflective of English teachers who eschew their responsibilities of "rigorous correction and annotation of student papers by the instructor in favor of atomistic and self-styled autonomous 'groups,' into which the process classroom is regularly disintegrated" (67-8). Bertonneau sees peer group methods not so much as undermining the teacher's position of authority, but as undermining the students' education to which they are entitled. Such a view positions authority completely with the teacher and appears to harken back to current-traditional composing theory; however, other researchers who have conducted thoughtful studies find themselves in partial agreement. Carol Berkenkotter (1994) studied student writers' reactions to, and their uses of, peer response as a form of authority over their own texts. She cites three students, one "too immature to develop any kind of a rapport with his audience," the second responsible to his peer audience, yet once committed to his subject, "he made a series of informed decisions about the usefulness of their comments," and the third whose "very receptivity to her readers' suggestions made her vulnerable to their unwarranted criticism." From

her study, Berkenkotter learns that “students who write for peer readers as well as their teacher might not necessarily reap the advantages we’d like to imagine” (318). She suggests that future research should address the problems inherent in the cited student reactions. In another practice-based study, Thomas Newkirk (1984) investigates more systematically the peer group responses in their function as audience. He finds that students are willing “to ‘read in’ elaboration” of detail in a way that teachers do not; the students identify more closely with the text and its writer, prompting them to fill in conceptual and detail gaps (310). He suggests that the teachers and students in the study comprise “distinctive evaluative communities” and that students should be viewed as apprentice readers with teachers as master readers taking active participatory roles in the workshops (309, 310). Sarah Warshauer Freedman (1987), in a study conducted through the National Writing Project network, finds that students tend to value the peer response group process to a lesser degree than do teachers. Her research suggests a connection between this valuation and students’ preference for written comments and grades on final written versions as opposed to writing-in-process (158). These studies, and their inherent criticisms of peer response group processes, reveal a need to understand better how students in peer response groups talk to each other and whether and how what they say influences their writing-in-progress.

**Peer Response Groups and the CMC Medium**

The need to understand these issues are just as crucial in the computer environment where studies regarding peer work in English classes have multiplied with the development of writing pedagogy that engages computer technology. Like that of collaborative learning in general, computers and writing research mirrors and extends collaborative learning theory into two strands of ideological and practical concerns with their implied pedagogies. For example, scholars have studied collaborative learning as an ideological tool by examining CMC as a

means of problem solving involving both consensus and dissensus (Howard, 1997, 1992; Baldwin, 1997; Gruber, 1995; Duin and Hanson, 1994; Selfe, 1992b; Kaplan, 1991; Ray and Barton, 1991; Gomez, 1991; Cooper and Selfe, 1990), sites of gender and power (Selfe, 1992b; Hawisher and Selfe, 1992; Bump, 1990), as sites of fruitful literary discussion (Bump, 1990), and as a means to develop a sense of community both among students and between them and various discourse communities (Daisley, 1997; Howard, 1997, 1992; Baldwin, 1997; Duin and Hanson, 1994). Some have extended the concept of classroom community to what they think is a natural connection between feminist theory and computers in the writing classroom (Guyer, *et al*, 1994; Takayoshi, 1994; Jessup, 1991; Selfe, 1990; Flores, 1990). Still others have studied and discussed the practical strand of joint document production (Selfe, 1992a; Schilb, 1992; Forman, 1991).

Interestingly, research into collaborative learning with computer technology is divided not only by theoretical concerns, but also by technological advances and the possibilities they present for writing instruction. According to Janet Eldred (1991), early research in this area mirrors the general developmental pattern of contemporary composition pedagogy. Specifically, she connects traditional product-centered pedagogy to instructional uses for drill and practice software, technological editors, and spell checkers; process-centered pedagogy to heuristic software and artificial machine intelligence for effective thinking and pre-writing; and the more recent social pedagogy that views writing as a dialectical act to collaborative software and computer conferencing. Gail Hawisher, *et al* (1996) agree: “In some sense, computers and composition studies, as a subfield, has *followed* its parent field, composition studies. We’ve moved from computer support for process-based composing to computer support for feminist and critical pedagogy—as composition has changed its teaching values, so has computers and

composition studies" (283). The result is an abundance of research on such topics as computer assisted instruction and word processors (Cyganowski, 1990; Kowalski, 1990; Schroeder and Boe, 1990; Holdstein, 1987; Bridwell, *et al*, 1985), computer conferencing and distance learning via telecommunications software (Howard, 1997, 1992; Baldwin, 1997; Yakamovicz and Murphy, 1995; Spitzer, 1989; Eldred, 1988), and research that pushes current frontiers with innovative technological literacies such as MUDs, MOOs, and hypertext (Faigley, 1992; Landow, 1992; Harisim, 1990).[5] Such research challenges scholars to envision the future of writing instruction as aided and even driven by technology (Hawisher and LeBlanc, Eds., 1992).

