Looking into my computer classroom these days produces feelings ranging from vertigo to exhilaration. When I open the door, strange students are there to greet me, and I pause at the sight, tremble at the thought, and wonder at the fact of them—these posthuman students of mine.

Theta student, sitting at eir computer workstation, has a phone pack on eir belt and a wireless headset on eir ear. Without breaking from work on eir writing assignment, e rings at the belt, presses a button on eir phone pack, says “Be home at six” and “Love you, too” at eir headset mouth-piece, and then turns off eir mouth by repressing eir phone pack belt button. Next to em, Gamma student senses my presence at the door and closes out of a well attended transvestite chat room. Momentarily chagrined, e tries to cover eir tracks by performing an Alta Vista search for keyword “Harvard.” Alta Vista knows better than to trust Gamma’s erudite impulse of the moment. The search engine processes both Gamma’s ivy league search term and eir transvestite cookie before coming back with text links to Harvard University and animated graphical links to Frederick’s of Hollywood. Rumor has it that Gamma waited until I took up position in front of the class before linking to Frederick’s and purchasing the establishment’s fabulous Harem Dancer Costume set—a four-piece ensemble that includes a veil, sequined headband, foamed shaped bra, and sheer pants with full back and built-in panty.

What a peculiar lot they are.

Small wonder then that I should feel as I do, like a teacher in a strange land peopled by creature students who profess to be human but who look and communicate like students from a distant planet. Still smaller wonder
that the sight of Alpha student should fix me as e does, causing me to stare out at em from my place before the class, a fascinated witness to the act of SoundWriting. E, like Theta, speaks at eir headset mouthpiece, but, unlike Theta, eir voice is tethered to a computer by a short patch cord. When Alpha speaks, eir microphone transducer turns eir sound wave energy into a continuous flow of electrical energy that eir voice-to-text computer program changes into strings of interrelated but disconnected and rearrangable digital information, which eir computer motherboard both stores in short term memory and reconstitutes as written words on a video screen. In other words, when Alpha speaks, Alpha SoundWrites, making text appear on eir computer monitor to the tune of one-hundred and eighty words per minute—as e does when e quotes me in a paper e is writing on contemporary composing processes. “According to Stanley Harrison,” e composes, “SoundWriting ‘challenges the idea of speech as ephemeral activity, shifts the site of composition from hand to mouth, and increases the efficiency with which we produce written text. To be sure, because posthuman SoundWriters use a supernormal process to produce text in increasingly supernormal amounts, we might reasonably expect an intense, if not supernormal, debate to hinge upon the exploits and adventures of posthuman SoundWriters.’”

And then there is Omega. E looks at me from behind a pair of “smart eyeglasses,” which e says connect to a computer e wears under eir shirt. E clicks a handheld control and manipulates a mouse rollerball. Of course, the mouse clicking and rolling might signify nothing, but Omega is probably either sending a picture of me via wireless eyeglass webcam to a remote display station or opening an e-mail that displays for reading on the underside of eir eyeglasses. In private conversation, Omega has claimed that eir tetherless system makes eir flesh body “smart”: “The kind of synergy that arises from constant connectivity” is particularly strong, e says, “because [human-machine] interaction is sustained” over a long period of time (Mann). E says, by way of example, that wearing “smart eyeglasses” while grocery shopping has transformed the way eir eyes process fruits and vegetables. “I stare, let’s say, at a cucumber display,” Omega continues, “and, somewhere else, my wife looks through my eyes, inspects the produce, and e-mails me with comments” (Mann).

Many times each class day, I look upon my uncanny students and see one incontrovertible fact: they are ceasing to be human beings in the traditional sense with increasing regularity. Whether they close quarters with hands-free cellphones, undergo subject position manufacture while
surfing the cooked internet (see Johnson-Eilola, "Control"), forge intermittent but nonetheless protracted connections with their computers in order to produce SoundWriting, or merge with tetherless "smart clothing" computing systems, my students fall or rush into posthuman cyborg states before my very eyes. When they take up the positions provided for them in my institution's computer classroom, they do—at different times and to varying degrees—what all good cyborgs do: they become homeostatic systems functioning unconsciously (see Clynes and Kline). In other words, they abandon their humanity for the privilege and burden of having powers and pressures beyond those of mere mortals.

This, however, is not the end of things.

