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Boundary Negotiations: Electronic Environments as Interface

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Abstract

Boundaries have long been a concern of literacy scholars, who are very much interested in how individuals cross boundaries and gain membership/genre expertise in new activity systems. Consequently, much attention and research has focused on issues of transition and transference: entering the academic community and acquiring academic literacy, writing across the disciplines, moving from undergraduate to graduate school, or transitioning from school to workplace settings. Less attention has been paid to boundary interactions involving other activity systems, especially those associated with home and popular culture. Drawing upon genre theory, I explore how the popular discourses and literacy practices prevalent in today's media-savvy, image-literate culture intersect and interact with academic discourses and literacy practices in electronic environments. Understanding how popular culture and classroom genres intersect via the interface of technology can help students use what they already know (i.e., apply the various literacy skills they already practice) in learning new strategies and new conceptions—in short, new literacies.

Keywords: Literacy; Popular culture; Genre theory; Interface; Electronic environments; Pedagogy

1. Of television and other exigencies: An introduction

My inauspicious foray into multimedia/multi-genre composing occurred in the context of an undergraduate English course and was, truth be told, an act of desperation. At the very beginning of the semester, the professor had divided the class into groups of three or four and warned us that in only two months' time, groups would begin making presentations to the class on a given literary figure. I can't recall now the specific author my group was assigned, but I clearly remember the professor informing us that the duration of the presentation should be in the neighborhood of fifty minutes. I also remember that my partners grew to hate each other with an intensity usually reserved at that age for rivalries involving either college athletics or the opposite sex. Even so, we dutifully researched our topic and met regularly to discuss our findings (though, of course, I always had to meet with each partner separately, lest they come to blows). Still, with only two weeks remaining before we were scheduled to present, we had no idea how in the world we were ever going to fill fifty minutes. The prospect of reading from note cards for that length of time inspired nothing less than despair—which is why I decided to entertain more creative possibilities despite my own tendency (at the time) to err on the side of academic caution.

The idea I hit upon involved a fictitious cable television channel with programming devoted exclusively to our author, sort of the literary equivalent of CNN but with an even more narrow focus and aimed at an even smaller niche. Our presentation would consist of an orchestrated assemblage of "live" performances and "pre-recorded" video clips including a talk show, a nightly news program (complete with goofy meteorologist), a documentary, and even commercials (all advertising the author's works, of course). We quickly discovered that it was one of those ideas that

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is simple only as long as it remains inertly on the page. In the end, the presentation turned out well enough, all things considered, but not before it gave us a number of headaches from trying to figure out how to integrate research and argument into formats and a medium we associated solely with entertainment, infotainment, and advertisement.

For a long time, whenever I recalled that project, I would think only of its numerous misadventures, such as when neither of my partners showed for a planned taping at a local park and I was forced to recruit a kind but confused stranger to serve as my videographer. Indeed, those memories still surface whenever a student comes to me with concerns about a collaborative project I've assigned. "Trust me," I say, "I know, I know. And believe it or not, you'll look back on this as a valuable learning experience. No, really." But in recent years, I've come to reflect upon the project from an additional perspective, one informed by my experiences living and working in a wired world. In retrospect, I am not the least surprised that the television channel premise proved challenging; it would have been troublesome even had my group been less dysfunctional. For starters, just procuring the appropriate equipment required no small amount of effort and ingenuity. Those were the days before the Internet, after all, or at least before it found its way into college dormitories, and no one in the group owned a personal computer. We managed to procure a videocassette recorder but, lacking access to proper editing equipment, were forced to make do with a few old VCRs. Hardware issues aside, we were still charting new territory, at least for us. Would the presentation end up being such a convoluted mess of genres, styles, and media that fifty minutes of it would tax the class's patience nearly as much as had we indeed read directly from note cards?

Was it going to be sufficiently academic? After all, it certainly wouldn't be like any class presentation I had ever given or witnessed. But neither would it resemble anything I—or likely anyone else—had ever seen on television, and not only because we were poorly equipped amateurs. All of which begged a rather vexing question: what, then, was *it* going to *be* exactly?

