Writing, literate activity, semiotic remediation

A sociocultural approach

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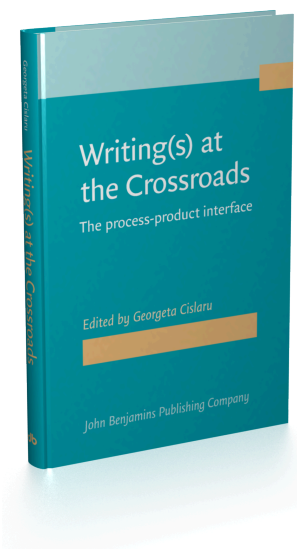

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This chapter sketches a sociocultural framework for understanding writing, particularly exploring the way notions of *literate activity* (Prior 1998) and *semiotic remediation* (Prior, Hengst, Roozen & Shipka 2006; Prior & Hengst 2010) maintain a distinct interest in both written artifacts and associated actions that are dialogically dispersed across people, tools, times and places. Drawing in particular on traditions grounded in the work of Vygotsky and Voloshinov, this approach argues for seeing writing as chronotopically laminated trajectories. Theoretical and methodological implications of this approach are illustrated by reviewing a line of research that has investigated writing as situated, mediated, and dispersed. The chapter concludes with key implications of this approach for the research, teaching, and practice of writing.

Keywords: writing theory; sociocultural theory; writing research; semiotics; chronotopes

1. Introduction

This chapter emerges from the Crossroads workshop on the process-product interface that led to this volume. That workshop and this volume have been grounded in the observation that there are multiple disciplinary approaches to tracing writing processes and to analyzing written texts, but a lack – whether within process approaches, within textual approaches, or between process and textual approaches – of the kind of sustained dialogue that is needed to construct a full and coherent account of writing. As Cislaru (in the introduction to this volume) states:

> …this book aims to contribute to the development of an interpretive approach to writing and its dynamics. It gives an overview of the state of research on the process-product interface through a range of viewpoints on process, product, and the links between them. Collectively, its chapters explore the possibility of establishing a coherent path from the real-time dynamics of the writing process to the product anchored in its formal dimensions and its pragmatic functions. The result is a look

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> at how results and concepts from different domains may support each other in the development of a mixed approach to the process-product interface.

The idea of a process/product interface might index a fuller scheme – product, process, and social context – that has been offered to narrate a certain arc in writing theory, research, and pedagogy (see, e.g. Nystrand 2005; Galbraith & Rijlaarsdam 1999). In that scheme, research (mostly cognitive) on writing processes replaced an earlier (mainly pedagogical and rhetorical) product tradition, and then was itself soon eclipsed by approaches (anthropological, rhetorical, postmodern) that focused on the social contexts of writing. Prior and Thorne (2014) critiqued this scheme and its underlying narrative, proposing instead a fine-grained, multidimensional mapping to articulate particular research projects. Drawing on Prior and Lunsford (2007), that mapping was organized around five key senses that co-exist in the word *writing*:

1. as an inscriptional artifact (a text),
2. as an individual cognitive and embodied capacity to act (the literate competence, dispositions, repertoires of the writer),
3. as the situated activity writers engage in (the chain of actions undertaken by writers and their respondents in a focal process – whether fleeting or lasting many years – of producing a text),
4. as a set of technologies or mediational means (whether digitized word processing, calligraphy inscribed on vellum, or use of a wooden stick to write in the dirt), and
5. as a mode of social organization (e.g. Smith's [1974] notion of documentary reality).

Given this scheme (text-person-activity-mediation-society), a study of writing might investigate one or more of these potential objects of inquiry, using one or more methods and pursuing one or more broad goals.