What I also see is that my students, in becoming cyborgs, accede to being nothing less than "living commodities" in the literal sense of these words; that is, they put on their prostheses and, in so doing, transform themselves into manufactured, animate, disposable exchange values that must pay to maintain and/or upgrade "themselves" if they are to survive as cyborgs. *Theta* student, for example, becomes just another human being who talks on the telephone if e forgets to pay eir monthly cell phone bill. To be sure, what animates the living cyborg—the software or public utility that fuels the cyborg's prosthesis—comes to us in the form of a ticket item that seems only to fuse with the cyborg's flesh if the cyborg, or the cyborg's patron (for example, a college with an open computer lab), agrees to pay or, alternatively, to enter into an arrangement with capitalists for deferred payment. Indeed, a subtle arrangement for deferred payment accounts for the continued existence of *Gamma* student, my web-surfer in the harem outfit, whose free-linking, hypertextual subject position gets appropriated by capitalists who, for their part, use such things as Internet cookies to bind *Gamma*'s hyperlink movements to products, purchases, and consumption (see Johnson-Eilola). The cost of *Gamma*'s web surfing is regular exposure to user-triggered, user-specific hucksterism that theoretically results in a user-defined, user-purchased range of products and services.

When it comes to *Alpha* and *Omega*, the cyborg imperative to purchase the commodity self becomes intensified to the point of explosion. Both tethered and tetherless human/computer homeostatic systems transform unsuspecting computer users into network-ready, software-driven, hardware-supported, biological workstations. Even more, human/computer systems shift the electronic contact zone from the computer screen interface to the software-driven, hardware-supported nervous systems of biological workstations; undergo regularly scheduled
technological obsolescence; maintain their embodied cultural identity through a program of software and hardware upgrades; and, from the outset, exist as actual commodities that know they must continue to purchase themselves if they would sustain themselves as commodities with identities. Seen from this perspective, Alpha and Omega exemplify, with one exception, what Donna Haraway meant when she wrote, “Cyborg writing is about the power to survive, not on the basis of original innocence, but on the basis of seizing the tools to mark the world that marked them as other” (94). All I would add is that the power to survive, which is at the heart of cyborg writing, seems less about “seizing the tools” than about paying for the programs and program upgrades that constitute both the cyborg’s world (for example, Windows 3.1, Windows 95, Windows 98, Windows ME) and the cyborg’s identity (Dragon NaturallySpeaking, Microsoft Office Professional Edition). Simply put, Alpha and Omega must cease to exist if they ever lack money to pay for those components of their cyberselves that have a quantifiable exchange value.

Strange, indeed, to look upon beings that are both the commodities and end-users of a system that wants its posthuman products to think of themselves as human users and not as commodities. Strange, also, that I should be so affected by the sight of these living curiosities. They are still my students, after all. But something has changed, something fundamental, and I find myself grasping in vain for the conceptual tools that will, on the one hand, get me past my desire to walk into a classroom and see it populated by human computer users and, on the other, get me on with the task of helping these student commodities to mark the world that marked them as other. This much is certain: at a time when I need to acknowledge, if not appreciate, my students for the commodities they are, the open literature on computers and composition threatens to set in motion an unproductive nostalgia in need of correction—a nostalgia for bygone, if not illusory, days when teachers fought for the rights of “human” program-users, not posthuman “student-programs.”

Accordingly, my purpose here is to argue for a pedagogy of the posthuman that more completely meets the needs of those student writers we encounter in computer classrooms. Toward this end, I shall point out that the educational theorists of interface do offer critical approaches to the problem of computer writing, but they skew their proffered critical perspective by drawing impossible lines between human agents and their computerized instruments and environments when they suggest that critique of computer interface originates from points “outside” of tech-
nology or the human-computer connection. This perspective, my argu­
ment holds, contributes to an unproductive nostalgia for “the human”
because it supports composition theorists who would “pay attention to
technology” in order to become better “humanists” and serves as an
advocate for the technological underclasses, not for cyborg theorists who
would instruct writers faced with the challenge of becoming posthuman
cyborgs at the point of interface.