Questions such as those are even more relevant today, when new technologies allow multimedia presentations far more complex than my group's modest project to be produced and shared with speed and ease. As even a brief search of YouTube will reveal, amateur videos now frequently look as professionally produced as anything aired on cable TV. (If you've ever seen a Sci Fi Channel original movie, you know what I'm talking about.) Importantly, students are creating videos, hypertext, and other digital compositions for reasons and purposes not necessarily—in fact, not usually—related to formal education. Indeed, students are much more likely to write in computer-mediated environments in their bedrooms than in their classrooms. As a result, students enter composition classrooms already possessing technological skills that often surpass those of their teachers. Moreover, as scholars (Selfe, 1989; Maxson, 1997; Williams, 2002) have argued, the conventional view of students as passive, oblivious consumers of mass media and popular culture, simple "ill-informed dupes of dominant ideological forces" (Williams, p. 7), is far from accurate. Students read and construe meaning from cultural products in complex, nuanced ways, employing a wealth of strategies gained from years of immersion in media-rich environments. What is more, today's "convergence culture" (Jenkins, 2006) encourages students to become active participants in their culture. They are circulating, transforming, and creating products as new technologies continue to diminish conventional distinctions between producer and consumer (Garrett-Petts, 1997).

I contend that distinctions between academic and popular culture literacy practices are being similarly eroded within electronic environments. Literacy and technology scholars have long recognized the enormous impact of computer technologies on literacy skills and practices. The very notion of literacy has itself been complicated. As Dànielle DeVoss (2001) reminded us, computer literacy, much like all literacies, is actually an assortment of multiple and diverse literacies, all of them enormously complex. Nevertheless, literacies of home and school are still often thought of as remaining largely separate and distinct. Although popular discourses and genres are no longer denigrated within academia as they once were (or at least not to the same extent), they are not always or entirely welcome either. Within composition, which has always been progressive, the focus has been on developing pedagogies that help students develop new rhetorical skills and literacies, including computer literacy, while still respecting the skills and literacies they bring with them into the classroom. Some have argued that students' pre-existing literacies can be tapped and utilized to facilitate the development of academic literacy. I find the work of these scholars to be both engaging and useful. Still, popular culture literacies are usually posited as being potentially (or already) at odds with the literacies present in and valued by the academy. Although I do not completely disagree, I believe computer technologies are impacting literacy practices in both popular culture and academic contexts. As most of us are well aware, the academy is not insular—nor would we want it to be. Universities operate within the same convergence culture as any other institution.

The purpose of this essay is to explore how the popular discourses and literacy practices prevalent in today's media-savvy, image-literate culture—a culture, I might add, that includes writing teachers—intersect and interact with academic discourses and literacy practices in electronic environments. I assert that home-based and school-based literacies are becoming increasingly blurred in these environments. More specifically, I argue that electronic texts represent an especially clear and prevalent instance in which genres typically associated with home (and popular culture) interact with and influence—and are themselves influenced by—genres and literacy practices of the classroom. Drawing upon North American genre theory, particularly the work of David Russell, I situate genre within the context of activity theory. Such a view conceptualizes genres not as static forms but rather as socio-rhetorical actions that operationalize recurring social processes and actions. As such, genres (and genre systems) mediate not only the interactions of individuals within a particular activity system but also interactions between/among activity systems, including those of popular culture and the academy. This reconceptualization of genre calls for a reinterpretation of interface that extends beyond user-system interaction to include interactions between the user and multiple, sometimes competing, systems as well as between systems themselves. Such a view allows us to examine system relations not simply in terms of juxtaposed boundaries but rather as dynamic boundary negotiations mediated by genres that are themselves mediated by the boundary interface.

2. Electronic genres as social action

John M. Slatin (1990) began his essay on hypertext with a blunt declarative statement: "The basic point I wish to make is almost embarrassingly simple: Hypertext is very different from more traditional forms of text" (p. 870). If such a point was "almost embarrassingly simple" nearly twenty years ago, it is patently obvious now. In the intervening years since Slatin's essay was published, scholars have commented extensively on the enormous impact computers, the Internet, and other communication technologies have had on literacy practices, theories, and pedagogies (Lanham, 1993; New London Group, 1996; Brent, 1997; Galin & Latchaw, 1998; Taylor & Ward, 1998; Selfe, 1999; Welch, 1999; Wysocki & Johnson-Eilola, 1999; Richards, 2000; Bolter, 2001; Kress, 2003; Selber, 2004). We have had to expand, if not outright revise, our notions about text, literacy, reading, composing, authorship, intellectual property, argument, research, learning, space, plagiarism, assessment, and a host of other fundamental concepts. Effectively summarizing these trends, Catherine Hobbs (2002) stated, "Writing teachers today are living through a revolution in literacy" (p. 27).