More pertinent to this study is research into networked microcomputers and writing instruction, commonly called computer-mediated composition, or CMC. Most networked computers are linked by a local area network (LAN)[6] and usually have some sort of file sharing capacity, as well as an internal communication method such as electronic mail (E-mail) or conferencing software. Teachers and students use these electronic communication tools to share papers for review and critique, to comment on shared writing, and to discuss their ideas in a textual group setting. Networks are also used for private messages, to assist collaboration on a jointly-authored document, and to create and implement heuristic and revision exercises. Talk among group members who share a network connection can occur synchronously as all group members converse simultaneously with one another (also called real-time) or asynchronously as messages are posted to the network and received at different times (also called non-real-time). MUDs and MOOs are examples of the former and E-mail is an example of the latter. Discussion

[5]MUDs (multi-user domain, a real-time chat forum) and MOOs (multi-user domain, object oriented) originated as Internet-based role playing game formats.

[6]They can be joined by a wide area network (WAN), as well, leading to long distance communications between diverse classes and among multiple users who access them via the Internet for distance classroom and "chat" room uses.

in real-time chat appears on the screen as it is being typed and discussion in non-real-time chat is delayed by the amount of time it takes for the writer to post the message and for the server to receive and queue the message. While some institutions create their own network space by creatively using E-mail and file transfer protocols (ftp), there are numerous brands of networking software being marketed for educational use, among them *Connect*, *Daedalus*, *Aspects*, and *Common Space*.[7] Additionally, many educators are beginning to make use of the Internet, a WAN, to create cyberspace-based on-line collaborative learning environments (OCLE) for their students to share files and discuss their writing and ideas. Thus, depending on the software and the network to which it is installed, students and their teachers can engage in conferences that occur in the classroom with everyone present, outside of class at pre-arranged times, outside the class at the individual's convenience, or any combination of the three.

Philosophically, CMC classrooms are a natural outgrowth of, and commitment to, social constructivist epistemology, which anticipates that writing growth can emerge from frequent sharing of student texts and discussions about those texts; the innovative factor is that CMC discussions are textual, not oral, in nature. Eldred (1988) explains that "computers make tasks more social by inviting in public information, public texts" (209). Further, this public accessibility and sharing of information and texts "redefines (much like the telephone does) our notions of space and intimacy" (210). Lester Faigley (1992) examines how postmodernism impacts epistemology and notes that "using networked computers to teach writing can change the nature of the writing class," causing a more student-centered environment (167). He sees promise for a student-centered classroom in students' abilities to choose as their focus what he calls a "hot message" and to guide their own talk by virtue of their interest in that message (180-

[7]*Connect*, Norton; *Daedalus*, The Daedalus Group, Inc.; *Aspects*, Group Logic, Inc.; *Common Space*, Houghton Mifflin.

1). Ann Hill Duin and Craig Hanson (1994) believe that emphasizing "the dialogic nature of social construction," helps the student to become a "contributor, a builder" in a dynamic and "two-way" literacy development (91). Stephen Lafer (1996) also values the social dimension of CMC in education because the student writer's primary audience circle is enlarged beyond the teacher, removing the writer from a primarily egocentric position and giving him/her practice in audience assessment and in deciding how to convey the messages to others (146).

Although research into CMC begins with early social psychological research regarding the effects of CMC in the workplace,[8] for composition purposes, most credit Trent Batson (1988, 1993) with the first networked classroom environment in 1985 at Galludet College in Washington, DC. Batson's *Electronic Network for Interaction*, or ENFI, allowed deaf students to discuss their ideas textually, enlarging the number of people who could engage in the discussion and eliminating the need for the close proximity and visual contact that hand-signing requires. Two of the developers of the *Daedalus Instructional System*, an ENFI-like software program, Thomas Barker and Fred Kemp (1990) formalize their conception of a computer-based collaborative pedagogy that they believe will be effective as an instructional tool and responsive "to the conditions of a postmodern culture" (2). In this pedagogy that they call "Network Theory,"[9] the collaborative software manages the interactions, keeps texts safe from manipulation by readers, and does not privilege a teacher above students, requiring that teachers

[8]See, for example, Kiesler, Siegel, and McGuire (1984) who determined that CMC is "a key component of the emerging technology of computer networks" (1123).

[9]They express this theory formally as: "The essential activity in writing instruction is the textual transactions between students. These transactions should be so managed by the network as to encourage a sense of *group knowledge*, a sense that every transactor influences and is influenced by such group knowledge, and a sense that such group knowledge is properly *malleable* (responsive to the influences of each transactor). The result of textual transactions so managed is a *deneutralizing* of text itself and a greater emphasis and skill on the part of the transactor in rendering such a text." (15)