For the purposes of correcting the “humanist” error in critical
theories of interface, my essay will introduce the following proposition:
we fail to serve the needs of posthuman students whose subjectivities
emerge at the conjuncture of consumer culture and cyberspace and
emerge as commodities (that is, as disposable market, as opposed to
human, values) when we apply what Joseba Gabilondo calls the ideology
of “Man” to the cyborg problematic—that is, when we come at the
problem of computer-generated cyborg existence through the
phallogocentric understanding that First World nation-states produce the
democratic, middle-class, consumer, “Man” subject position as their first
order of business. The effect of this observation will be to support my
claim that the sudden appearance of commodity students requires that we
produce critique that both gauges the pressures and limits that define
commodity, or cyborg, subjectivity and, just as importantly, resists the
distorting influence of compositionist nostalgia for the human. Coming
at the problem of cyborg writing from this vantage will reveal that cyborg
writers, in the first instance, are born into the nonsociety of ignorant, self­
involved cyborg writers whose first order of business is to purchase,
master, dispose of, and upgrade their prosthetic selves—in other words,
to acclimate themselves to a commodity-driven, blissful tyranny of the
subject-self over the object-self that exists to be bought, used, and
destroyed at the point of upgrade. With this in mind, I will argue that
critically oriented compositionists must accept the power of consumer
culture and cyberculture to transform human life into a commodity fetish,
relinquish the ideology of “Man” when faced with the task of teaching
cyborg writers, and embrace posthuman critical pedagogy in hopes of
demystifying cyborg-filled computer classrooms and, more importantly,
designing curricula suited to the needs of our posthuman students.
Consequently, we need to begin immediately to do such things as teach
student cyborg writers how to intervene in their subject formation at the
level of software so that they might learn to participate in the counter­
hegemonic manufacture of a cyborg self that is not, at one and the same
time, a living commodity.
Humanist Theorists
To their credit, theorists like Joel Haefner, Johndan Johnson-Eilola, Cynthia Selfe, and Richard Selfe bring a critical attitude to bear on the problem of interface. As a group, they stress, for example, that subjectivist individualism (the idea that computer users shape their environments according to their creative will) is inadequate to the task of accounting for language origins and practices in an era dominated by politically articulated computer writing spaces. Toward this end, they recommend that teachers identify the cultural metaphors and premises that shape the computer interface and the computer-user’s experience, believing that close analysis of the computer interface will not only help educators perceive the effects of “domination and colonialism associated with computer use” but also empower educators to “establish a new discursive territory within which to understand the relationships between technology and education” (Selfe and Selfe 482). The educational theorists of interface also suggest that we take an active hand in customizing the programs we use in our composition classes because Structured Programming protocol—the heart of ubiquitous American computer program code, interfaces, and operating systems—is itself shaped by what Haefner calls “the profiteering imperative and the hierarchical structure of corporate America” (325). Finally, these theorists express concern about our automatic preference for first-person and argumentative essays, as well as literature and literary criticism, arguing that this preference blinds us to the power of functional hypertexts (online help, for example) to underwrite composing practices that value transparency, efficiency, and performativity over contingency, dissensus, and negotiation (Johnson-Eilola, Nostalgia). As a group, the theorists of interface advocate politically oriented critical literacy of computer technology, as opposed to task-oriented functional literacy, and they seem entirely unmoved by nostalgia for challenges associated with teaching in the pre-computer age.

At the same time, however, these theorists lose their edge where they succumb to an uncritical, ultimately disempowering nostalgia for a “humanity” that not only exists “outside of technology” but that also gains perspective on and effectively alters key points “inside of technology.” While they are correct to protect against excesses in the direction of subjectivist individualism, the theorists of interface, interpellated by the ideology of “Man,” make an understandable albeit unfortunate error in guarding against impulses that run in the opposite direction—that is, toward theorizing that stresses the power of commercially organized and
proliferated computer writing spaces to penetrate and utterly transform the computer user at the point of interface. Because educational theorists of interface need to believe that writers, writing teachers, and writing theorists should "use the technology to question the hegemonic tendencies of disciplinarity and discourse communities" (Johnson-Eilola, Nostalgic 28; emphasis added), they permit themselves to draw impossible lines between human agents and their computerized instruments and environments for the purpose of allowing persons to stand back from interface, to read interface critically, and to reengage with interface from the position of critical literacy and with the effect of altering the political trajectory of interface. Toward this end, they deploy the "interface as contact zone" metaphor with a certain frequency, and they dream of opening and privileging a nonexistent outside postcolonial space from which to bring the ideology of "Man" to bear on the inside "Cyborg" problematic.