This brave new world of new rhetorics and literacies includes but extends beyond functional technology skills. Just as general relativity and quantum mechanics are not simply classical physics tweaked a bit, hypermedia is not simply words with pictures. "The logic of digital technology leads us in a new direction," Neil Kleinman (1996) reminded us. "Objects, as well as ideas, are no longer fixed, no longer tangible. ... In this space, stories are written that change with each new reader; new material can be added, and old material deleted. Nothing is permanent" (p. 76). Kleinman's observations about texts written in electronic environments point to the general nature of these texts as dialogic, interactive, fluid, non-linear, context-specific, intertextual, and dynamic—in other words, as social. But then, all literacies are social (Lemke, 1998). It's just that advances in computer technologies allow for, facilitate, and engender increasing opportunities for participation and interactive collaboration. Each new reader in the electronic environment can her- or himself become a contributor/designer/writer; the lines between consumer and producer can be transgressed, blurred. The conceptualization of the positivistic, solitary, stable owner of words and ideas is complicated by postmodern notions of fragmentation, destabilization, and fluidity.

Electronic texts turn on this complication. Texts composed in or for electronic environments have little in common with that bastion of academia, the traditional academic essay. Indeed, digital compositions are so different from traditional forms of text that one might, to paraphrase Slatin (1990), reasonably inquire as to *what* they are. It is one thing to describe the salient features of a particular genre of electronic text—say, the blog—but it is quite another to place that text/genre within an academic context and assess it using academic standards or criteria. More to the point, one can list the characteristics or qualities of a rhetorically effective electronic text, but does such a text demonstrate academic expertise? How to know? Does it depend on genre? If so, which genres are so sanctioned and why? Or, perhaps more to the point, what is academic literacy in electronic environments? Are digital and academic literacy equivalent? And, of course, at the center of this: how are we to define academic literacy in a mediated world?

The difficulty in answering these deceptively straightforward, simple questions lies not only in the vast differences between electronic texts and the traditional method for demonstrating writing competency in first-year composition

(the essay) but also in the sheer complexity and variety of electronic texts/genres themselves. As a result, responses to inquiries regarding electronic texts and academic literacy usually resort to a reliance on the traditional-standard method of academic classification and clarification: comparative analysis of textual features and forms. Accordingly, a particular electronic text would demonstrate academic literacy if it looks like or has the features of... well, of something, and likely something familiar (and print-based). Such a move seems almost archaic in the context of a discussion of electronic texts. To be sure, such responses are instructive and engaging, but they still do not exactly answer the question(s).

Genre theory offers an alternative and particularly useful way to address questions of text, one uniquely suited for the analysis of electronic (con)texts. Conventionally, genre has been defined as static categories of discourse sharing certain formal(ized) structural and linguistic features. This definition is, of course, rather limited and limiting in its view of texts as static, ahistorical, and decontextualized receptacles and in its failure to acknowledge the inherently social nature of language and texts. Consequently, scholars from a number of different fields and disciplines, including linguistics, communication studies, education, and sociology, have sought to redefine/reconceptualize genre to reflect more accurately its dynamic, socio-cultural nature. Carolyn Miller's seminal "Genre as Social Action" (1984) has been especially influential in helping to redefine genre within composition. Miller considered genre from a socio-rhetorical basis, redefining genre as "typified rhetorical actions based in recurrent situations" (p. 159). In a subsequent article, Miller (1994) expanded her conceptualization to include the connections between genre and cultures.

Building on Miller's work, Charles Bazerman (1994) examined what he called systems of genres, which he defined as "a complex web of interrelated genres where each participant makes a recognizable act or move in some recognizable genre, which then may be followed by a certain range of appropriate generic responses by others" (pp. 96-97). In this way, Bazerman was able to study how genres relate to other genres and how those relations mediate social practices. Genre systems provide a conceptual framework for examining how genres structure entire networks of human activity. In turning his attention to systems and networks, Bazerman moved beyond the classroom and classroom genres, a move followed by other genre theorists, most notably David Russell. Synthesizing genre theory with Vygotskian activity theory, Russell (1997) analyzed how genres operate within activity systems, which he conceived as "any ongoing, object-directed, historically conditioned, dialectically structured, tool-mediated human interaction" (p. 510). Written genres function to routinize and operationalize recurring actions and interactions within the activity system, creating both stability and avenues for change. Equally important, however, genres and genre systems mediate interactions not only within activity systems but also between activity systems (Russell, 1997, pp. 520-21).