who wish to join into discussions "must choose a workstation and participate at a transactional level equal to that of any other person sitting at any other workstation" (16). Transactions between participants occur as *formal text*, *electronic mail*, and *electronic discussion*. Formal text, or essays, arguments, and journals in more traditional terms, are shared among participants, which "deneutralizes" them by emphasizing their developing, changeable nature as writing-in-progress for readers to which the writer can respond. An E-mail system is built into the software for sending memos and commentary that "ideally" stimulates correspondence and influences writers' decisions (19). Finally, participants can engage in electronic discussion about the texts and commentary, stored in files by the network system for recall and response. Throughout this entire procedure, students complete all of their transactions in writing, commenting textually, often in complex sentences necessary because of the removal of face-to-face communicative signals; because students are always practicing reading and writing in this medium, Barker and Kemp call this process "*textualizing* the class" (20). Kemp (1993) believes that through networks, "[t]he writer learns how to affirmatively affect the reader. . . by getting a variety of reactions to a variety of the writer's efforts, and time and again adjusting effort for maximum positive effect," which he likens to "feedback" as used in electronics and the natural sciences (25). He thinks that students' critical reading and writing skills deepen through the processes of writing to, and reading responses from, each other. Peer criticism becomes "meaningful for students in ways that teachers' comments cannot" because: (1) students' natural sympathy and identification with each other "generate[s] attention"; (2) students are aware that theirs is "amateur criticism" which requires their full attention and "application of critical skills"; and (3) most importantly, the necessary "act of critical reading" requires "the ability to read with a critical eye," a skill gained through the practice of reading, not professional, but student text (26-

7).[10] Other scholars agree with Kemp's understanding of the possibilities of CMC. Michael Palmquist (1993), along with Lafer (1996) and Hawisher (1992), thinks that "the most tangible benefit of using" networks in the classroom is "immersion in writing" (26). Faigley (1990) believes that networked software like *Daedalus* offers possibility for altering "collaboration, relationship of power, and our understanding of language and knowledge" because the students, not the teacher, maintains the balance of power (291). Selfe (1992b) sees CMC as "healthy complements to the traditional composition classroom," by trying "to develop computer-based strategies that offer students the opportunity to effect change, to see things from different perspectives" (165).

Teachers using networked writing classrooms cite largely anecdotal evidence for CMC's benefits to student writers in terms of critical skills development, revision, and the more intuitive, inventive aspects of the writing process. For example, some believe that CMC addresses revision skills by adding a social, human intelligence dimension to the revision process. Barker and Kemp find that: "Good writing, therefore, is a function of revising, but revision itself is a function of (1) purpose and motivation, (2) awareness of voice and audience, and (3) the conscious application of editing skills. The computer approach supposes that the one instructional activity that best supports these elements of revision is the intense reading and critiquing of peer texts" (24). Carol Klimick Cyganowski (1990) supports this notion, believing that networks build community, which strengthens revision. Indeed, some believe that networks may help students to internalize the more intuitive aspects of composition, which include Sondra Perl's (1988) "felt-sense," an "internal criterion writers seem to use to guide them when they are

[10]Gere (1987) expresses a similar view about writing groups in the traditional oral environment: "Collaboration in writing groups addresses this alienation by providing writers opportunities to explore the language of their linguistic community in the company of members of that community" (68).

planning, drafting, and revising" (116). Marilyn Cooper and Cynthia L. Selfe (1990) believe CMC may benefit students because it diminishes the teacher's traditional authority; allows students to be relatively anonymous through the use of pseudonyms and the faceless nature of the computer screen; shifts competition "from that of personality to ideas"; creates more "free wheeling" discussions where students choose what they will respond to through a "lack of traditional turn taking rules"; encourages more lengthy, more slowly developed, carefully considered written comments; and causes comments to be "more emotion-laden" to compensate "for the lack of paralinguistic cues" (853). Carolyn Boiarsky (1990) extols the benefits of a CMC classroom where the teacher is free to become a coach or editor-in-chief of a group of writers who share their texts freely and often. She finds such an environment empowering as it is conducive to students learning to trust each other's judgement as readers who somehow echo the teacher's suggestions. Boiarsky explains: "For many students this role is antithetical to what has been ingrained in them since preschool" (61). Michael Spitzer (1990) also praises the value and promise of computing with collaborative networks. CMC "makes writing more enjoyable, extends students' willingness to spend time writing, enlarges their awareness of audience, makes it easier for them to face the blank screen, clarifies the need for revision, and facilitates revising" (62). In addition, he believes that CMC via a LAN encourages collaborative activities, allows the teacher as coach to intervene during the drafting process, facilitates modeling of strong writing, and as a bonus on a WAN, encourages professional collaboration, debate, and exchange. Selfe (1992a) believes that collaborative work using CMC has the potential to mitigate some of the "marginalization or silencing of some individuals" that occurs in face-to-face oral peer group sessions (151).