Yet, the truth is with cyborg theorist Joseba Gabilondo, who observes that "there is no such thing/subject as a 'postcolonial cyborg,' because postcolonial subject positions are always left outside cyberspace" (424; emphasis added). By way of explanation, he writes that "the production of 'Man' [in the economically privileged First World] has given way to the reproduction and simulation of 'cyborgs,' and the technologies and apparatuses of the nation-state that produce the democratic, middle-class, consuming 'Man' have been transferred to the peripheries of the First World and to the Third World" (424). From this perspective, members of the set "Man" are either present in the Third World, where access to computers is a chimera; or prevalent on the peripheries of the First World, where access to computers is restricted or denied; but they are never members of the set "Cyborg," which includes no members of the set "Man," because interface transforms persons into cyborgs. To insist that human beings are not fundamentally transformed at points of human-computer conjuncture misses the point of interface: intimacy with computers takes hold of fleshy beings, typically born into this world as use-values who spend their lives fending off cultural pressures to become exchange-values, and changes them into cyborgs, borne by interface into a state of being an exchange-value that might, through sustained effort and cunning, become and then die as a use-value.

Bringing the ideology of "Man" to bear on the "Cyborg" problematic produces some rather interesting effects on behalf of the technological underclasses but contributes nothing to a philosophy that would help cyborgs (e)merge with(in) a giving, sympathetic, and self-controlled
society of cyborgs that both values its citizens and, also, treats "Man," or being-prior-to-interface, with respect. This is what comes across when we read, from a heretofore undefined cyborg perspective, articles like Cynthia Selfe's "Technology and Literacy: A Story about the Perils of Not Paying Attention." She appeals to the ideology of "Man" where she argues that the fight against the continuation of racism and poverty through the unequal distribution of technology is a battleground for humanists. The problem, she makes clear, is that "in our educational system, and in the culture that this system reflects, computers continue to be distributed differentially along the related axes of race and socioeconomic status and this distribution contributes to ongoing patterns of racism and to the continuation of poverty" (420). The solution to the problem, which asks compositionists to pay attention to technology, is slow in coming because technology is "either boring or frightening to most humanists" (412; emphasis added). She suggests, shortly thereafter, that as humanists we prefer things to be arranged so that we don't have to pay attention to machines because "computer technology, when it is too much in our face (as an unfamiliar technology generally is), can suggest a kind of cultural strangeness that is off-putting" (413). Nonetheless, she believes that compositionists must take it upon themselves to merge "the technological and the humanist perspectives" and, in so doing, empower themselves to advocate "free access to computers for citizens at the poverty level and citizens of color" (434; emphasis added). By paying attention to technology, she concludes, we may "learn lessons about becoming better humanists, as well" (435, emphasis added).

Her perspective speaks to computers and composition scholars like Jeffery Grabill who argue, for example, that compositionists need to "work on access in nonschool settings" in order to prevent "the technopoor" from "missing something" (313). Clearly, this inside/outside approach to cyborg writing champions the cause of "Man" on the peripheries of the First World. Bearing this in mind, we need to acknowledge that the critical, political program advocated by the likes of Grabill, Johnson-Eilola, Haefner, Selfe and Selfe proceeds from the mistaken assumption that postcolonial "humanism" is consonant with efforts to educate posthuman cyborgs. We need to accept that cyborg students, like their human counterparts, need the help of teachers who will address themselves to the particular needs of their students. Cyborgs materialize for the duration of interface and demand an education appropriate to the needs of cyborgs, even if this means that their teachers fail to advance the cause of "Man." Only when interface, or techno-human fusion, is broken and
“Man,” with the sense memory of “Cyborg,” reappears does the need for a pedagogy of the human reappear. These appear to be the “facts” and, as such, serve as a warning against those who would succumb to the all-too-human practice of treating cyborgs as human correlatives and humanizing educational protocols as a matter of unstated policy.

