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Circuitous Subjects in Their Time Maps

James J. Sosnoski and Ken S. McAllister

Over two decades ago, Fen Labalme designed the prototype of a postmodern newspaper that he *was* then designing *as* part of a media and technology project at MIT. Stewart Brand, the Director of MIT's Media Lab, summarized Labalme's project in his history of the Media Lab:

NewsPeek, a selective home-publishable semiautomatic electronic newspaper that knows the reader, [is] made of material drawn daily from Dow Jones News Retrieval, Nexis, XPress, and wire services, along with television news. Walter [Bender, the director of the project] punches it up on his monitor screen. Topic headlines in different colors indicate "international," "Technical," "Financial," "Mail," "People," etc. When he slides his finger across the screen, the image on the screen slides with him, revealing more text. He runs his finger across a lead paragraph, and that story fills the screen. He calls for other newsclips on the topic, and three come up, one of them colored pale yellow like aging newsprint, indicating it's an old item.

Illustrations on the screen in color, such as the map of Cuba or the photograph of the President, are drawn locally from a videodisc capable of holding 54,000 such images, the sort of thing that might be mailed out monthly by a subscription service. When Walter touches an article under "Today," suddenly the illustration comes to life, flames and smoke pouring up, a television voice announcing, "In Mount Bellevue, Texas, today there was an explosion at an oil refinery that set off a spectacular fire. Flames from burning propane, butane, and gasoline towered 800 feet...." The clip was captured from the evening news by *NewsPeek* and formatted into the presentation. The most significant item on *NewsPeek's* front page ... [is] the user's own electronic mailbox.... "It's news only to him, but it's the most important of all." (*Media Lab 37*)

Back in 1981, when ideas like this were just beginning to accrue popular attention, Labalme's *NewsPeek* seemed a futuristic vision. Now, it reads

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like a description of familiar communication tools such as *Opera*, *Netscape*, *Internet Explorer*, and *Firefox*, as well as a rather simplistic preview of graphical and tactile user interfaces, the likes of which have now been iconized in movies like *Minority Report* and *The Matrix Reloaded*. Today, newspapers, TV networks, and political groups all have web sites that more or less correspond to experiments done during the eighties at MIT's media lab because in the early twenty-first century such "experiments" have become commercially viable applications. As a consequence, the critique that is usually reserved for the prophetic and naively enthusiastic utterances of the likes of Labalme and Brand have been quieted by the somewhat embarrassing fact that the utterances have not only become manifest but popular.

As readers of *JAC* are well aware, a similar phenomenon has occurred in the disciplines of English and communications studies. The interface between text and cultural study has now been sufficiently technologized and transformed that scholars in these and related fields might usefully refer to the various multimedia applications in the humanities not as "NewsPeeks" but as "CultPeeks." Students can now access hundreds of hypermed is resources via the web, CD-ROM, and DVD that allow them to become immersed (in varying degrees) in the intricacies of a specific text's production, from Tennyson's poetry and performances of *Faust*, to interpretations of Shakespeare in cinema and interactive digital media. Several MOOs facilitate the study of canonical literature and ancient Greek and Latin authors, and there are at least two virtual *reality* renderings of important sites in the Mediterranean Basin designed to be explored by classics and art history students. Students of rhetoric, on the other hand, can go to *LinguaMOO*, where they can listen to rhetors in its theatre while eating virtual popcorn. What seemed so futuristic in 1989 is now commonplace. Many classrooms are now beginning to approximate fully immersive electronic educational environments (or as we shall refer to them throughout this paper, EEEs), because they primarily offer students and teachers just a physical space wherein they may login to a multitude of virtual spaces. By "electronic educational environment," we simply mean an interactive learning situation in which various media are programmatically interfaced as a massive dynamic hypertextual database that can be drawn on to provide specific courses of study. We also concur with the findings of the Committee on Virtual Reality Research and Development that "the purpose of a virtual environment system is to alter the state of the human operator or the computer" (Durlach and Mayor 2)) Today's computer-enhanced classrooms cer-

tainly fit these descriptions, connected as they often are to numerous online indices, search engines, and archives; loaded with a plethora of software to edit photos, illustrations, movies, and audio files; and enabling communication with other computer users around the world using anything from text-only email to streaming video connections. Such technologies aren't restricted to the computer-enhanced classroom, of course. Many students now have access to these kinds of hardware and software technologies in their home, making their bedrooms and dorms into EEEs in their own right.

But not all EEEs are alike. In this essay, we distinguish between two types of EEEs: *non-dialogical*, in which users navigate in solitude and that are principally published on CD-ROMs, DVDs, and static websites; and *dialogical*, in which users necessarily encounter others in such a way that their exchanges become part of the learning process. Dialogical EEEs usually take the form of MUDs, MOOS, chat rooms, web forums, and, at the leading edge, networked 3D environments similar to (or modifications of) massively multiplayer online games (MMOGs).

That interactive multimedia resources like *NewsPeek* grow increasingly familiar makes what happens to us as we use them also seem commonplace. This is not an unmitigated blessing because what appears to be normal does not appear to require scrutiny and thus is sometimes accepted without reservation. In our view, advocates of EEEs (among whom we count ourselves) need simultaneously to be critical of the emerging pedagogies such technologies spawn. Hence, in the following reflections, we link critical commentaries on *the* formation of subjects offered about print culture with the rapidly growing educational technoculture sprouting up in departments housing various forms of cultural and media studies.