A fundamental feature of these genre reconsiderations is a shift from form to function, a move that foregrounds the role of agents and agency in its emphasis on rhetorical actions. The critical focus, then, similarly shifts from texts per se to motives and outcomes as genres come to be defined, as Amy J. Devitt (2000) explained, "less by their formal conventions than by their purposes, participants, and subjects: by their rhetorical actions" (p. 698). According to Bazerman (1997), genres "are not just forms. Genres are forms of life, ways of being. They are frames for social action. They are environments for learning" (p. 19). Anis Bawarshi (2000) extended Miller's and Bazerman's formulations in asserting that genres do not simply regulate activities; they also help to shape those activities (p. 340). As such, genres both reproduce and enact our realities, shaping us even as we shape them. From this perspective, all texts can be defined and analyzed as "complex rhetorical actions" (Bawarshi, 2000, p. 357).

Though these genre theorists did not directly address electronic texts, their reconceptualizations of genre provide a useful hermeneutical frame for (re)examining texts composed in or for electronic environments. An activity theory view of genre is particularly well suited for analyzing the complex and dynamic texts produced in electronic environments. Instead of having to define electronic texts solely in relation to wildly dissimilar print texts or according to fixed categories conceived long before Apple aired its infamous Super Bowl commercial (if not long before television!), we can use genre theory to define texts by what they *do* and how they are *used* rather than by what they *are*, a methodology that better accounts for the dialogic, collaborative, and interactive nature of electronic texts than do formulations based on features and forms. Texts can be recast from containers or receptacles to processes and practices that operate within, between, and among networks of social activity. In other words, genre allows us to see that intellectual/creative works do just that—work. Freed from the frustrating constraints of form and content, electronic texts can be considered on their own grounds, in their own environments, allowing questions of rhetorical effectiveness and writing competency to be addressed independent of print texts and literacies.

3. The popular and the academic; Or, please pass the salt

Importantly, genres (and genre systems) not only instantiate routine actions and social processes of individuals and groups within activity systems, they also mediate the interactions both within an activity system and, crucially, between/among activity systems. As Russell (1997) pointed out, both "individuals and groups can be involved in multiple activity systems" (p. 510). As a result, people may appropriate a particular genre from one activity system and employ it—perhaps in a different manner and to different ends—in another activity system, sometimes changing the activity system in the process (pp. 519-523). Texts too may function as different genres in different activity systems (p. 518). All these movements, processes, and (inter)actions make the boundaries between systems potential sites of conflict and change. Indeed, activity systems are constantly interacting with each other (though with some more than others). Thus, we can examine system relations not simply in terms of juxtaposed boundaries but rather as complex and dynamic boundary negotiations always only stabilized-for-now by/through various written genres (Russell, 1997, pp. 530-531), a conceptual move that can be fruitfully applied to the study of academic literacy, particularly in regards to electronic environments, as the process of becoming academically literate is also frequently conceptualized in terms of boundaries. Metaphors of space are often employed in discussions of academic literacy to emphasize the student's status as an outsider, as a not-yet-member of what Frank Smith (1987) termed the literacy club. To join the club, with all the rights, privileges, and responsibilities of membership, the student/traveler must somehow cross the border, bridge the gap, traverse the great divide, break on through to the other side. But be wary, young Padawan, of the spaces in between, for the gulf is wide and deep, the landscape strange and inhospitable, and should you find yourself bereft of map or guide, you will surely lose your way. (From this perspective, my undergraduate group presentation was not entirely successful due in large part to our fateful decision to situate it within the boundary lands that lie between the classroom and popular culture.)

Though useful to a certain degree, the bifurcated-world model of academic literacy—with the idealized academic world on one side of the chasm and the down-'n-dirty world of popular culture on the other—remains nonetheless problematic. Scholars have noted, for instance, that the model may be insensitive to students' home languages and literacies. I maintain that it is also overly simplistic and, as a result, misleading. Whenever I hear or read anything about the proverbial gulf that students must bridge in order to enter the academic community, I find myself wondering about what lies at the bottom of the fissure. (Giant, nasty insects as in Peter Jackson's remake of *King Kong*?) What exactly does the bridge span? To conceive of an empty space, a no-man's-land, between the adjacent domains of school and popular culture is, to me, to rely upon a rather basic, simplified notion of interface, one inadequate to the task of describing or explaining how texts actually circulate and literacy practices evolve and operate. Interfaces always concern boundaries and borders, but the idea of a vacuous region separating the academy from popular culture, even if only used metaphorically, implicitly construes interface as nothing more than a common boundary between contiguous regions or objects. I don't see the boundary regions of systems as empty, however. I view such regions, whether located on my computer screen or not, as complex socio-rhetorical constructs that both enable and frame interaction.