Like the scholars discussed above, Faigley (1992), Myron C. Tuman (1992), and Susan Wyche-Smith (1995) offer anecdotal evidence alone in support of CMC's positive values. However, some scholars and practitioners are calling for a more critical understanding of this medium. Even those who generally find exciting the movement towards fuller pedagogical uses of technology in the classroom (Lanham, 1993; Tuman, 1992; Hawisher, 1992; Selfe and Meyer, 1991; Hawisher and Selfe, 1991; Handa, 1990) express a need for balance in developing a research agenda. Carolyn Handa contends that the computer is not a neutral tool; it reflects the politics and ideology of a particular time and a social context. She thinks that teachers should examine their own beliefs to discover whether they harbor within themselves "a deeply embedded, unconscious resistance to collaboration when thought we actually favor it" (160). Technology has the capacity to enable change in classroom dynamics, but it will not automatically do so; indeed, as I found in my own experience as a new user of CMC, she cautions teachers that we cannot simply transfer a traditional course syllabus to a networked classroom and succeed in changing dynamics (169, 171). Hawisher and Selfe agree. They explain: "What many in our profession have yet to realize is that electronic technology, unless it is considered carefully and used critically, can and will support any of a number of negative pedagogical approaches that also grow out of our cultural values and our theories of writing" (56). Bringing Barker and Kemp's network theory full circle, Bernard Susser (1993) reminds teachers that there is a "wider range of social writing" that can be accomplished with computers and that it is the pedagogy which should take precedence over the technology (64).

Such pedagogical concerns lead finally to a necessarily more critical and balanced view of the ways that CMC can impact student interactions and writing. Eldred and Hawisher (1995) and Hawisher, *et al* (1996) each conclude that there is no empirical evidence in composition studies

proving that CMC significantly improves student writing quality; indeed, few have even demonstrated "important differences between students writing on- and off-line" (147).[11] Surveying contemporary research, Hawisher (1992) finds that most studies have converged on basic issues: they seek to determine the characteristics of electronic discourse, they analyze how students respond to the discourse, and they examine this medium's educational potential (84). She cites as researched benefits of electronic conferences: the text-based nature of the environment, their provision of real and expanded audiences for writers, an encouragement toward a sense of community, demonstrated high participant involvement, an encouragement toward equitable participation, and a decrease in leader-centered communication. However, she also notes some of the negative effects recorded by researchers into CMC: potential for "flaming" or disrespectful speech toward group members, a higher potential for communication anxiety, individual writers who may experience a sensory overload, and an equal chance for ineffective learning as occurs in traditional forums. Palmquist (1993) sees a need for further research in how computer networks "shape curricular and classroom context" and vice versa (27). Batson (1993), however, believes that interactive computer classrooms may improve critical skills development. His study, in which both David Bartholomae and the Educational Testing Service (ETS) read and evaluated writing that stemmed from ENFI discussions, reveals that at best the ENFI essays were "less formal, more colloquial, less predictable, more individualized, less likely to present themselves as texts, and more likely to imagine a direct

[11]Hill, *et al* (1991) present a convincing study into the differences between student and experienced writers using both pen/paper and computer mediums; they attempt to determine how the computer affects writers' processes, not just their products. They find that "experienced writers define this type of revision task to include more global-level changes, while students tend to focus almost exclusively on local-level concerns"(101). Interestingly, their results do not demonstrate that using a computer changes the task definitions or the revising processes between revision tasks using either pen/paper or the computer (101, 102).

form of address" (96).[12] At worst, the essays were no less competent for having conducted peer conversations online; however, he cautions that there is a need for much further research (98). One of his "key" questions is whether the "ENFI setting allow[s] teachers and peers to have more of a direct effect on how students write their individual essays" (100). Irvin Peckham (1996), a long time user of oral peer response groups who offers a tongue-in-cheek account of his "insane" attempt to adopt CMC wholesale, sees value in this medium but believes that CMC represents a mere tool that can help or hinder good classroom practice; his message is that one must be circumspect in deciding when and how to employ it.

**The Nature of Peer Talk and its Influence on Revision**

Those who consider peer response groups to be valuable in teaching writing believe that groups harness the power of a small social assembly in order to generate and develop ideas and writing. The social nature of the group, however, is both its promise and its challenge as an instructional method. The promise is fulfilled whenever peer response groups work together well —conversing spontaneously about the writing being presented, expressing satisfaction with the time spent in the group, producing writing that has developed beyond the stage the writer believes it may have reached if written in solitude. The challenge, however, is invoked every time students are divided into peer groups. What happens when a writer is unprepared for the session or when the conversation is otherwise stalled? What can we do when members of a group argue or hate working in that particular group, or like Bertonneau, express a belief that the entire group process is a worthless venture, an abdication of the teacher's responsibilities? In CMC,

[12]Langston and Batson (1990) offer a possible explanation for this phenomena: "Creating the first draft of a paper by working conversationally on a computer network allows groups to alternate between commenting on the process and generating text to keep. The distinction between talk—a relatively unevaluated component of class—and writing—the most evaluated component—becomes blurred. The result is that often the students carry forward into their writing some of the energy and fluency that characterizes their talk" (148).

what happens when the group becomes interested in a “hot message” to the exclusion of one peer whose ideas are not addressed? How do we defend the process when individual writers believe that their writing is worse for having been discussed by the group? How do we defend our use of peer response groups when we see little or no improvement in the writing? Such practical challenges occur daily in classrooms where peer groups are formed and they can occur even for groups that generally seem to work well. Scholars like Murphy, Berkenkotter, and Newkirk raise reasonable questions that reveal a less than whole-hearted endorsement of the social constructionist epistemology in general and peer groups in particular as its natural pedagogical extension. Indeed, as this chapter reveals, even scholars who generally support CMC, an instructional tool inherently and intimately connected to the social constructivist epistemology, advise caution regarding what is reasonable to expect from this pedagogy both ideologically and educationally in terms of student talk and writing development. The reality is that scholars and teachers know very little about peer talk and how, even *if*, that talk affects students’ writing-in-progress. Peter L. Mortensen (1992) explains that this particular lack of knowledge is related to as yet unclear research goals for what researchers hope to find by studying talk about writing (116). This dissertation, which examines and compares peer talk in both the traditionally oral and the CMC environments, and seeks to learn whether and how the talk influences the writing, is designed to address some of these concerns.