Though humanities scholars have learned to theorize interpellation, we are often unaware of how subjected our subjectivities can become. The attention we pay to the circumstance that we constitute printed texts from the intellectual frameworks we bring to them should not be allowed to obscure the circumstance that, in doing so, we frame meanings out of our memories of prior readings of writings we did not author. In the highly subjective process of reading either print or electronic matter, we write ourselves largely from interpretations made available to us by others. In reading, we subjugate ourselves in the sense that the very subjectivities that frame our reading are themselves altered by what we read. Writings are not merely subject matters we read, they are subjugations (instances of acculturation) we often unconsciously accept. These considerations

may seem unimportant in considering cyberspace if we disregard the circumstance that its *texture* is discursive and has to be read. In what follows, we call attention to two forms of subjected subjectivity that we have experienced in the virtual world of cyberspace: circuitry and dehistoricization. As a point of departure, we ask: are readers of hypertextual, multimedia databases actors who perform scripts written for them?'

Reading and Writing in Cyberspace as Performances of Symbolic Actions by Virtual Subjects

The recent propagation of wireless broadband and the latest 3D graphics capabilities of tablet-PCs, cell phones, and PDAs make it reasonable to project that within the next five or so years, students will connect to EEEs so much like *NewsPeek* in their customizability that we can give them the generic name, *CultPeeks*. We use this term because such EEEs, which tend to be non-dialogical, configure users' experiences of the research "motive" built into such educational environments as little more than a "peek" at the complexity of the subjects being studied. Similarly, "cult" configures the microcultures that are spawned by the users' idiosyncratically selective "peeks" at cultures represented by the authors of these EEEs. Like Walter Bender, the director of the *NewsPeek* project at MIT, students—economically privileged ones, at least—will call up such environments on their wireless devices from wherever they can gain access to a global computer network: campuses, public libraries, train and bus stations, airports, and any public building.' Subject listings in a U.S. Studies Program, for example, may use different colors to indicate "Early U.S. Politics," "19th-Century U.S. Technoculture," "U.S. Literature from 1900 to the Viet Nam War," and "Contemporary Trends in the U.S. Entertainment Industry." When Walter (on whom we'll turn the table for a moment) slides his fingertip across the screen to "U.S. Literature from 1900 to the Viet Nam War," the screen slides with him, revealing a long list of names and places. He runs his finger across the names to one he does not recognize—Agee, James. Out of curiosity, he touches Agee's name and a list of annotated dates appears. Recognizing a magazine title, Walter picks out "1936, *Fortune* Assignment in Alabama" and a story about Agee's trip with Walker Evans to Alabama, formatted as if it were the magazine itself, takes over the screen. Noting the availability of visuals on the topic, he calls for them. A dozen of Walker Evan's remarkable photographs come up. A close-up of a young woman in a straw hat with strangely sad eyes peers at him; another of a rural post

office catches his attention because the "DRINK COCO-COLA" sign oddly overwhelms the designation "U.S. Post Office, Sprott Ala."; a third, of two work shoes sitting in the parched dirt, puzzles him. With his fingertip, he traces a question mark over the image—a technology enabled through the system's gesture recognition software—and a text from *Let Us Now Praise Famous Men* (1939) appears describing the homes of the Alabama sharecroppers in Evans' photographs.

Now fascinated, he searches for information about Agee. A photograph of the writer in a rumpled suit fills the screen; then in the right hand corner a range of biographical topics quietly becomes visible in a window. Noticing "Hollywood," Walter taps it. A list of films shows up in a window in the lower right hand corner of the screen. He touches *The Night of the Hunter* by accident; suddenly the screen comes to life in the figure of Robert Mitchum with "hate" tattooed across the fingers of his left hand and "love" across those of his right. The film freezes, becoming a backdrop for a superimposed menu: "Load Movie (\$2.00)" and "Play Game (Free Demo)." Having time for neither (though interested in both), Walter backtracks and identifies a biographer. James Barson, as a fully rendered three-dimensional avatar (built from a generic motion-capture dataset) comes up on screen and says "James Agee's Pulitzer prize winning *A Death in the Family* gives us an evocative view of his childhood in Knoxville Tennessee...." Walter traces the "mute" symbol on the screen and uses another symbol to call for the text of Barson's remarks, which obediently appear in the upper left hand corner of the screen. After skimming the bio's overview, he browses through the headings of Agee's film reviews for *Time* and *The Nation*, eventually settling on an essay on silent comedy, having been attracted by the image on a *Life* magazine cover for September 3, 1949 that had flashed up as a cross-reference in his archive file.

From the perspective of Kenneth Burke's dramatism, users of multimedia systems configured in the CultPeek mode like Walter are performers whose discursive interactions with the database (often recorded as a "history") can be understood as the story (or drama) of reading the database. A subject's time in the virtual world of a database becomes part of the history of that virtual world. These histories are chronologies of choices made along the subject's journey through the database. Of course, many (if not all) of these "choices" have been scripted into the database.

Construing databases as virtual worlds whose histories are comprised of their users' decisions allows us to construe virtual subjects as

agents with motives and to inquire into the extent to which becoming a performer in someone else's drama prescribes identification with a set of motives. In this regard, Kenneth Burke's delineation of motives in his various rhetorics is helpful since he shows how discourses that do not appear to be dramas are nonetheless dramatic. From his theoretical perspective, databases can be analyzed as webs of motivation since using them is a symbolic action comprised of agents, acts, motives, and consequences no matter how virtual. Though we rarely do so, we might think of even a simple listsery as a dramatization of motives or of a database as the terrain over which an investigative journey is taken. In either case, histories are made as discourses are built out of chains of decisions.