And so, I ask, what if we conceive the interface as the communication boundary not only between an individual user and a system but also between systems themselves? And what if instead of a common boundary between systems, the interface is viewed as a conjuncture located simultaneously between and within systems in a manner not unlike the overlapping circles of a Venn diagram? The interface, as I am conceiving it here, represents the larger dynamics, ideologies, forces, etc. that reside, often unnoticed, behind the scenes while also functioning *as* the scene. If genre is the mechanism by which interactions between activity systems occur, the interface is the space in which these interactions occur, the larger, encompassing context. Conceiving interfaces in these broadened, more social terms will allow us to extend our analyses beyond operating systems. Rather than simply mapping the overdetermined ideologies hidden within computer iconography (Selfe & Selfe, 1994), as valuable as that is, we can ourselves become participatory agents and active creators of meaning (and change). In this regard, my conception of interface owes much to Stuart Hall (1986) theory of articulation, which is both "a way of understanding how ideological elements come, under certain conditions, to cohere together within a discourse, and a way of asking how they do or do not become articulated, at specific conjunctures, to certain political subjects" (p. 53). Articulation, then, is concerned with how relationships, connections, and unities of various kinds (as between ideological forces and social groups) form, coalesce, operate, and potentially dissolve, or dis-articulate, within specific contexts and historical moments. Crucially, Hall warned that articulations represent non-necessary relationships even when those relationships might seem natural or inevitable. From the standpoint of articulation theory, an interface might be productively viewed as the complex associations

and links that extend beyond or beneath the present boundary relationship(s), often to larger social and ideological forces.

Composition, for instance, interacts with a range of other activity systems—other fields, other disciplines, local schools and businesses, publishers, editors, the classroom itself—through the genre systems that mediate those interactions. As writing scholar-teachers, we too operate within some, if not all, of the boundary systems mediated by the discipline's genre systems, as well as within any number of additional systems. In turn, any of these systems may be articulated to organizations, belief structures, political movements, or tendential forces of which we are not aware. Students also operate within and interact with a variety of activity systems. As I always try to keep in mind, my students have lives and identities outside the confines of my classroom. The person seated in the second seat of the third row may be a spouse, an office worker, a biology major, a political activist, a blogger, a school volunteer, U Dont I♥press Me on MySpace, and a frequent contributor to a *Halo 4* discussion board in addition to being a student in my course. Busy though s/he and the rest of us may be, extensions into new activity systems are how new genres and literacies are learned, which in turn facilitates the development of more complex and sophisticated rhetorical skills.

These dialectical, genre-mediated boundary negotiations must be considered when we examine electronic texts. Though the borders of a particular activity system may be virtual in the essential sense, and its sphere of influence and activity tenuous in places or at times, the system nonetheless has an identity and a geography, even if that geography is virtual in the simulated sense. It is this geographical space, a complex rhetorical and ideological construct that functions as the enabling medium through and by which genres enact rhetorical-social actions, that is the interface, and it is the interface that provides the boundary-space implied and necessitated by boundary relations, interactions, and interpenetrations. This is especially relevant in relation to electronic environments, which are diverse, diffuse, and often indistinct. Indeed, the term *electronic environments* is but a convenient way to describe a multiplicity of meanings, situations, and contexts. However, countless activity systems utilize, regularly inhabit, or exist (some exclusively) within these environments. How does one locate boundaries of systems within cyberspace? Where does one situate the borders, even virtual ones, of the Internet? Oh, they exist: private chat rooms, discussion boards, virtual universities and classrooms. Still, an array of activity systems inhabit, which is to say that they circulate texts through, overlapping or even identical geographies. And what of other electronic environments, those not (necessarily) connected to the Web? My cell phone, for instance.

As genres are defined by the actions they instantiate and mediate, so too with the interface. As such, I have come to define electronic environments, broadly conceived, as an interface, as the point and medium—literally, the environment—of interaction between users and systems. Underlying this notion is the premise that rapid technological advances, along with other factors, have led to technology's nearly ubiquitous presence within virtually all areas of our lives. As a result, a diverse and sometimes competing assortment of discourses and literacy practices intersect and interact within electronic environments. These interactions, coupled with the powerful and innovative ways of composing and communicating allowed and engendered by new technologies, have in turn caused new *kinds* of writing and texts to emerge and evolve. These new genres do not function within the exclusive purview of any one system, however large or seemingly hegemonic. Instead, the genres proliferate and circulate across systems of media and activity because the amorphous, open terrain of electronic environments position them as unique communicative boundary spaces.