Commodity Students
But how do we make this change? How do we learn to see our students for what they are? How do we develop appropriate strategies for teaching the cyborgs that increasingly populate our classrooms? In the first place, we need to understand why pedagogy that is steeped in race, gender, and class analysis but that is not also grounded in class-inflected cyborg analysis must fail students who require a pedagogy of the posthuman. Toward this end, we need to accept that the experiential categories race, class, and gender correspond to a mode of production that manufactures human, as opposed to posthuman, subjectivity as its primary order of business. In The German Ideology, Marx and Engels provide an overview of the process that produces human subjectivity. The isolated human body, imagined for the moment as existing outside of culture, has needs. The satisfaction of the body’s first need leads to new needs and, as such, constitutes the first historical act. “The third circumstance,” Marx and Engels write, “which, from the very outset, enters into historical development, is that men, who daily remake their own life, begin to make other men” (49). Labor and procreation, or the production of life, result in the first mode of production, for bodies in collective are quick to discover the necessity of co-operation. The need to improve co-operation through communication, of course, is what leads to language acquisition, what Marx and Engels call “practical consciousness,” or language that “only arises from the need, the necessity, of intercourse with other men” (51). Of obvious significance, human subjectivity emerges at this juncture as the result of the several divisions of labor: sexual labor (gender), physical and mental labor (class), and cultural labor (race). Indeed, the experiential categories race, class, and gender, which are the products of low- or no-tech embodied human interaction, are bound inextricably to that state of practical consciousness that Gabilondo calls “Man.”

In contrast, the cyborg subjectivity that shows up in computer writing centers appears only at the technologically advanced stage of production when it becomes possible for human beings—as the products of established systems of race, class, and gender identification—to co-operate in the production, distribution, and reproduction of “intelligence amplify-
ing" prostheses that both network the body and inscribe the body with semiotic traces of race, class, and gender distinctions that exist for cyborgs as powerful elements of the commodity prosthetic, as opposed to the product of lived human relations. In other words, culturally articulated human subjects decide to wear prostheses that have the effect of birthing people out of their humanity and into a superstructural zone that conflates the forces and relations of production in the cyborg prostheses and typically sells these prostheses on the open market, indicating that cyborg subjectivity materializes at the conjuncture of cyberspace and consumer culture. That is to say, cyborg subjectivity begins when the self—or purchasing agent for the self—buys the tools that are to become indistinguishable from self and, in so doing, adopts a proprietary attitude toward the self as chattel—the logical result of a cultural system of production that encourages cyborgs to sell, buy, and become the self that is a market value and to have no moral regard for or sustained relation to the self, which becomes garbage at the moment of upgrade, the refuse of a life manufactured, sold, bought, and discarded.

Strictly speaking, race, class, and gender analyses, each based on a division of human labor, will fail to penetrate the cyborg subjectivity and, therefore, fail to produce a posthuman pedagogy. These modes of critical analysis, and others, will yet prove indispensable to the cyborg scholar, critic, and teacher because cyberspace is already fully raced, classed, gendered, aged, nationed, and so on. Yet, if our tools of analysis are to produce critique that escapes the pull of nostalgia for the human, they need to be rearticulated to address the problem represented by embodied subjectivities that are both mortal and commodity, both relation of production and material of production, both subject and object. For this to happen, we need to add at least one more element to our analysis of cyborg subjectivity as a subject/object conflation. We must ask ourselves, "What are the pressures and limits that define the subject/object subjectivity—including its potential for sustained, collective, counter-hegemonic action—when it appears as a consumable sign within the sign system of objects that manufacturers and advertising agencies produce in order to stimulate and control sales of the disposable self to the disposable self?"

Because interface transforms human beings, under typical circumstances, into self-consuming commodities, we need the help of a philosopher of consumption who is guilty of the kind of totalizing, deterministic, antisocial theorizing that holds small appeal for computers and composition theorists and does, in fact, overstep its bounds when applied to
human culture. Jean Baudrillard is particularly useful here, even though his theories of hyper-reality, which depend on such ideas as "the implosion of the social," become unstable when applied to human communities. Statements to the effect that resistance to advertising is futile in a world where the social is a simulation crumble when we remember that human beings still participate, however minimally, in locally generated communal relationships (primary groups like family, church, school, and community watch) that deflect or inflect the influences of advertising on individual subjectivity. However, Baudrillard appears to have much to say to teachers of computer-based writing, when we consider that a commercial relationship between and for the continued existence of animate products results in cyborg subjectivity, and that cyborg subjectivity is consonant with commercial influence because cyborgs are borne by interface into direct relations with "providers," not primary social groups, who/that exist to deliver, not deflect, one message: become, dispose, and upgrade. For us, there is no resisting Baudrillard, not when newly self-purchased cyborgs come packaged to accept "the providers message"—that is, when they enter the human-computer world in a state of ignorant, self-involved isolation that amounts to an absence of relation; when they emerge as first-time cyborgs who do not know how to turn themselves on or off, let alone how to operate an e-mail client, access and establish Usenet newsgroups, participate in and host IRC, or contribute to and administrate W3 bulletin boards. For their part, cyborgs materialize as inefficient users inside an absent social order, a nonsociety of cyborgs, and this renders them, even as it leaves them, unprotected from the sale of themselves to themselves.