Though such *histories* are minimal—hardly more than chronologies and object sequences—nonetheless, when actions are verbalized, they reveal motives because "performance-verbs play a fundamental part in the description of human actions" (Kenny 183). In his study of the verbalization of action, Anthony Kenny writes,

Very often, what happens when a human being performs an action may be described as follows. First, there exists a state of affairs of which the agent disapproves; then the agent does something; after his action there exists, in place of the original state of affairs, a different state of affairs of which he approves.

Wherever this scheme of description of action applies, there will be room for three main types of explanation of action. An action may be explained by reference to the unwanted state of affairs, which preceded it, or by reference to the wanted state of *affairs* which was, or was expected to be, its upshot, or by some form of explanation which alludes to both of these together. (90-91)

Narratologists identify this pattern of description of human behavior as a "story." To put an action into words is to narrate. Part of the force of Kenneth Burke's work is to show us that many forms of discourse (for instance, arguments) can be understood as symbolic actions. A depersonalized argument—a flame in an ICQ chat room, for instance—once returned to its context of debate, quarrel, or controversy, for example, may more easily be discerned as discourse than when it is absent from its context. An examination of listsery logs or web forums as the context for the desires and conflicts expressed therein makes this narratological process more apparent because such logs (records of asynchronous dialogue) are linked to a longer history of readings and writings (argu-

ments) that make up the entire database. Considering that listsery and web forum logs are often quite volatile (in the emotional, not the electronic sense), it is similarly apparent that critical arguments usually begin in desire and conflict: interlocutors want to be right and will become antagonistic to show that they are. From this perspective, arguments can be perceived as the human dramas they invariably are, and can be understood to have histories. As narratologists have claimed, stories often begin with states of desire or conflict that represent the desires and conflicts audiences wish to resolve strategically in terms of their own interests. These interests are often obscure, especially in virtual worlds.

When inhabiting a virtual world, a person en-roles a virtual persona who is also a subject, the "I" of the virtualized discourse. Other subjects online synchronically cannot tell whether a virtual subject is speaking truths or lies, whether the discourse is governed by a male or female, or whether it resembles the user's real-world behavior. Nonetheless, we recognize a virtual subject as a legitimate agent of discourse—that is, as the authoritative "I" who speaks and who hails others through virtual discourse. Though we may know nothing of the person behind the avatar, he or she acts through this actor and occupies a position relative to the other virtual subjects. The avatar's "I" is subjected to the discourse invented for it. In sum, as Kenneth Burke might say, the virtual subject is a symbolic actor whose actions have discursive consequences that are usually experienced as outcomes of a complex of desires *and* conflicts. We term this complex the *virtual dialectic*.

The outcome of a performance within the virtual dialectic is bound up with a desire that the audience—other virtual agents and their puppeteers—will respond in particular ways to the discursive world presented to it. For this to happen in the virtual world, the audience for a message has to accept *their implicated subject position*. Consider this example: a group of longtime online companions set off on a new adventure in a massive multi player online role-playing game (MMORPG); none of the players has ever met one another in real life and the VR world's protocols discourage players from "breaking the spell over the land," a euphemism for talking about life on "Earth" where people have real lives, families, and jobs. As this party sets off, it encounters a wandering healer, all alone. After a brief exchange, the party—short on healers—decides to invite their new acquaintance along, even though the avatar is very inexperienced. As the party travels across the land, making small talk about the advantages of chain mail over plate armor and keeping an eye out for brigands, the new healer makes the inevitable

"newbie" error and breaks the spell: "I'm a manager at a Blockbuster Video store in Detroit. What do you all do?"

The healer-avatar's utterance admits the real world into the virtual one, catalyzing a transformative moment. The healer's "I" in the players' innocuous, but consistently en-rolled, chit-chat gives the lie to *all* the avatars by hailing the other puppeteers with a "you" situated in a real- (not an MMORPG-) world context. Like many transformative moments that occur when people traverse the increasingly ambiguous boundary between real and virtual dialectic—and the discourses that comprise them—this one is violent. The other players have been forced to abandon their fantasy—if only for a moment—and remember the context of the game they are playing. Their immersion is withdrawn, and they are forced to see again their own real lives, families, and jobs.

Each member of the party has several options for responding to this violent interpellative moment. One might accept the healer's reminder and simply answer the question: "I teach high-school English." Another might accept the reminder but refuse to answer, choosing instead to offer the new player some instruction: "In this **world** we don't talk about Earth. . It defeats the purpose of being here." In such a case, a player acknowledges the truth of the reminder but informs the new player that such reminders are unwelcome; in this VR world, it's rude to offer someone a subject position they can't refuse. Finally, a player might choose to ignore the interpellation, either by not responding or by turning the interpellative moment on its head: "What's a Blockbuster Video store? I've never seen one of those here before." With this latter response, the healer's player is now forced to choose between continuing to occupy a subject position in the real world or to reconstitute the healer-avatar's subject position.

Such moments are common in MMPGs and other dialogical databases, and are negotiated in just the ways described above. Each negotiation carries with it a history—one that not only comprises the past but also constitutes the present and future—that must be en-rolled. The player who fails to properly en-role is corrected, and in this way, such environments are self-policing. And once a player concedes to the en-rolment process, her or his avatar's **history** becomes fixed (though not necessarily forever) according to the terms of the negotiated, which is to say the implicated, subject position. And behind all of these overt interpellative actions in the EEE, there is another one, a shadow interpellator haunting the system: the designer. It is designers who make inter-EEE roles such as "healer" inhabitable in the first place, and while players may self-police the VR

world, they rarely police the world-builders themselves.' It is at this very point, however—where virtual and real interpellations collide—that virtual and real dialectics coalesce. The desires and antagonisms of the real world invade upon the virtual world and vice versa, transforming the players and their avatars simultaneously.