The Crossroads workshop underscored that theoretical and research attention (linguistic, discursive, rhetorical, text-genetic) to textual products continues to be active and productive, as does research on micro processes of composing, as does observational, ethnographic, and cultural examination of writing practices and histories. In fact, it is not unusual for studies to combine attention to two or all three of these dimensions of literate practice. Olive and Cislaru (this volume), for example, represent a process-product blending as they analyze bursts of (elicited) inscription in terms of both the timing of production and the linguistic-discursive features of the textual bursts. Perrin's research (2014; Grésillon and Perrin this volume) on the multimodal composing and delivery of TV news programs in the Swiss Broadcasting Corporation highlights with particular clarity and depth the value of combined attention to tracing products, processes, and social contexts in seeking a "coherent path from real-time dynamics of the writing process to the product anchored in its formal dimensions and its pragmatic functioning" (Cislaru this volume, Introduc-

tion). This chapter considers how a sociocultural approach to writing (Prior 2006) can address the integration of text, cognition, and social practices.

2. A sociocultural perspective

Sociocultural (also referred to as cultural-historical activity theory or CHAT) approaches to writing are often grounded in traditions that have developed from Vygotsky's (1987) approach to the sociocultural development of mind and the dialogic semiotics of Voloshinov (1973) and Bakhtin (1986). This sociocultural framework sees human activity as always mediated by other people, tools, and practices (Wertsch 1991; Cole & Engeström 1993; Scribner 1997), so texts must be understood as artifacts-in-activity. Given Vygotsky's (1987) emphasis on the genesis of tools (material and psychological) and people (learning/development) and Voloshinov's insistence that language (indeed any type of cultural sign) is "a purely historical phenomenon" (1973, 83), sociocultural approaches emphasize concrete chains of history and the complex ways temporality is folded into people, objects, environments, and practices. This focus on concrete histories challenges structuralist (e.g. Saussurean, schema-theoretical) accounts that posit synchronous, homogenous systems governing discourse and society (see critiques in Prior 1998; Bloomaert 2010).

Working in this sociocultural tradition, Lemke noted the importance of understanding how multiple temporal scales of activity are integrated:

> Each scale of organization in an ecosocial system is an integration of faster, more local processes (i.e. activities, practices, doings, happenings) into longer-timescale, more global or extended networks. It is *relative timescale* that determines the probability and intensity of interdependence …, and it is the circulation through the network of *semiotic artifacts* (i.e. books, buildings, bodies) that enables coordination between processes on radically different timescales. (Lemke 2000, 275)

Similarly, in research on navigation in navy ships, Hutchins (1995) highlighted *heterochronicity*, the way a mix of elements from multiple past activities undertaken by varied people for varied purposes across varied settings are folded into a specific local stretch of distributed cognition and activity. In sociocultural approaches, this weaving, unweaving, and reweaving of historical trajectories takes the place of abstract social and cognitive structures, a view well articulated by the flat ontology and sociology of Latour's (2005) actor-network theory (ANT). This chapter sketches a sociocultural framework for understanding writing, particularly considering how alternate units of analysis like *literate activity* (Prior 1998) and *semiotic remediation* (Prior, Hengst, Roozen & Shipka 2006; Prior & Hengst 2010) entail examining *laminated chronotopic* trajectories

of activity (Prior & Shipka 2003; Prior & Schaffner 2011) that are folded into and felt in both processes of writing and situated engagements with texts.

3. From writing to literate activity

Cultural images of writing typically picture an individual inscribing a material text (usually on paper or screen). Such images fit Goffman's (1981) observation that prototypical models of communication conflate the roles of animator (speaker/inscriber), author (who composes words, meanings, purposes), and principal (whose ideas and interests are being represented), assuming all three reside fully in the individual producer. Goffman noted many exceptions (e.g. reported speech, ghostwriters, diplomatic communications) to this prototypical model, stressing instead the multiple footings and laminations typical of communicative encounters. For sociocultural theory, these three roles in production are by necessity always distributed, and similar dialogic complexity in reception is central to any *utterance* (Bakhtin 1986; Voloshinov 1973), as utterances are situated wholes that always involve production, reception, distribution, and use. I did not make the pencil and paper I first wrote the last sentence with, nor did I create the words, their orthography, or the intertextual affordances of many other texts that may infuse that sentence with a range of meanings. The discourses and tools I use speak through me in some measure, however much I try to make them express my sense. Indeed, sociocultural theory takes everything – the writer, the language, the tools of inscription, the social purposes, genres, and uptakes of texts – as socially and historically made, hence as distributed and laminated. Understood as a blend of texts, persons, activities, mediational means, and social formations/practices, writing appears as temporally and spatially stretched out trajectories rather than as punctual events in a narrow and isolated here-and-now.