Exhibiting the same characteristics as the genres and texts they generate (intertextual, collaborative, dialogic, polyvocal, fluid, multimodal, hybrid), electronic environments function as an especially powerful interface, instantiating and mediating the actions and interactions of individuals and interrelated/boundary activity systems by means of a seemingly endless variety of tools-in-use. These environments operate in a manner that Bawarshi, 2000 termed "the genre function": the "social and rhetorical scene within which we enact various social practices, relations, and identities"; they are what they allow us to do, "the potential that makes the actual possible, the 'con' and the 'text' at the same time" (2000, p. 357). A complex ecology of interrelated and articulated systems, the electronic interface influences the actions and writing practices of its users/inhabitants even as the users/inhabitants shape and reshape the interface itself, introducing new technologies and genres and reconfiguring old ones. Diffuse and virtual, the electronic interface is both everywhere and nowhere, media and medium, *kairos* and *topoi*, dialogic and heteroglossic. Consequently, the electronic environment, as an interface, offers limitless generic opportunities. Technological advances allow texts of all kinds to circulate with ease both within and between activity systems. As a result of this and the general rapidity of communications in electronic environments, genres are more frequently appropriated and repurposed in electronic environments. Much as the rate of evolutionary change on islands is often accelerated, literacy practices are more readily

altered in electronic environments. These environments allow for and even encourage active integration and dynamic interaction, resulting in a mixing of genres and literacy practices that does not respect conventional categories, divisions, or dichotomies, including the border that separates—in my opinion, artificially—the popular from the academic. As a result, home-based and school-based literacies are becoming increasingly blurred in electronic environments as they share and appropriate genres and literacy practices by means of articulations made by the mediating interface of the electronic environment itself.

The process by which this blurring occurs has much in common with Debra Journet's (1997) notion of boundary rhetoric. Though she was concerned with interdisciplinary relations, the concept is applicable to other system boundaries. Drawing from Steve Fuller's (1993) notion of sublimation, Journet articulated a theory of interdisciplinarity in which differences are sublimated not only by explicitly expressing connections but also "by recasting the knowledge claims of one discipline into the generic form of the other" (1997, p. 57). Undergirding this model is a conception of genre as flexible and dynamic. Journet asserted that true boundary rhetorics are not simply combined or juxtaposed genres. Rather, they are new genres (and a new kind of genre) that represent radical new ways of thinking, a blurring of expectations, and a revisioning of assumptions (p. 65). The (re)negotiations of electronic genres fostered by the interface of electronic environments also go beyond juxtaposition or mixing. As Gunther Kress (2003) asserted, the notion that genres can be mixed still relies upon the conventional conception of genre as fixed and stable. Otherwise, how could one "recognize" the generic mix as a blend?

As electronic texts of various sorts illustrate, the hybrid text is more than the sum of its parts. An analogy that comes to my mind is that of a chemical bond. When two elements join, their atoms lose their individual properties and take on properties different from the elements that comprise the bond. Sodium chloride is no longer sodium *or* chlorine, but neither can it be accurately described as sodium + chlorine, which would be, one supposes, something of a noxious flame (sodium will produce a flame if it encounters water, and chlorine is a poisonous gas). Instead, sodium chloride is, of course, table salt. From two, one—something different, new, and tasty.

Similar to Journet, Michael Carter (2007) was also interested in disciplinary genres and boundaries. Approaching the subject from a writing-in-the-disciplines perspective, Carter used genre theory to challenge the conventional notion of disciplines as separate divisions of declarative knowledge. Linking similar ways of doing to similar ways of writing and knowing into what he terms a metagenre, Carter reconceptualized disciplines as "modes of inquiry rather than static territories of knowledge" (p. 410), a move that highlights the relationships and similarities among seemingly distinct disciplines. The notion of metagenre is an especially useful way to (re)conceptualize electronic genres and the connections between the literacies of popular culture and school that exist in electronic environments. When we view electronic environments as representing an interface between popular culture and school, we can begin to recognize ways in which such texts composed in or for those environments share similar ways-of-doing with activity systems of both home and school.