When dealing with dialogical databases, we may say, then, that the structure of motivation is dramatized: the actors (or at least their avatars) are present, and their desires and conflicts are fairly evident. Though not always obvious, motives in dialogical databases are attributed during the dialogue, and the interpersonal dimension of the inquiry is palpable. The motivational patterns built into non-dialogical databases, however, are far less accessible: the actors are masked by corporate invisibility—far more so even than with the MMPG designers described above—and their motives camouflaged by flamboyant appeals to imagined and shared values of the commonwealth or sometimes to "good old-fashioned commonsense." A Burkean perspective suggests, however, that non-dialogical electronic educational environments are dramatic symbolic actions whose structures of motivation (that is, implicated subject positions) necessarily evade easy detection. In the next section, we describe the circuits of motivation built into the search routines of non-dialogical EEEs. These routines produce what may be called *circuitous subjects*.

Circuitous Subjects

Electronic educational environments **operate** through electrical transmission paths—"circuits"—along which a continuous flow of signals form an electronic discourse. Such circuits of signals, like other discursive formations, invite a variety of subject positions. People are positioned by the ways in which they both talk and think about themselves and the ways others talk and think about them. They are placed in positions relative to others in hierarchically structured systems of power. Many readers, for example, are probably teaching assistants, or assistant, associate or full professors. A few may be university deans, provosts, or college presidents. Similarly, in EEEs, users are guests, subscribers, testers, clients, or contributors. These titles represent their bearers' privilege to exercise different degrees of power in higher education and within particular EEEs, respectively. Persons designated "faculty" typically think of themselves as inhabiting a combination of roles—rhetoricians, historians, political economists—which, considered separately from the powerful institutions that support these roles, might well seem subordinate to "faculty." These positions are joined to specific functions in the discurs-

sive world faculty inhabit. Such persons are also performers, actors who "teach," "research," and "edit," for example. And notably, these roles do not usually also include positions such as "clerk," "bursar," or "sanitation engineer"; while these roles are neither more nor less important than those a faculty member plays, the social construction of faculty roles has been manipulated such that they retain more cultural capital than those associated with building maintenance and office work.

In Althusser's famous view, we acquire our subject positions by being called to them: "I shall then suggest that ideology . . . 'recruits' subjects . . . or 'transforms' . . . individuals into subjects . . . by *interpellation* or hailing, and which can be imagined along the lines of the most commonplace everyday police (or other) hailing: 'Hey, you there!' (71, 174). An individual so interpellated or hailed recognizes "that the hail was 'really' addressed to him, and that it was 'really' him who was hailed (and not someone else)" (174). An individual, in being called "professor" or "teacher" is hailed by the institution—including all its personnel, even students—in which the terms "professor" and "teacher" function and have power. That individual recognizes that she or he is "*really*" a professor. She or he thus believes in the reality of professorhood and all that it entails within the institution of the university. According to Althusser, "The existence of ideology and the hailing or interpellation of individuals as subjects are one and the same thing" (175). Persons are subject to discourses that position them in particular mappings of a social world and assigned correlative functions that imply motives designed to justify the system. This is just as much the case in the virtual environments designed by interpellated subjects as it is in the real world that those subjects themselves inhabit.

In educational electronic environments, then, persons are *also* called to subject positions. Once inside the EEE, where their cultural world is mapped by programmers or other high-level functionaries, they are called upon to make decisions.⁶ Because the circuits of decision-making are pre-motivated by their designers and developers, virtual subjects are positioned within the apparatus of the EEE in much the same way that Althusser describes interpellation. The arrangement of data in the *database*—*what* programmers call "structure"—only allows for a restricted range of motives. The user who searches the database and makes a list must, therefore, subscribe to at least one of the predetermined motives in order to proceed with his or her work. In order to generate a history of the "game film"—a term coined by Judd Ethan Ruggill to designate movies based on computer games—using IMDb (www.imdb.com), for

instance, one must first register at the site, login, learn the database's interface, then master the web application's search engine before beginning to compile such an unusual filmography. Using the wrong terms—terms not implemented by the developers—results in erroneous or empty results. A search for "video games," for example, turns up numerous hits for actor David Games and for director Marcelo Games. In order to find films based on games, a user must experiment until she or he finds a search term and pattern that "makes sense" to the application. Once that rubric is identified, of course, it also seems then to "make sense" to the user. The relationship between video games and films, in other words, is not a motive the program admits, and so the CultPeek that might eventually emerge from such human-computer interaction necessarily implicates the ideologies of both the user and IMDb's developers.

It would be easy enough to take a fatalistic view of the CultPeek scenario just described and conclude that the dramatic transformations brought about by digital telecommunications will only "speed up" the effects of cultural hegemony and posit that we are always already unwitting dupes of the programs we use. We are not quite so fatalistic but in our experience—as both users and developers—electronic educational environments differ significantly from book-oriented learning environments with respect to the construction of intellectuality. These differences are due primarily to the circuitry of virtual subject positions.