Past studies regarding the nature of peer response group talk have only scratched the surface of this dynamic pedagogy. Some of the research regarding the traditional oral classroom has examined the conversation that occurs in peer response groups, generally categorizing the quantity and quality of such talk as feedback comprising global, local, and evaluative commentary (Faigley & Witte, 1981; Sommers, 1988). Gere (1990), who sees writing groups as

facilitating metacognitive thinking and as stimulating metalinguistic vocabulary, believes that students using writing groups "produce better writing because talk helps them identify and solve problems at many levels—word, sentence, paragraphs, and whole piece of writing—and solving these problems leads to a better piece of writing" (122-3, 117). Further, writing groups "learn about the nature of writing. They develop a language to describe what they and others do to write, they learn about audience needs and expectations, and they develop criteria by which to evaluate writing" (117). To develop these metacognitive and metalinguistic skills, however, Gere stresses a need for special preparation by the teacher-as-facilitator (125). Barbara M. Sitko (1992) appears to agree with Gere's major premise. Her research into how writers revise upon receiving feedback given as reader response shows that "simply by listening to readers' constructive processes, writers can get information that helps them to identify text problems and to take action at the structural level of their text" (292).[13] By exposing ways in which student writers use peer response groups to test their ideas and how peer discussions offer suggestions for developing ideas, these studies have advanced our understanding of how peer group talk functions in the invention and revision processes. Unfortunately, in terms of building a deeper understanding, these studies do not delineate the characteristics of the talk, and like Brooke, Mirtz, and Evans (1995) and Spear (1988), they do not systematically analyze whether and how the talk that occurs in peer groups affects the writing being developed.

In CMC, peer talk is conducted on the computer and is recorded to the network for future reference. Faigley (1990) calls this talk "a truly hybrid form of discourse, something between

[13]For a non-social constructivist approach to the problem, see Kathleen E. Welch (1993) who considers the nature of talk in peer response groups from a Platonic perspective. She finds group talk to be a dialectic that engages the whole psyche, creates a dynamic tension, and, because the dialectical process is one that values non-closure, opens up ideas. Dialectic operates in peer groups through the techniques of writing workshops, use of critique sheets, and teacher/student written dialogue or metacommentary (134).

oral and written, where the conventions of turn taking and topical coherence are altered" (292). Talk generated by CMC is different in noticeable ways from that of oral discussions. Kiesler, Siegel, and McGuire (1984) explain that there is "a paucity of social context information" and "few widely shared norms governing its use" (1126). These characteristics affect communication in various ways. First, because written messages lack "social feedback" and may appear in "unpredictable" styles, users may find it more difficult to organize and understand each other's messages. Second, because electronic communications hide much of the "hierarchal dominance and power information," there may be a leveling of social positions. Third, "social standards will be less important and communication will be more impersonal and more free because the rapid exchange of text, the lack of social feedback, and the absence of norms governing the social interaction redirect attention away from others and toward the message itself" (126).[14] This final point is important because it indicates that by its very nature as textual talk, CMC may lead to communications that are less interactive, requiring conscious strategies on the part of writers who wish to connect on some level with group members.

Kathleen Giesler (1990) offers an example of research that enables a better understanding of peer talk conducted via CMC. Her study of a ten week period of student discussions shows that their conversations have a tendency to follow what she calls "an evolutionary pattern of responses" (268). Over time, how students see themselves as readers and responders to others' texts evolves and is revealed by an "increasing willingness to exercise the authority implicit in the role" (269). Finding that students changed as readers, renamed their tasks, and accepted their own authority, Giesler's research offers reassurance that the peer group process conducted on-line is as much a learning process as it is in the traditionally oral classroom. Palmquist (1993)

[14]For others who use social psychology to study the relation of social factors to CMC, see Spears and Lea (1992), Feenberg and Bellman (1990), and Matheson and Zanna (1989).

also attempts to understand better the nature of the talk occurring in the on-line environment, believing that adding computer classrooms to the equation has given researchers an important tool for learning how student writers in peer groups address each other's writing. To answer the basic question of how "computer networks shape curricular and classroom content," he analyzes the conversations that students have in two classrooms, the "information" class where students independently researched topics of their own choices, and the "argument" class where students shared both a topic and a knowledge base. Palmquist questions whether subject matter would affect the critical commentary in on-line peer groups. His findings argue compellingly that students' on-line discussions in the "argument" class revealed a stronger group cohesion and deeper critical skills. Unfortunately, Palmquist's important insights into the substance of student conversation stops short of examining how students apply what they learn through their peer group discussions to their writing in-process. As with those studies conducted in the traditional oral classroom, none of these CMC studies illuminates specific characteristics of the peer response group talk and how that talk may influence the students' writing.