From this perspective, whether writing refers to processual acts of inscription, to texts produced by such acts, or both, it can only be a synecdoche for longer, broader histories of semiotic activity. From the start, cognitive process research (e.g. Flower & Hayes 1981) highlighted *reviewing*, the amount of immediate reading and rereading of emerging text observed in tightly focused acts of inscription on its own (that is, in the typical lab task of elicited writing without other texts or people present to consult). In fact, the composing of any text has cognitive and social dimensions that reach beyond any immediate act of inscription, if indeed they are connected to such an act: a person walking on a beach or a couple talking and sharing a beer at a pub can be engaged in a writing process. Following from these kinds of observations, Witte (1992) argued that the unit of analysis for research on writing could be little less than *unlimited semiosis*, as Eco (1976) interpreted Peirce's (1998) triadic semiotics. The idea of unlimited semiosis resonates with Bakhtin's (1986) proposal to take dialogic *utterances* as the

basic units of his translinguistics and his assertion of the unfinalizability of utterances – the way they remain open to re-use, re-interpretation, and re-purposing.

In my early research (e.g. Prior 1991; 1995; 1998), I explored connections between writing and disciplinary enculturation in graduate seminars. The research involved observation and recording of seminar meetings, collection of students' drafts and final papers (including professors' written comments and, when given, grades), semi-structured and text-based interviews, and historical contextualizations, for example, of the history of seminars or of a specific discipline. Analysis of these data identified the complex co-authoring of texts, ideas, discourses, and social formations that emerged through chains of events that involved a mix of reading, writing, talking, observing, and acting.

To account for these data, I proposed in Prior (1998) that an appropriate unit of analysis for writing research would be *literate activity*, "a confluence of many streams of activity: reading, talking, observing, acting, making, thinking and feeling as well as transcribing words" (xi) in whatever medium, "activity that is not only multimodal, but also temporally and spatially dispersed and distributed across multiple persons, artifacts, and sites" (Prior 1998, 137). I argued that sociocultural approaches to writing must grapple with the fact that texts and acts of inscription "are no more autonomous than the spray thrown up by white water in a river, and like that spray, literate acts today are far downstream from their sociohistoric origins" (*ibidem*, 138). Drawing on Bakhtin's (1981) notion of utterance as *chronotopic* (as a phenomenon always situated in and indexing times-spaces), I argued that writing must be understood "as situated, mediated, and dispersed," as an aspect of literate activity that is "not located in acts of reading and writing, but as cultural forms of life saturated with textuality, that is strongly motivated and mediated by texts" (*ibid*., 138).

As I engaged in analysis of the graduate seminars, however, I also realized that my research designs (centered on graduate students writing in seminars) had imagined a relatively fixed chronotopic scene (the site of a seminar, the time of a semester). One case in particular made the problem of this chronotopic fixity clear. Although I had invited all 60 students in a study of four graduate seminars to keep process logs, in the end only one did so. Lilah was taking an American Studies course taught by a geography professor, who I called Kohl. My frame tacitly assumed that she was writing a paper for Kohl's American Studies seminar. However, her log constantly referred to papers from two other courses, making it plain that Lilah was navigating the three courses in a combined way. For example, although she really did not find Kohl's course or Kohl himself that compelling, she liked the ethnographic orientation Kohl pushed in his seminar. She decided to write her papers for both American Studies and a History seminar on local celebrations of Cinco de Mayo (the May 5th celebration commemorating a Mexican victory over the French at Puebla in 1862). In spite of her lack of enthusiasm for Kohl, Lilah carried his ethnographic framework into her history paper, although it turned

out the history professor did not find that kind of evidence very persuasive. Lilah's process log also highlighted the way her life entwined with her academic thinking. For example, going out with her husband to a Mexican restaurant in a Mexican neighborhood played into her papers on Cinco de Mayo and her reflections on the way local celebrations had come to be more about tacos than the battle of Puebla.