The rapid changes in subject positions required by computer programs in general—even basic word processors hail users into particular socially defined roles—and by BEES especially, form a circuit, giving the impression of coherence. A "circuitous subject" is one who, while online, is routinized through a particular sequence of implicitly motivated performances that resolve back to the starting point, thereby constructing an apparent continuity. In other words, a string of pseudo-random subject positions (understood here as "roles" that prescribe practices within a fixed range of motivation) is given coherence by the task that makes the circuit a circuit. The context of the work makes the work itself "make sense." This is the process by which a series of followed links from a Google search, for instance, can be said to tell a story; the initial search string is the initial task, the resulting "hits" are the pseudo-random subject positions, and each click of the user as he or she explores the links gradually encourages the user to see a coherence among the links—even when they occur on seemingly unrelated sites. Such circuitry acts like a carousel that one cannot step off. The effect of living as a circuitous subject, even momentarily, can be highly

exhilarating cause it offers self-confirmation through self-absorption. At the same time, self-confirming subjectivity makes for circuitous subjects those inner worlds become increasingly private if left uncritiqued.

Nondialogical EEEs privatize intellectuality, and circuitous subjects created within them tend to hallucinate culture. It is difficult to resist the illusion of culture that such electronic educational environments create because they are forms of discursivity whose virtual worlds routinely model real worlds. Accustomed to regarding digital models as accurate representations of the world of our actual perceptions, comfortable users of today's virtual worlds (for instance, computer gamers) nonetheless experience "real" effects that are not public—that is, not customarily shared with others.' With a little ingenuity, for example, users could construct an entire history of cinema from the IMDb "My Movies" tab by creating a chronological list of films, directors, actors, and other agents and events. This might seem to a user of that database a "real" history (or at least chronology of the cinema). However, if it were published, that is, shared, it would likely be laughable because of omissions that would astonish film historians. In other words, users can (and our students often do) construct what seems to them to be versions of reality from their databases that, from a sociohistorical perspective, are so idiosyncratic that they might well be described as private fantasies.

Our perception of the boundary between the virtual and the real (between the private and the public) is affected by the technology we use. The virtuality of a tape-delayed event does not change the recorded event itself, and watching such a prerecorded event affects viewers in ways that are indistinguishable from those experienced by viewers watching the event in real time, especially if they lose the sense of the delay or are unaware of it. On the other hand, electronic educational environments that allow users to explore prerecorded culture(s) are themselves constitutive of culture; that is, it is difficult to perceive EEEs as having noticeable boundaries between virtual, private, and idiosyncratic educational experiences and actual, public, and shared ones. Both a VCR tape and a printed history book may be records of actual events, that is, of events we believe could have been witnessed by many persons; such events, then, seem public. When we watch a film like *Gods and Generals*, which includes scenes of Civil War battles, we believe these battles—though realistic—to be fictitious because of our generic expectations of films. Our generic expectations of informational media, however—broadcast news, for example—can lead us to accept fictitious images as

actual ones.' But since most people have not yet developed generic expectations of EEEs, they have no consistent signals to help them sense the boundary between public and private readings. As a consequence, it is easy to take a virtual history (one concocted from a set of idiosyncratically motivated choices) as a real history. This is, of course, also true of print environments—the subjective selectivity of readers often results in highly idiosyncratic readings. The difference, however, is that an idiosyncratic reading is not necessarily "circuitous." A printed text is relatively linear by comparison with an EEE. Reading a novel and then going to the library and choosing another novel differs from using TWO, for example, whose "wishlists" are predicated upon users' choices of films. Underlying TIVO is a predetermined set of subjectivities that are mapped onto each user's "history" of film watching and that are logged into a database from which the user's profile is created.^o

We are not arguing that "reading" in electronic educational environments is fundamentally different from reading in a print environment. On the contrary, we are suggesting that they are equally subjective, but that in the EEE the nature of this subjectivity is far less well understood.^o The circuitry of the decision-making processes in a given database positions its readers pedagogically; when EEEs have little dialogical dimension (no ongoing conversation), their circuitry fosters privatization unless a counter-initiative is simultaneously undertaken to combat it. Unfortunately, judging from the proliferation of educational CD-ROMs and DV Ds, nondialogical EEEs that reduce pedagogy to programming seem well on their way to broadly defining what electronic educational environments are about.

In our view, non-dialogical EEEs ultimately have deleterious effects that go beyond the complaints that conservative thinkers who defend canonicity make. Under the right interpellative conditions, any text's potential for "subversion" and for catalyzing cultural change can be forestalled, even when such texts are interactive and electronic. Given a sufficiently large database for example, misogynist or racist users will find it that much easier to construct "histories" that merely confirm their bigoted ideologies when exploring a non-dialogical EEE. Expansive circuitry, in other words, can actually promote circularity and insularity, a pair of characteristics that actively mask an EEE's ideological moorings.

Identificatory Subjugation

Subjugation is a danger of electronic environments, whether or not they are intended to be educational. Because of their self-confirming charac-

ter, the heart of non-dialogical EEEs is "identificatory subjugation," a phenomenon that is also at the heart of the privatization of culture. From a psychoanalytic perspective, "identification" is "the process through which the subject assimilates aspects of others (objects) and constitutes its personality from the resulting products" (Harre and Lamb 86). In a section of *Rhetoric of Motives* entitled "Ingenious and Cunning Identifications," Kenneth Burke singles out "the persuasiveness of false or inadequate terms which may not be directly imposed upon us from without [as in the case of interpellations], but which we impose upon ourselves, in varying degrees of deliberateness and unawareness, through motives indeterminately self-protective and/or suicidal" (559). In considering Burke's view of cunning identifications, we might also recall that

An identification is not effected with the totality of another person or object but with some specific aspect of the person's behavior in a very specific context. The aspects of the individual's behavior that are selected for purposes of identification are congruent with or correspond to certain specific drive needs of the individual. These may relate primarily to fulfillment of wishes, to ego's purposes of defenses, or to superego efforts directed toward self-punishment. (Arrow 137)

In other words, we usually identify not with persons but with their functions and characteristics—for example, "programmer," "critic," or "scholar" (functions) and "generous," "methodical," "overbearing," "curious" (characteristics). In an electronic environment, users tend to identify with the functions and characteristics built into the software as part of a process best likened to a circuit—a circuit of subject positions. To understand this process of identificatory subjugation, let us return for a moment to the once-futuristic application with which we began.