Anne Gere and Robert S. Abbott (1985) more closely approach this goal in a quasi-experimental study that assumes there is a direct relationship between what is said in writing groups and the later writing (363). They systematically study nine peer response groups in a traditional oral environment, three each from the 5th, 8th, and 11/12th grades, comparing the talk across grade levels. They record and transcribe the group talk, and then separate it by linguistic idea units that coincide with a speaker's focus of attention. Their coding system enables a three dimensional functional analysis of peer talk. First, they look at the three major linguistic functions of informing, directing, and eliciting. Second, they examine area of attention—whether the group itself or the writing is the speaker's focus for a particular idea unit. Third, they code for

specific focus of consciousness: content, form, context, procedures and processes, and reference. They examine length of student texts and the characteristics of the comments offered, but give no evidence of having compared the comments against the writing for any concrete discussion of the talk's influence on the writing. The study used a highly stylized talk protocol developed by Elbow (1973), which asked students to talk and respond to each other in a patterned manner. Writers read their work aloud twice without apologizing for their writing, with peers making notes the second time and then offering their comments to the writer, who noted them for future reference. However, Gere and Abbott's examples of student talk reveal that occasionally, at least, students did not follow the stylized protocol and talked to one another interactively about the writing as opposed to simply offering apparently isolated comments about that writing. This study offers evidence that peer groups can and do keep their attention to the writing as their primary focus, and that the talk allows writers to orally rehearse their ideas to a live audience. Gere and Abbott suggest that future studies look longitudinally at writers as they develop, that researchers use retrospective interviews to learn more about the students' self-perceptions as writers, and that researchers analyze naturally occurring talk as opposed to the less contextually reliable nature of think-aloud protocol analysis (Flower and Hayes, 1980). However, whereas their coding rubric allows inroads toward understanding peer comment characteristics, it does not consider more interactive talk, nor does it offer a way to understand specific effects of that talk on the revised writing.

Gere and Ralph S. Stevens (1985), in what appears to be an extension of Gere and Abbot's study, express this same need for research that examines closely what occurs in writing group meetings and how writing groups may affect the writing process, "particularly the revising which may take place subsequent to group meetings" (86). Their examination of nine writing group

transcripts in the same grade levels as the above cited study compares the drafts against the talk, finding that "[s]tudents of all ages incorporated suggestions of their peers into their revisions" (99). Unfortunately, apparently because they found the changes difficult to document and cite, they offer no evidence of such influence, nor to they explain their analytical methods for other researchers to replicate (99). Gere and Stevens believe that their most striking finding (notably one that regards the peer talk and not its influence on the writing) is an emerging understanding of the difference between teachers' written comments and peers' spoken comments regarding the writing: "teachers proceed from the view that meaning is conventionalized in the text while students assume that meaning lies in the constructions they create in their minds while listening to one another read" (104).[15] They think that this different "theory of meaning" among teachers and students leads teachers to comment more on the surface errors in the writing and students to respond more directly and specifically to the meaning that they find in the texts, demonstrating for the writer the diverse ways that readers can interpret their writing and leading to meaning-level changes in subsequent drafts (104). Even though it lacks textual evidence of revision changes, Gere and Stevens' study is important in that the researchers attempt to isolate specific ways that group talk influences revision and, thus, they increase understanding of this phenomenon.

Dene Thomas and Gordon Thomas (1989) also explored the effects of talk on writing development by examining how Rogerian reflection (Rogers, 1970) motivates students "to solve writing problems" (116). Relying on Vygotsky (1962), they believe that "[c]onversation about writing may provide a bridge between speaking and writing, parallel to that which inner speech provides between thought and speech" (117). They argue that Rogerian reflection is a specific

[15]Their findings lead to conclusions similar to those of Newkirk (1984).

and valuable technique for response, as well as a skill that students need to be effective peers readers. In earlier research that aimed to gain an understanding of the interaction between writers and their teacher, Dene Thomas (1986) conducted a detailed analysis of taped, transcribed peer conferences; writing in drafts and final copy; journals and notebooks; and student and teacher interviews. She finds that:

> Groups work because group skills are relevant to writing. The group interaction skills exhibited in the conferences are both speaking and writing skills: expanding text, explaining problems, discussing alternate procedures, planning, coming to understand and react to the needs of an audience, coming to say things in different ways. As these abilities develop in speaking, they are transferred, however slowly at times, to writing. (24)

Thus, like Vygotsky, she believes that talk has a crucial impact on the writing development, thereby justifying the use of peer response groups in writing classes.