Prior (1998) and Prior and Shipka (2003) articulate the blend of Bakhtin's (1981) account of chronotopes (represented and embodied) with Goffman's (1981) account of the lamination of discourse. Once we take on board this understanding of activity as situated, mediated, and dispersed, fundamentally dialogic and heterochronic, then it follows that any cultural act or object is layered with multiple histories – with a fuzzy, emergent set of affordances for meaning and action – that any activity can only be a *laminated assemblage* (Prior & Schaffner 2011).

The complex *chronotopic lamination* of Lilah's case (Prior 1997; 1998) led me to seek a broader, more open method to trace chronotopic trajectories of writing (cf. Karsten 2011). To that end, Jody Shipka and I (Prior 2004; Prior & Shipka 2003; Shipka 2011; Shipka & Chewning 2007) designed a process drawing and interview protocol that asked undergraduates, graduate students, and professors to draw representations of their work on some particular text or project. Brent Johnson, an undergraduate college student in kinesiology, focused on an assignment for Jody's first-year composition course. The assignment was to write an educational autobiography; he wrote about how much he had learned from watching movies and how watching movies indexed the important times and relationships

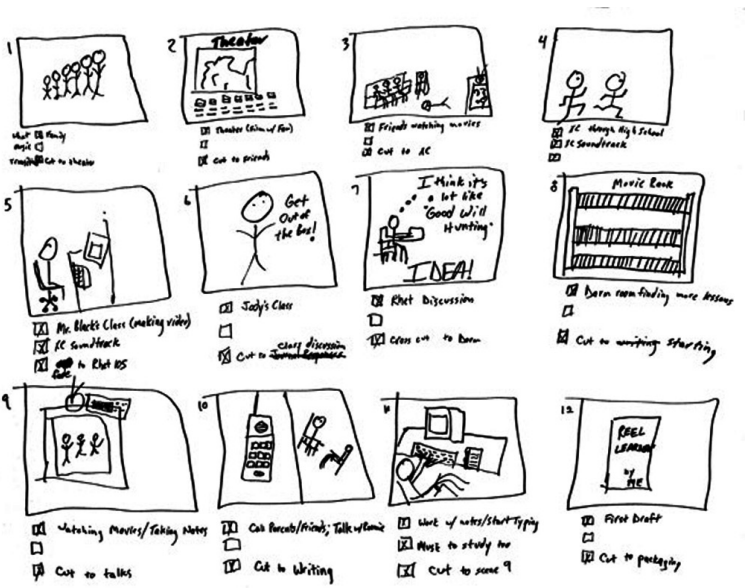

Figure 1. First twelve (of 18) panels from Brent Johnson's drawing of the writing process for one of his first-year composition projects

of his life. His paper, "Reel Learning" (playing with the homonyms "real" and film projector "reel"), argued that his most important lessons had almost always happened outside, or in non-core parts, of school.

Brent drew his overall process as storyboards, not a form we had invited, but one he chose because of his interest in film. Figure 1 displays the first 12 of the 18 panels he drew. What is striking is that we do not see Jody's class – the class where the autobiography was assigned – until the sixth panel. In panels 1–5, Brent represents being born into his family, going to movie theatres, watching films at home with friends, running races in high school, and taking a high school class where he learned to shoot and edit videos. Brent's temporal framing of his process brilliantly captures that writing processes are chronotopically dispersed, not bounded, that the experiences of our lives can always be recruited into composing.

In another interview, Michelle Kazmer, who was doing a Ph.D. in Library and Information Science (and is now an associate professor in the School of Information at Florida State University), drew the process of writing her dissertation proposal. In the center of the page there was a sequence of three images (see Figure 2). Michelle indicated that the first image on the left represented her in bed, very demoralized about writing at this stage and feeling she should just give up on the PhD. She then narrated the next two images, focusing on a critical conversation she and her boyfriend ("curly-haired person") had at the Esquire, a local bar:

> This is the Esquire – it's kind of hard to tell because it's a little table and that's-they're pints there at the Esquire and this is us talking back and forth. And, um, finally I said, "I have not been here for three and a half years to walk out of here without a degree. This is stupid! You know, I just, I can't sit in front of the computer and just go, 'heeh, heeh, heeh.' You know? I just have to write something. It doesn't have to be the best dissertation proposal ever, it just has to be good enough to pass and, you know, that's what people are always telling me, right? So, curly-haired person and the beers and the Esquire and, you know, I finally get to that point where it's like, "NO!" Okay, fine. There's typing on the screen now.