NewsPeek is a program that collects and organizes data from various multimedia sources. The data available in the various databanks from which *NewsPeek* gathers the "micro-texts" presented to the viewer can be thought of as analogous to the various signs that are elements of any cultural text. The user of *NewsPeek* constitutes the "macro-text" of her personalized newspaper by assembling these "micro-texts." To put it another way, each *NewsPeek* user constructs his or her own customized multimedia newspaper by assembling available media blocks according to the user's specified and tracked preferences. Similarly, users of *CultPeeks*, in constituting their personal anthologies of cultural texts, constitute their own histories of the cultures they are studying. Granted, they must use the *CultPeek* program itself and thus are subjected to the

cultural formations implicit in the *CultPeek* program, but nonetheless, within those parameters, they create their own collections, which are simultaneously historicocultural meanings. The process parallels the way a reader constitutes any cultural text but is much greater in its definitive (that is, meaning-making) scope. Whereas a novel's reader manufactures that text's meaning, *CultPeek* users manufacture a meaning for an entire culture or cultural milieu.

Take, for example, the ways in which a student, let's call him Walter again, might be self-absorbed in reading a new text with a non-dialogical program in the *CultPeek* mode. Let's say he reads Alice Walker's *The Color Purple* for the first time. Because he saw Steven Spielberg's film, Walter sentimentalizes the novel. Moreover, he cannot get the image of a slimmer Oprah Winfrey out of his imagination and it interferes with his constitution of the character of Sofia."

In the traditional classroom, the role private associations play in the way Walter perceives the text in relation to its historical contexts has to be negotiated in terms of its relationship to the ways in which other student readers have constituted the novel in their readings. In a book-centered classroom, interpretive strategies are evolved by interpretive communities. These communities depend for their existence upon the development of a particular history of literature from which they make sense of the text under consideration. The conventions by which a given text is made meaningful come from shared cultural histories. The same is true of dialogical EEEs. In the *Lit/CultPeek* and other non-dialogical EEEs to which we have called attention, however, users privately and singly constitute the contexts within which texts make sense.

In such situations, subjects are formed through self-absorption. Many people who come to a computer with trepidation soon discover that, once they learn the software, computing can be enjoyed. Even relative newcomers to computing often describe the experience of playing a game or surfing the net and suddenly realizing that they have lost track of time. In short, playing in electronic educational environments is absorbing work."- This, ironically, can be a problem: working in non-dialogical EEEs encourages users to "absorb" hybrid subjectivities, partly imposed by the interface (and the database behind it), and partly from the user's developing circuitous subjectivity.

This identificatory subjugation—really just part of the process of becoming a circuitous subject—can be both highly compelling and isolating. It is the condition of users identifying with their own creations of "the other" as a projection of their own interests and desires. When

Walter creates a literary "history" around the figure of James Agee by investigating persons, places, and topics that have captured his interest as he browsed the database, his view of southern culture—woven from the fabric of his own desires for literature and shaped by its potential for his self-expression—is the view the multimedia database allows him. In this process, persons position themselves in narcissistic identifications to which they then are subjugated.

All EEEs—dialogical or not—teach users to behave in certain ways, of course. Non-dialogical EEEs, however, have no built-in community, a group of people who will provide "reality checks" for each other. This inherent problem with non-dialogical EEEs is not insurmountable. As with many technologies that have mixed sociocultural effects, circuitous subjectivity and identificatory subjugation can be considerably ameliorated through "subjectivity consciousness" and critique. Users (and people who work with users—for instance, teachers) can intervene in the accidental education of circuitous subjects by interrogating the circuits they've formed and the logics that they've constructed. This critique can effectively begin with the realization that EEEs always catalyze the kinds of interpellative processes we've discussed so far. Critique, in other words, is the only remedy to the self-absorption that non-dialogical electronic educational environments encourage.

Before we consider how CultPeeks are governed not only by space but also by time, we want to make one final observation about the social implications of computer programs that foster circuitous subjectivities. In our customary university habitats, when one shifts from teacher to researcher to typist, one usually walks from the classroom to the library to the office or study. In each locale, this university subject behaves differently. In an electronic environment, however, there is no sense of locale changing when subject positions change. In an electronic environment, the differences among subject positions are virtually invisible and are therefore experienced as the same. What Richard Lanham calls the "unsubstantiality" of the "electronic word" results in blurred subject positions. When persons first enter a computer world, they are not familiar with the options available to them and thus are likely to accept the role assigned to them in the program as normal. They do not notice when they become secretaries—or ambassadors—to themselves. If a professor switched positions with a secretary in the customary work environment, it would be a widely noted event. At the keyboard, however, the same change in subject positions goes unnoticed.

The process of self-absorption and privatization that we have tried to describe in this section does not stop at the boundary of the specialized subject. Subject positions in non-dialogical electronic educational environments appear in continuous *time maps*, our term for the momentous ways in which users of CultPeek-type databases create particular histories as powerful as, if not yet as widespread, the mass media's creation of Middle Eastern cultures or Korean geography or the 1960s.