More recently, Candace Spigelman (1998) analyzed video-taped peer group meetings, essay drafts, journals, and retrospective interviews to consider ownership issues regarding ideas and phrasing generated in writing group meetings. She finds that writing groups “mirror the tensions between the public and the private, the individual and the communal, that occur in every sphere when the question of intellectual property arises” (234). Spigelman believes that students expect their peers to appropriate their talk and texts, and yet view themselves as autonomous authors, thus straddling competing world views where they simultaneously are collaborators and individual authors. She determined that students help each other in at least three ways: they assist with editing, idea generation, and with the actual labor of writing, by writing with and for each other new phrases and sentences expressing group-generated ideas. Her study is intriguing

because she finds, through simple textual analysis and probing of the data, that "students *do* share in writing groups as often as they do not. They read their essays aloud, and often they appropriate sections of each others' texts and refigure them in their own papers" (250).

Conducting a systematic and thorough analysis of peer talk and its potential effects on revision is especially challenging in the traditionally oral classroom environment. Talk analysis requires extensive audio-taping, expensive and time-consuming transcriptions, and a reliable coding instrument such as the one developed by Gere and Abbott. Examining the writing requires an equally precise methodology because, even though careful textual analysis reveals trace evidence that students revise their writing after peer sessions, as Gere and Stevens found, it is difficult to prove that these changes are related to the talk. Spigelman's approach seems to build some reliability because she interviewed students, asking them to comment on some of the changes they made due to peer talk. On the other hand, talk analysis is aided in the CMC environment because the technology enables researchers to obtain easily a transcript of peer talk; thus, it is not surprising that researchers have begun to study the nature of computer-mediated peer talk. What is surprising, however, is that only a few studies have undertaken to delineate the influence of on-line talk on writing development and none have attempted to characterize the nature of the talk itself. This neglect is unfortunate as, in what Faigley (1990) has called a hybrid language form, we reasonably could expect to see some differences between oral and CMC talk and these differences reasonably might be expected to influence the writing-in-progress in distinct ways. The following studies, two of them dissertations, have opened this question for professional scrutiny.

Samuel Young Boothby (1988) studied the effects of computer-mediated writing conferences (CMWC) on revised writing. Because the electronic medium that his study employed is similar

to E-mail wherein the commentary provided on student texts occurs privately between the reader and writer (allowing the teacher access only if the commentary is forwarded), his discussion includes principles of networked groups, and yet is quite different. The students corresponded with individual students, not to individuals who shared a writing group, eliminating some of the group dynamics that might affect the comments and/or the writing. And although the class in this study engaged in limited oral peer response discussions, it is not clear whether the particular students that Boothby examines ever orally discussed their writing as a group. In this format, peers commented directly on the copy of the paper they received, using a stylized protocol.[16] Because more than one peer might respond to the same issue at the same spot in a writer's paper, there was some consideration of the effects of multiple comments on revision. Boothby's research emphasis quite clearly is on comments, not interactive group talk, and on understanding the value of the computer-shared comments on the writing. To study the results, he used the Faigley and Witte (1981) instrument for coding revision changes. He modified this instrument in two ways that he believes improved its specificity.[17] Boothby's rubric for coding comments is inductively developed out of the data itself. He examined the direct and indirect relationships between peer comments and revision for four students in a peer group, and reported case studies on one undergraduate and one graduate student from this group. He finds that although the graduate student made few revision changes due to the CMWC commentary, her largest meaning-changing revision was related to the comments; however, the commentor whose ideas

[16] Insertion directly into the writer's text using capital letters and brackets; comments could appear within a sentence, after a sentence, or after a section being commented upon.

[17] First, Boothby eliminated *substitutions* from the two text-base change levels, replacing them with *reorganizations* to account for reorganizations above the sentence level. Second, he classified all revisions by T-unit or less, thus eliminating "a confusing tangle of textual units" that he believes is inherent in the original Faigley and Witte instrument.

most affected this student was the teacher, not a peer. The undergraduate student made more meaning-level changes due to CMWC comments, but the teacher believed that the largest change related to CMWC actually decreased text quality. Boothby argues for using computers in writing conferences as a "means of stimulating revision, while writing on computers would be seen as eliminating a potential block to effective writing conferences," which is "the reluctance to give criticism that might suggest large revisions of peers' writing" (18). His recommendations include implementing a computer bulletin board that would remove the isolation of individual comments and would allow students to see all of the papers and comments given, while still providing some "safety" factor of privacy for making comments. Finally, Boothby suggests research that would contrast oral and CMWC peer conferencing to "highlight the differences between improved affective climate and reduced author/reader interaction (CMWC) and the reverse (oral)" (179).[18]

Steven A. Singer (1994) builds on Boothby's study by again using Faigley and Witte's taxonomy (though apparently in its original form) to code revision changes, but he extends Boothby's work by using networked computers (*Daedalus* software) in a case study of six first year writing students, both native and non-native speakers of English. Unfortunately, because each of these additional variables affects the research, there is little comparison that can be made between the two studies. The sample peer groups were not intact throughout the study as the subjects belonged to multiple groups over the course of the semester. Like Boothby, Singer inductively developed his own coding rubric to look at the characteristics of the comments. He examines student revision patterns, the type of peer comments made on each student's first draft, the observable relationship between revisions and peer comments, and the students' attitudes toward the CMC process. His results, which cannot be generalized to a larger student population,

[18]Apparently, this suggestion does not take into consideration Boothby's other recommendation that teachers also employ electronic bulletin boards to increase interaction.

indicate that the students' meaning-level revision decisions generally were not based on peer comments and that most changes were surface-level. Interestingly, Singer examines comments made regarding revision, but not interactive group talk about that writing despite the capability that *Daedalus* offers for engaging in and recording such an exchange. In fact, he suggests that a fruitful area of future research would be the effects of synchronous communication on content development.