The image of the conversation at the bar is followed by an exclamation mark and the third image of Michelle typing away at the screen.

Figure 2. Extract from Michelle Kazmer's drawing of the process of writing her dissertation proposal, images 9-11 of 16 on the page

We designed the drawing protocol to capture the contours (the shape) of complex chronotopic trajectories of composing. When we think about writing processes, I propose that we be sure to seek accounts that include things like Kazmer at the bar (Figure 2) or Johnson watching movies and talking to his mom on the phone (panel 10 in Figure 1) as well as fast shifts between planning and reviewing during inscriptional events, that we seek, in other words, literate activity – chains of reading and inscribing, talking and observing, acting and making involving a temporally and spatially dispersed set of scenes and cast of characters.

4. Semiotic remediation and the problem of the text

Writing as text-person-activity-mediation-society involves multiple semiotic resources (not just linguistic signs) and multiple semiotic traversals in the process. The most basic traversal is the constant movement between external and inner (cognitive and embodied) semiotics. Vygotsky (1987) noted that externalization (e.g. speech) involves transformations. Converting the internal semiotics of sense into the externalized signs of language and image involves what Hutchins (1995) has called the propagation of representations across media (human minds and bodies, tools, inscriptions, etc.), each of which have particular affordances. Voloshinov (1973) evoked these semiotic transformations rather poetically:

> The process of speech, broadly understood as the process of inner and outer verbal life, goes on continuously. It knows neither beginning nor end. The outwardly actualized utterance is an island arising from the boundless sea of inner speech, the dimensions and forms of the island are determined by the particular situation of the utterance and its audience. (Voloshinov 1973, 96)

Prior, Hengst, Roozen, and Shipka (2006; see also Prior & Hengst 2010) have proposed *semiotic remediation* as a unit of analysis, arguing for a dialogic approach to all semiotic practices-in-the-world, to "the diverse ways that humans' and nonhumans' semiotic performances (historical or imagined) are re-represented and reused across modes, media, and chains of activity" (Prior et al. 2006, 734). This dialogic perspective on all sign systems (gestures and embodied activity as well as language and visual symbols or designs) is informed by diverse disciplinary discussions of mediation, recognizability, repurposing, and affordances of media. *Remediation* points to ways that all activity is (re)mediated – not mediated anew in each act – taking up the materials at hand (materials with a history), putting them to present use, and thereby producing altered conditions for future action. It also highlights that all activity is composed of multiple semiotic materials. As a unit of analysis, semiotic remediation extends the cognitive image of unlimited semiosis into a practice- and material-oriented perspective: it is designed to disrupt static notions of isolated products and bounded processes, beginning instead with distributed activity and cognition as givens.

Since Emig's (1971) seminal work on composing, writing studies – particularly cognitive and dynamics research into composing processes (e.g. Flower & Hayes, 1981; Olive, Alves & Castro 2009; Perrin 2014) – has viewed writing as the moment-to-moment production of texts, just as speaking is the moment-to-moment production of talk. However, the problem of the text and its sense remains. No utterance (written, oral, multimodal) can achieve its sense and function in a moment. Its relevance, production, interpretation, and use all require attention to the histories that lead to it, the unfolding events of its use, the imagined projections of its future, and ultimately the way it is in fact understood, taken up, replayed and reused in near and perhaps more distant futures. If production of written utterances is equated to production of spoken utterances, how do we understand texts that emerge out of long histories of production, texts that are composed and often lengthy? Such utterances (e.g. Tolstoy's *War and Peace*) not only have a history, as even a simple "Salut, Marie, ça va?" must have a history; they have a history of focused composition.