Time Maps

One problem with an electronic cultural history developed from non-dialogical electronic educational environments (for example, CultPeek-type databases) is the potential such technologies have for the phantasmization of the world and its history. By *phantasmization*, we mean the extent to which the world could become a private phantasm of the database user. Imagine an image of a world developed from television programs. Images from *Leave it to Beaver* map "the family." Images of *Cosby* map African-Americans. Images of terrorists map Iraqis while images of Rambo-esque white men map patriotism. These images could easily form a coherent mind-map of the world, and most teachers have likely encountered students who manifest such mass-media produced mind-maps: geography assembled from images on CNN; the past from TV network docudramas; the future from sci-fi movies and *Wired* magazine. All of these elements selectively and idiosyncratically combine to map out a personal worldview that encompasses both space and time.

To recap: we have been speaking of electronic anthologies, histories, and narratological experiences of particular space/times in what we have termed the "Peek" mode. Imagine now what a more extended history, a WorldPeek, might look like. In imagining that extended history, be guided by your sense of what the sixties, as an historical period in the U.S., looks like in the nostalgic and fretful return to that period in images that have populated U.S. television screens. Think of films like *The Big Chill*, newsreels of the Kennedy family, images of hippies on crime shows of the period. At present, historical data includes official records, personal memorabilia, literature and art from the period, and so on. A non-dialogical electronic educational environment's databank would be similarly constructed. In WorldPeeks, these databanks will be searched by students to form multimedia docudramas; indeed, programs like *Macromedia Flash* and *Director*, combined with image and MP3 search engines, are already making such presentations possible. Such docu-

ments will be construed, at least by some, as evidence of historical events on a parallel with the ways some network news programs docudramatize events they have not actually filmed." A student using a WorldPeek databank will not differ much from Stephen Dedalus in his spiral view of the world: me: Dublin: Ireland: the world. Spheres within spheres. A student or a teacher searching the history (possibly now quite literally a "His Story") database will likely pursue connections that are "of interest" to him. World Peek users would be called forth as circuitous subjects by following personal linkages through historical databanks. Moreover, they will be the very circuitous subjects to which they subject themselves. They will, in effect, invent themselves—an electronic form of narcissism—out of data that has been put in place by someone else.

Returning to the historical dimension of Peeks, consider that they will not only be world maps, that is, sets of images mapped onto a wished-for world, but also time maps. Like geographic maps, time maps show relations of proximity; that is, they suggest the temporal distance from one moment to another: U.S. slavery is an old crime against humanity, the U.S. war on Afghanistan a recent one. Also like geographic maps, time maps show relations of boundary; that is, they suggest temporal edges that mark one time as distant from another: the Harlem Renaissance is "different" from the Black Power Era.⁴ In combination, these bounded time maps begin to look like neighborhoods.

Physicists have taught us, of course, that space and time are connected and relative: U.S. slavery seems a recent crime when one knows that slavery was outlawed in England a century before the U.S. declared its independence from that country. The Harlem Renaissance and the Black Power Era seem more similar than different when both are understood as moments when African-Americans (primarily) were expending massive energies to overcome their exploitation and oppression. Spheres within shifting spheres.

The problem is that in a database, shifting spheres must become static, becoming instead categories subgrouped under categories. The dynamism of narrative history is de-animated in order to be categorized into fields, records, and tables. Users of non-dialogical EEEs built upon such databases naturally breathe new life into these limbs of history, but the revived product is cheap. Emerging electronic cultural histories (for example, Susan E. Gallagher's *Don't Look Now*, a history of the idea of privacy in the U.S.) are made up of documentaries, not merely documents. Like most documentaries, they include varying points of view on an event that give way to circuits of identificatory positions.

Extrapolating from Gerald Graff's analysis of print-based educational environments predicts that conflict, one of the motors of narrative, will dissolve in CultPeeks into undecidabilities because conflicting assumptions will, at least in EEEs arranged to appear like "news" rather than "argument," be given approximately "equal status." The consequence of this mediated treatment of conflict is that the represented conflict itself will be submerged beneath the collaborated ideology of the user and the databases to which he or she has access. This is circuitous. The CultPeek historian might say: I understand all of these positions and they are all equal in merit, identifying with all of the contradictory positions simultaneously and claiming to be at peace with the dialectic of history.

A history of rhetoric as it exists in book culture, for example, is limited by a variety of publication restrictions. Not so, an electronic equivalent. A HistRhetPeek could easily draw from a database containing all known primary and secondary sources on rhetoric—a relatively small database as such archives go. The HistRhetPeek user would simply plot a route—perhaps thoughtfully, perhaps spontaneously—through the database that fits his or her vision of rhetorical history. In other words, histories developed from Peeks would be "routes"—that is, maps of time spent in the database automatically registered by the program and readily printed as a list. To paraphrase a Microsoft interface gimmick, such a route would be a "My HistRhetPeek."