Conceptualizing electronic environments as an interface also offers a new perspective on why questions concerning academic literacy in electronic environments—or is it electronic literacy in academic environments?—cannot always be as easily answered as one might initially suspect. Obviously, electronic genres and literacies have been shaped by technological advances. However, operating as they do within the interface of electronic environments, these genres and literacies have also been influenced by the genres and practices of popular culture boundary systems. In "Academic Literacy in a Wired World," Alice Trupe (2002) asked, "What should an academically literate student's text look like? Or how should an undergraduate writer demonstrate academic literacy in a wired world?" (n. p.). In response, Trupe compared the characteristic features of the traditional academic essay with those of an electronic text. Some of the features that characterize effective electronic texts include brevity, compression, and abbreviation; interactivity; graphical elements; a potentially global audience; intertextuality; multigenerical elements; structural linking; and multivoicedness. Notice that the characteristic features of effective electronic texts are exactly that—characteristic features of effective electronic texts. By which I mean the features are not specific to texts designed for academic settings. If we reconsider the literacy skills of our students, and Trupe asserted that we should, we "are likely to find that the literacies students have developed before entering our classrooms include more skills in genres like these [a variety of texts composed in electronic environments] and that student writers thus have more useful academic literacy skills than we have heretofore given them credit for" (2002, n. p.). The implication is clear: academic literacy in electronic environments has been strongly influenced, even shaped, by popular culture literacy practices.

That this should be the case is, for me, not surprising. Activity systems of formal schooling have always lagged behind those located within popular culture in the development and employment of electronic genres and composing

practices. The innovation, speed, openness, and visual richness that characterize contemporary popular culture facilitate the development of electronic literacy skills. More and more, human activities and interactions take place within electronic environments in complex, multifaceted ways. In a given day I may order a book from Amazon, reply to a student's email concerning her paper (whether the paper will be a traditional academic essay or not), text a friend (as I will do countless additional times before the day is over), find a scholarly article online (but not before reading the day's headlines and checking out all four of my email accounts), watch an episode of *South Park* on the Web, update my university homepage, download the latest podcast of NPR's *This American Life*, email my evaluation of a textbook manuscript to its future publisher, listen to music on my iPod at the gym, upload content to WebCT and new photographs to Facebook, and, of course, sit at my computer and write, as now.

Students also regularly inhabit and compose within electronic environments, and usually for reasons unrelated to school. Yet, as we have seen, students and academics alike import into the classroom genres and literacies used in settings (activity systems) outside school. Of course, texts frequently circulate between boundary systems, typically for specific reasons and usually mediated by specific genres. However, popular culture and school, historically, have not been viewed as so closely aligned. In this case, the movement of texts across system boundaries is more indicative of the role played by the interface of the electronic environment itself. Much more often than in other contexts, users in electronic environments frequently encounter similar composing strategies and skills in different activity systems. Even when the systems, genres, or literacy practices call for different strategies or procedures, the interface may pull, almost gravitationally, toward similarity, if not uniformity. In articulation theory, this represents a point of conjuncture, the moment at which different ideas or practices become joined or articulated to other ideas and practices. According to Hall (1986), this is the way in which people build order out of the chaos around them. We could say as well that the student is a point of articulation between activity systems of popular culture and formal education, shaping them as they shape her. In this way, the electronic environment, as interface, creates articulations that might not otherwise occur.

If the interface of the electronic environment can facilitate moments of conjuncture in which popular culture genres are articulated in the class, why not the reverse? In other words, electronic genres associated with popular culture can also be influenced by academic literacy practices. Just examine a well-designed web site whose content and purpose are unrelated to education or academics. Not only will it exhibit the features outlined by Trupe (2002), it will also demonstrate rhetorical sophistication not incompatible with a well-written essay. Specific elements, arrangements, and techniques may differ—the use of visuals being just one—but general principles will be the same, as Alice S. Horning (2004) explained:

> The capacity of web pages to use not only written language but also images, graphics, color and the juxtaposition of elements to make meaning does not significantly alter the underlying processes that constitute critical literacy. If Frank Smith is right that we process text (including print and now, images) in whole meaningful units rather than as individual elements (2004), the fundamental processes are unaltered in electronic form. (p. 136)

Consider, for example, satire. A sophisticated satire is not simply a text that adheres to a certain form or contains particular features. As genre theory explains, genres are context-specific, used within or between activity systems to accomplish certain outcomes. Accordingly, to compose an effective satire requires careful consideration of style, audience, mode, and tenor. For a genre used more routinely and in less formal situations than satire, such as, say, a grocery list, such considerations come to seem intuitive through regular use and deep familiarity. Other genres are more complex and thus more demanding, necessitating employment of deliberate, if still typified, reasoning. This is true whether the satire is print or electronic. This is not to say that print and electronic genres are not different. As Jay Bolter and Richard Grusin (2000) explained, new media refashion—both re-mediate and remediate—prior media forms. But a skilled writer in any medium is reflective and analytical, understanding that texts are meaningful, or produce meaning, through the mediation of genres, old or new, that are always already socially constructed and rhetorical.