I have argued (Prior 2009) that we reject Bakhtin's (1986) problematic account equating written texts to oral language through the notion of turn-taking and instead consider the nature of *composed utterances*, utterances that call on us to analyze the chains of utterances that are woven together; the various ways that the composed document/performance overtly or covertly indexes its specific history of composition; and the ways that production, reception, and use take this history into account. Of course, the notion of composed utterance also applies to much talk. For example, Irvine (1996) analyzes how insult poetry for Wolof wedding ceremonies is co-composed prior to the event by sponsors, others in the community and a *griot* (a low-ranking female bard); how the *griot* delivers and leads communal repetition of the insults during the event; and how what Irvine calls *shadow conversations* (those conversations that are not here-and-now but are felt here-and-now) are critical to the cultural production, uptake, interpretation, and reuse of the insults. Political speeches, film and stage drama, religious ceremonies, sales pitches, language drills, sermons – a lot of talk fits into the category of composed utterance, often with texts woven significantly into the history. Roozen's analysis (Prior, Hengst, Roozen & Shipka 2006) of semiotic remediation in the trajectories of an amateur comedy skit offers a detailed glimpse into the complexity of composed performances, tracing the way compositional events brought together multiple people who co-composed the text/performance in interaction. Such composed performances index not simply some authorial vision, but also the emergent, interpretive work of the actors animating their lines and of the director, stage crew, audiences, and others shaping the contexts of the performed, embodied skit.

To better understand situated semiotic practices and the role of new technologies in literate activity, I began a study of a university Art and Design group as they

revised and redesigned an interactive, web-based art object called *IO*, an interactive website that mixed words, sounds, and images. The study focused on the work of two professors, Joseph Squier and Nan Goggin, and two of their graduate student research assistants, Tony and Eunah. The data included video and audio recordings of 14 group meetings over 11 months (each lasting at least an hour); several video recordings of individuals working on the project outside of group meetings; interviews with Joseph, Nan, Tony and Eunah; and a collection of texts, including screen captures and electronic files. The *IO* group continued to work on the redesign for at least a year after my data collection ended.

Figure 3 displays a text that emerged as a key mediator of the work of the group in its first year and illustrates how attention to chronotopic trajectories illuminates the folding of activity into composed utterances. The text is fairly simple, consisting of printed text (words, numbers, and lines) overlain with handwritten annotation (lines and numbers, mostly paired sequences separated by commas and representing Cartesian coordinates for the screen interface). That simplicity belies the complex origins and use of this text.

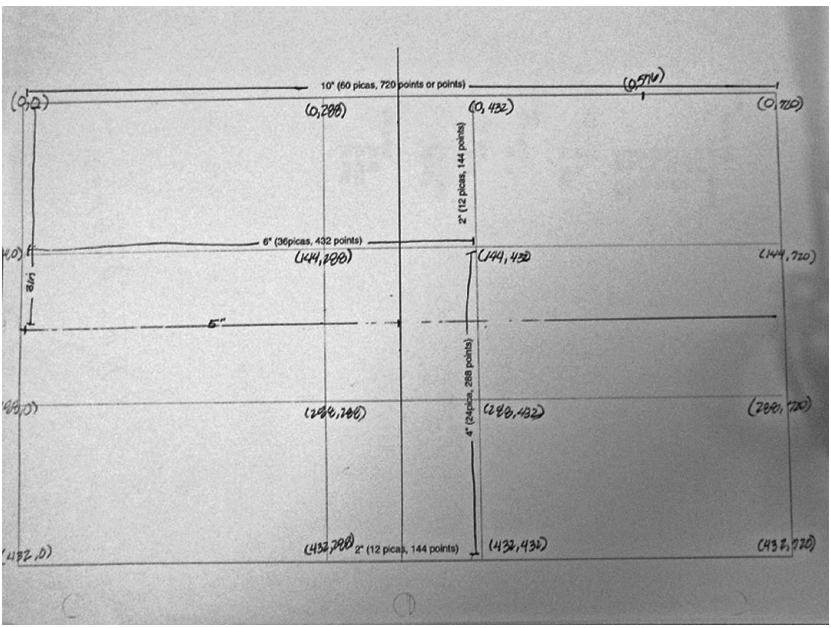

Figure 3. A printed, handwritten, drawn representation of the IO interface

Prior (2010) offers a detailed analysis of processes and artifacts in this group's work that I summarize briefly here to explore the semiotic remediation around this text. The document in Figure 3 represents a template for the screen interface