Time maps like this, since they are plotted as individual histories of decisions, tend to make history writing into records of personal phantasy. Print histories, too, are phantasized, but electronic environments not only speed up the phantasy process, they also give it a graphic, realistic, and immersive life that is semiautonomous from the daydreamer." Thus a circuitous subject might not readily identify her or his integral self as being coherently—but illusorily—located in a self-constructed time map of a world because components of that world can be documented in a variety of more traditional (and more generally accepted) media: movies, timelines, and hard copy. Also troubling is that this daydreamer-turned-historian might not realize that subtle shifts had taken place in her or his role in the phantasm-world or that the functions of the subject positions in her or his customary world had also subtly changed. Our Walter, for example, might not notice how much more labored—in the Marxist sense—his work had become, how much more intellectually powerless and less creative his new work was turning into. He might not notice how his demeanor had changed. Unaccustomed to thinking of himself as an authoritarian, he might be

surprised to find how restrictive his computer-assisted history turned out to be. In short, Walter might wake up one day a complete **lv** different subject—and never know it.

Conclusion

We can probably halt the privatization of culture already underway by taking an active interest in how electronic educational environments are programmed. For example, EEEs can be designed as features of Local Area Networks and integrated with dialogical software to maintain the social (dialogical) dimension of cultural study. Here, then, lies the main difficulty—for now, at least: Who will program our future electronic educational environments? Will our hypertext books always be prerecorded? If we give over the programming of EEEs to educational businesses and their university cohorts, might we be condemning ourselves to becoming circuitous subjects whose self-absorption will have an alienating end?

These reflections underscore the motives for designing projects like **Alternative Educational Environment's ASCEND project** (www.ascend.comm.uic.edu); the Virtual Harlem, Virtual Montmartre, and Virtual Bronzeville Projects (www.caee.net); and the *Thirst Project*, which is aiming to use a commercial computer game engine to implement digital game-based learning in college classrooms (lgi.mesmernet.org). Marsha Kinder's "Labyrinth Project" (www.annenberglab.org/labyrinth) is also a useful example of what can be achieved through innovative database narratology, as are Lucy Petrovich's cooperative digital art installations (www.warts.arizona.edu/lucy/bio). Such projects offer useful guideposts to anyone committed to stemming the tide of non-dialogical electronic educational environments, and interested in developing more dialogical alternatives. In our experience, the best high-tech alternatives to circuitous subjects in their time maps begin with no technology at all. Rather, they begin in community, in developing subjectivity consciousness, and in the sensitivities enabled by the recrudescence of one's identity as they mature in electronic environments.

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Notes

I. The Committee on Virtual Reality Research and Development was convened in 1992 by the National Research Council "at the request of a consortium of federal government agencies: the Advanced Research Projects Agency, the Air Force Office of Scientific Research, the Human Research and Engineering Directorate of the Army Research Laboratory, the Crew Systems Directorate and the Human Resources Directorate of the Armstrong Laboratory, the Army Natick RD&E Center, the National Aeronautics and Space Administration, the National Science Foundation, the National Security Agency, and the Sandia National Laboratory" (Durlach and Mayor vii).

2. While one might take a different tack than the one we offer in this essay and argue that if it's okay for actors to perform roles based on scripts they have not written then it should be okay for users of EEEs to do the same, as this essay will elucidate, our response to such an argument would be that actors are conscious of the fact that they are performing roles invented by someone else, while users of EEEs often are not.

3. Such access is already available in certain parts of the U.S., as well as in many parts of Scandinavia and Japan.

4. The virtual dialectic, modeled as it is on the conceived parameters of the real-world, is therefore necessarily bound up with the real-world dialectic.

5. There are many comparable—and more realistic—roles that computer users inhabit: sys admin, moderator, and CyberAngel, are just a few.

6. Such functionaries can include particularly enthusiastic users who have added on to the virtual world in their free time.

7. Such virtual worlds probably should be regarded neither as fictional nor as real, but rather as existing on a continuum stretching between the end points of "common" and "uncommon" experience.

8. The most striking recent example is Jayson Blair, the *New York Times* journalist who was recently discovered to have invented many of the details of his stories.

9. This necessarily and simultaneously constitutes a form of surveillance. See Pogue; Harmon.

10. As a cognitive process, reading a printed text and reading in an EEE is not "fundamentally" different. However, as a "learned practice" or habit of reading, they differ considerably. See Sosnoski.

11. In *Teleteory*, Greg Ulmer proposes this very scenario, terming it a "Mystory" (rather than a "history"), as a curriculum for the future. See 44 ff.

12. A more detailed discussion of how electronic environments—particularly computer games—require different types of work can be found in McAllister, Ruggill, and Menchaca.

13. Perhaps the most common recent examples of such docudramatizations were the plethora of computer-generated animations of various aspects of the U.S. led wars in Afghanistan and Iraq. With the government's censorship of front

line coverage, many U.S. news organizations were forced to stitch together media clips provided to them by the Department of Defense (the result of which can reasonably be called "propaganda"), or if their budgets permitted, they generated 3D computer models of their stories' substance: ground force deployments, ordnance effects, weather and terrain problems, and so on. In both cases, such docudramatizations are fictions based on (purported) facts and passed off as very real looking "news."

14. Recent scholarship has begun to problematize the notion of "periodization," linking it to imperialism, colonialism, and hegemony. See, for example, Said, Harvey, and Spivak.

15. It may be argued that the privatization we describe vis-a-vis non-dialogical EEEs also takes place in book-oriented learning environments and that they are not different in kind but only in degree. We have two answers to this objection: first, while we agree that privatization occurs in both instances, we contend that the "speed" (degree) of the privatization differs; second, in some matters, speed changes the relationship between kind and degree. Cream, when whipped, has a very different effect on one's appetite for it. This is not a small matter. Our appetite for privatization is already keen. Finding privatization to be a good (the object of an appetite) would be a substantive change for many, and could arguably be termed a new form of "isolationism." Such a tendency is counter to the cross-cultural exchanges we appreciate and work to encourage.

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