Thea van der Geest and Tim Remmers (1994) and Dean Barclay (1995) also consider how CMC talk influences revision. Van der Geest and Remmers, citing the necessity for better understanding the impacts of CMC on writing because of its increasing use in the workplace, conducted a small empirical study that contrasted five students who met in CMC and five who met in verbal peer groups. The students used the CMC software[19] to give and exchange feedback, which they were encouraged to use in revising their writing; the verbal group exchanged papers, gave each other written feedback, discussed the papers, and then revised. While the authors never make this issue completely clear, it appears that the CMC students did not use the computer to discuss their writing outside of initial comments made on the drafted writing. Van der Geest and Remmers' results imply that the CMC group found need for additional face-to-face meetings to discuss assignments, that using the software did not affect time spent on writing activities, and, in contrast with the verbal peer group, that students lost contact with instructors, not informing them of difficulties as they arose. They conclude that further research should address not the *why* of optimal collaboration in a CMC environment, but the *how*. Barclay, in a fourth study, applies literary theory to ENFI and then conducts a case study involving a short (five minute) transcribed conversation between one student and his

[19]PREP-EDITOR, designed and developed at Carnegie-Mellon University.

group; he examines one draft and a final paper, taking into consideration the other factors that likely affected this student's writing. Barclay determines that while this student did not change the structure of his essay in ways that the teacher and one student had recommended, he did cite from the conversation (in a somewhat unconventional manner for the essay's genre) to densify his ideas. He concludes that "although networked computers may not produce my students' best written product [sic], networked computers do mediate my students' best *relationship* to writing" (41). More research directly comparing the transcripts of peer group talk against revision would help us to understand better whether Barclay's singular finding represents an isolated case or a common phenomenon.

**An Inquiry into Peer Response Group Talk and Its Influence on Revision**

Despite the progressive understanding offered by these CMC and traditionally oral studies into peer group talk and its potential effects on writing, there is much to learn. Yet some of these same studies offer guidance for the way ahead. Although Gere and Abbott (1985), in the traditionally oral environment, studied group talk to learn how it influences writing, their study does not include a way to discern the revision choices that the students made in their writing, making it a somewhat one-dimensional view of peer response group talk. In addition, partially because of the highly stylized talk protocol in which students were asked to engage, Gere and Abbott do not focus on the interactive nature of the peer talk. Further, although Gere and Stevens (1985), like Spigelman (1998), find evidence that peer talk affects revision, their undetailed account of these talk-inspired changes is unenlightening. In the CMC environment, although Boothby (1988) studied the influence of peer comments on revision, his study also is somewhat one-dimensional as those comments were made in isolation from peer reader to writer via E-mail. Even though writers had several peer responses from which to make revision choices (to

include disregarding peer comments), there was no interactive or interpersonal talk among group members. In a sense, Gere and Abbott and Boothby, aside from the different mediums (oral and CMC) through which the comments were generated, have studied the flip sides of the same concern: Gere and Abbott address the talk and Boothby the writing; for both, the talk was somewhat one dimensional in its focus on *commenting*. Similarly, even though he used a CMC software with a potentially interactive format for discussing writing-in-progress, Singer (1994) studied individual comments made regarding writing and not interactive peer group talk and its potential for influencing the writing. Because Gere and Abbott studied only stylized talk and Boothby and Singer studied only comments about the writing, the one-dimensional nature of these studies prohibit them from accounting for more interactive peer response group talk and its potential influence on revision.

Yet, “speech and writing are . . . in dialogue with one another” (Mortensen 117). This dialogue has dynamic potential because when peer groups meet together to discuss writing, they have the ability to influence not only the writer whose writing is being discussed at any particular time, but also themselves and others in the group whose writing is not currently under scrutiny. There is the potential for an exchange and sharing of writing and revision ideas that reveals itself intertextually in the writing. Mortensen (1992) explains intertextuality as both iterability, or repetitions and appropriations of “what has been said about” the text, and presupposition, or “assumptions that presuppose talk about it” (119; see also Spigelman, 1998). More to the point of this thesis, it is the interactive nature of peer groups that Bruffee (1984, 1993) thinks allows students to generate and share knowledge and that LeFevre (1987) and Hillocks (1993) think represents its potential for invention. The objective of this study, therefore, is to illuminate the characteristics of interactive peer response group talk that occurs in both the traditionally oral

and the CMC environments and to discover and compare some of the potential influences of such talk on writing-in-process.