of *IO*, a template used to direct placement of images and text from the database as they loaded onto the screen. For example, an image that measured 6 inches by 4 inches might be loaded onto the screen with its top left corner at the 144, 0 coordinates (an option highlighted by the handwritten lines starting at 144,0 on the document). A 2-inch by 4-inch image could be loaded into the six boxes along either the left or right sides of the interface. The central 2-inch column would become the default space for loading text.

At an early meeting in February 2001, Joseph, Nan, Christian (a dance professor who worked briefly on the project), and Tony were planning the digital infrastructure for the revised *IO*, assessing how they could integrate a set of new programs (PHP, an open source database program; MySQL, an open source inquiry language program; and Flash 5, a proprietary multimedia application that would be the front end of *IO*). They needed to make critical decisions about how to structure the database, access it, and present images and words on the screen. A videotape of the meeting in the studio displayed an important sequence of interactions at the whiteboard as Nan and Tony, who took the lead in programming the database, talked about how to store and call up the images. The drawing/text on the whiteboard on the left of Figure 4 represents the Flash template for a revised *IO* screen interface. It was drawn, written, talked, and gestured into existence in less than three minutes of somewhat muddled interaction. The final representation that day involved at least 29 separate actions that touched the surface of the whiteboard, movements made by Nan and Tony, who used two different colored markers to sketch the boxes (Nan), revise the boxes (Nan), add letters (Tony), and then add arrows from letters into the diagram (Nan). The drawing and discussion of this emerging template was being coordinated with references to a PHP data entry screen on a laptop on the table, with another drawing on the whiteboard (representing a database architecture), and with many gestures in the air and over the diagram. As my fuller analysis (Prior 2010) details, Nan and Tony's interactions over this box diagram

Figure 4. A video screen capture (left side) of Nan drawing a line on the whiteboard in February as Tony watches and of Tony in November (right side) placing the document from Figure 3 over the computer screen as Nan and Eunah watch

involved a lot of miscommunication as Nan wanted Tony to be thinking about how the database related to the design of future *IO* screens whereas Tony was focused on another issue, how users could contribute images to *IO* to achieve what Joseph imagined as an intelligent art object that would learn. Inscription at the whiteboard emerged through sequential, co-present interaction, inscription as embodied and social activity rather than as artifact (although inscriptions became artifacts-in-interaction and could have a longer duration, as a version of the diagram did in this case).

I first saw the paper version of the whiteboard inscription in a September meeting seven months later. Tony, Eunah, Nan and Joseph were re-starting the project after a summer lull. Nan raised again the question of how Tony had set up image types (and their sizes) in the database. She then referred to "the grid" while making a box gesture with both hands that closely echoed a gesture she had made over the diagram on the whiteboard in February. She then stood up and came back with the document shown in Figure 3. For the next few minutes, she and Tony gestured on and over the paper and the screen as they discussed how many image types needed to be set up in the database.

This piece of paper (and other pencil drawings of interface elements) came out again in interactions over the next three months. In a November meeting, as Tony, Nan, and Eunah were assessing a new screen interface design, they discussed a problem with where the images were loading. Tony held the paper up to the screen (see image on the right side of Figure 4) to clarify the problem, which involved how a dark border Eunah had added around the interface meant that they needed to mathematically adjust the Cartesian coordinates for loading images to the screen.

Talking about this document in a December interview, Nan noted in passing that the dimensions of the revised paper template (which were noticeably not like the nearly identical squares drawn on the whiteboard in February) were designed to align with the mystical golden section proportions that Pythagoras had identified and that have since been popular in Western art and architecture (see Elam 2001). In sum, the textual product in Figure 3 represents a laminated enfolding of multiple historical trajectories. Its sense and functions were rooted in not only the long history of golden section proportionality in the West, but also in the whiteboard interactions of the group in February. It was drawn in shadow-conversation anticipation of its being brought out and used to coordinate talk and action as it was in the September discussion of the database and the November problem solving at the screen. In short, the linguistic and visual structure of this document (and other texts) can only be unpacked and understood in relation to its chronotopic trajectories and their semiotic remediation.