Accordingly, one way to improve students' writing is to help them to recognize their own familiarity with many genres and then to teach them how to analyze what they already intuitively know so that in future writing tasks, both the familiar and the new, they can draw upon their own prior knowledge in working out how to make critical rhetorical judgments and apply appropriate rhetorical strategies—in other words, to help them to become genre theorists (Rose, 2003). This methodology is especially effective and relevant in electronic environments not only because students are already extremely familiar with electronic genres but also because the popular culture genres with which they are familiar directly influence academic literacy practices in electronic environments. The student designers of MySpace

pages interviewed by Bronwyn Williams (2007) displayed the kind of hybrid literacies I am discussing here but, as with many first-year students, were generally not yet reflectively aware of their own rhetorical skills and literacy practices. As Williams explained, many of the students showed an acute awareness of the rhetorical nature of their representations of self. Though to someone unfamiliar with the online social networking genre these students' sites might seem frivolous, the sites actually demonstrated the designers' understanding of the genre's conventions. Moreover, the students also exhibited knowledge and skills associated with traditional academic genres and literacy practices. For instance, the students were well aware of the fact that their pages were self-presentations that would be read and possibly misinterpreted. Williams quipped that some of the students "displayed an understanding of the slipperiness of representation that would make any postmodern theorist proud." The students also admitted to spending hours "'tweaking"' their pages (Williams, 2007, pp. 32-33). These students' efforts and concerns were products not of the media or popular culture but rather of genre. What a MySpace page *does* is present a constructed identity to one's peers while working to establish and maintain social networks that are usually both virtual and material. Viewed thusly, a MySpace page is similar in many respects to a professional homepage or a business brochure.

4. *Don't* mind the gap—(critically) mind the boundaries

In asserting that electronic texts represent sites where literacy practices of popular culture intersect and blur with those of the classroom, I am not implying that students do not need our guidance in electronic environments. As scholars have long pointed out, students may have developed electronic literacies through frequent immersion in digital environments and systems, but that does not mean they possess critical literacy skills as well. Carolyn Handa (2004) asserted, "Outside of our writing classrooms, students surround themselves with multimedia and cybertexts. . .. Our students, however, may be technologically sophisticated yet rhetorically illiterate" (p. 3). Others have similarly argued that the literacies students have acquired through contact with popular culture products and media usually differ from the kinds of literacy fostered by print texts and required in academic settings (Penrod, 1997; Svehla, 2006). Additionally, some scholars have pointed out that technological literacy is not the same thing as critical technological literacy (Selber, 2004; Duffelmeyer, 2000).

I readily acknowledge that my students are frequently not as critical as I would like, and I certainly believe I can help my students to improve their critical thinking, reading, and writing skills. However, I also think Handa (2004) underestimated the skills, including rhetorical skills, students possess and use in electronic environments. In calling for a more encompassing theory of text, one better suited to the demands of contemporary culture, Kress (2003) asserted that production of even the common, unremarkable texts of everyday life requires a remarkable amount of rhetorical skills. As even a casual examination of Trupe's (2002) listing of the characteristic features of effective electronic texts suggests, students commonly produce texts with these features for reasons (and activity systems) not always related to school. They can and do produce skilled and sophisticated electronic texts. Of course, again, this is not to say students don't have much to learn. My experiences working with students in electronic environments have shown me that what students generally lack in those environments is not so much skills, including literacy skills, as what I would call critical *awareness*. Discussing students' exposure to and experience with texts of both music and television, Rich Lane (1997) observed that students possess varying degrees of sophistication with the medium. The problem is that they "remain largely unconscious of their own abilities in decoding and producing this type of 'composition"' (p. 104). When it comes to electronic texts, students know far more than they realize or can express, a fact that helps explain why college students are sometimes deemed rhetorically illiterate even when their texts suggest otherwise. And as I have argued, electronic texts share similar ways-of-doing with the genres and literacy practices of both popular culture and school.

Consequently, instead of helping students to bridge the proverbial literacy gap between home and school, I assist them in mapping and critiquing the genres and literacy practices that mediate the two. In other words, we examine how the two activity systems (broadly conceived) relate to and connect with each other through the interface of electronic environments.

5. Conclusion: What it is is what it does

As new and emerging technologies continue to alter writing practices and pedagogy (not to mention the landscape of education in general), it is crucial that students and teachers alike expand their notions of literacy. Shifting the emphasis from what texts *are* to what they *do* and how they are *used* (and to what ends) promotes an active and engaged genre

theorizing that can facilitate awareness and development of multiliteracies (New London Group, 1996). What is more, understanding how popular culture and classroom genres intersect via the interface of electronic environments can help students to use what they already know to compose more effective texts in a variety of genres.

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