5. Conclusion

Writing research needs methods that can drill down into moment-to-moment text production; that can illuminate the linguistic and semiotic affordances of a material inscription but also its webs of intertextual and interdiscursive affordances (e.g. by use of text genetic methods, Grésillon and Perrin this volume); and that can locate the text, its production, reception and use in chronotopic trajectories that give it meaningful and functional affordances. For full accounts of writing, larger units of analysis like literate activity and semiotic remediation are, thus, necessary. Working from the perspective of sociocultural and semiotic practice, Agha (2007) defines language use rather radically as "events of semiosis in which language occurs" (Agha 2007, 6). Paraphrasing Agha, I would argue that literate activity must be understood as *events of semiosis in which writing is implicated*. I say "implicated" here because of the kind of complex temporalities the drawing protocol makes visible, because Kazmer at the bar and Johnson watching movies in high school are events in which writing does not "occur" but in which writing is implicated.

Working in the institutional space of the newsroom, Perrin (2014; Grésillon and Perrin this volume) has been able to capture an impressively deep picture of composing processes; however, his analysis offers an attenuated image of the chronotopic trajectories, the other times and spaces outside of that institution, that shape the journalists' actions. In contrast, Roozen's (2009) account of the rich intersections of Kate's writing for school with her textual and multimedia production (online and off) of fan fiction captures an impressive image of the heterogeneous trajectories of Kate's literate and semiotic activity; however, Roozen only gestures at Kate's moment-to-moment practices of writing (and the same can be said for the drawing protocol research I have done).

Accounts of writing can be built by combining the findings and frameworks of different research projects, but I also believe that attention to chronotopic trajectories and closely situated evidence of episodes of focal composition can be put together in one study. Bowen's (2011) research on the digital literate activity and lives of elderly individuals; Fraiberg's (2010) research on multilingual, multimodal, and cultural practices in and around a high-tech, start-up company in Israel; Sheridan's (2008) accounts of literate activity around a feminist youth project in the community; and Berry, Hawisher, and Selfe's (2012) examination of transnational literate lives, all illustrate designs that move between close attention to composing and wider, more open-ended chronotopic trajectories.

Olinger's (2014) sociocultural research on disciplinary writing styles suggests a key implication of this perspective for teaching and practice. As she argues, we

need to work from a deep recognition of the situatedness and heterogeneity of disciplinary genres, to reimagine writing styles more as tropes of identity and stance rather than as hard-and-fast rules of discourse.

To teach students to engage in such dynamic and emergent practices, Shipka (2011) offers a detailed account of her activity-based, multimodal framework for composing. Asking students to make and defend choices about the whole rhetorical situation (goals, materials, genres, ways of composing, and contexts of reception), Shipka's pedagogy rejects "the highly decontextualized skills and drills, linear, single-mode approach to writing instruction" (Shipka 2011, 85) regardless of whether the mode that is privileged is a traditional paper essay or some multimedia digital form. The detailed examples of her pedagogical designs and students' practices in response to her invitations to act rhetorically are well worth close reading. Shipka (2011) sums up the pedagogy in these terms:

> …when called upon to set their own goals and to structure the production, delivery, and reception of the work they accomplish in the course, students can: (1) demonstrate an enhanced awareness of the affordances they employ in service of those goals; (2) successfully engineer ways of contextualizing, structuring and realizing the production, distribution, delivery and reception of their work; and (3) become better equipped to negotiate the range of communicative contexts they find themselves encountering both in and outside of school. (Shipka 2011, 103–4)

Grounded in sociocultural research on writing, literate activity, and semiotic remediation rather than in traditional cultural views of writing processes and products, Shipka's pedagogy is one that emphasizes the development of the *semiotic agility* (Prior 2010) that is, in fact, the hallmark of our literate and semiotic practices in the world.

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