Because the cyborg depends upon self-consumption for its existence and is, therefore, vulnerable to the dictates of consumer society, we need to ask with Baudrillard, What is the experience of life within consumer culture at its most extreme? To answer this question is to see the cyborg's soul, and to know that posthuman pedagogy must make provision for teaching subjects that begin by being marked as other, even from and to themselves.

Many people still believe that the words "consumer society" refer to a society of consumers who participate in a self-directed activity of commodity consumption. Baudrillard, however, argues convincingly that "the ideology of competition, which . . . was previously the golden rule of production, has now been transferred entirely to the domain of consumption" (11). "A fixed class of "normal" consumers," he continues, "has been created that coincides with the whole population," and, as
importantly, capitalists have developed a strategy for controlling these consumers that includes materializing the superego; stimulating the id, or deep drives; and sanctioning/censuring consumers to act "freely" on their deep drives, or desires, in order to be different from everyone else through consumption and exactly like everyone else through consumption ("I ran Windows 98. Now I run Windows ME." "I ran OS. Now I run OS/2 Warp." "I am different. I am the same.").

The key here is in the materializing of the superego. Ordinarily, the superego is immaterial and exists because individuals participate in its production through syntactic linguistic exchange (speech acts) with members of a shared community. These syntactic exchanges give rise to, among other things, the superego, or unconscious consciousness, that may be defined in part as the internalized set of asyntactic expressions that defines (enables/limits) what speakers might say or think comfortably at any given time. The materialization of the superego through advertising subverts this process by providing consumers with a set of asyntactic expressions (Pentium I, Dreamweaver HTML editor, DSL) that emerges without the participation of the consumer. Because the consumer does not produce this set of expressions through syntactical exchanges, the materialized superego is always inappropriate to and incapable of integrating with the self. More importantly, the available set of expressions, which corresponds to related sets of products and recommended feelings, has no meaning for the consumer except insofar as it stimulates the consumer's desires (Chevy, Ram Tough—BuyIT) and then breeds dissatisfaction in the consumer in order to produce a new set of desires (Chevy PT Cruiser, Retro, Cool—BuyIT). Rather than exalting intelligence and wisdom, the authors of this system seem to champion the "ideology of personal fulfillment," the "triumphant illogicality of drives cleansed of guilt"—that is, the regression by adults into a series of unrelated, albeit reproducible, infantile desires for and dissatisfactions with products (18).

The impact of consumer culture on cyborg subjectivity, which exists within advertising's system of salable object relations as a disposable exchange value, is both profound and unique to cyborg culture. Born into an absence of relation that is all about the purchasing of materials necessary to resolve a fundamental inadequacy in the self, the cyborg quickly learns that the self that will or should endure can never be bought. Cyborg subject positions are manufactured and sold with the intent of creating cyborgs who not only look upon the self as an object that must be re-consumed on a regular basis but, also, move into a relation of
blissful tyranny over the self that exists to be bought, used, and destroyed. Cyberspace, given this arrangement, becomes something of a showroom display case filled with id-driven, self-involved, self-destructive subjectivities that are attractive to consumers because they are neither produced to forge meaningful, politically active communities on the Web nor produced to be self-aware of the fact that the battle for profits has expanded to include the cyborg's self-financed war upon the self.

Each is made to destroy, buy, destroy, buy, destroy the self, which exists to be different from but identical to other cyborgs who destroy, buy, destroy, buy, destroy the self.

**Posthuman Pedagogy**

What precisely does this mean to one whose livelihood depends upon teaching cyborg writers to compose? If I am correct in my analysis of cyborg subjectivity, then compositionists will need to do more than consider the influence of computer-based writing tools and environments on the processes and practices of human literacy. We will need to go beyond thinking, for example, that the computer interface is a semiotic contact zone that privileges and empowers male, caucasian, American, corporate, human identity, even as it supports the creation of a technological underclass that includes disproportionate numbers of African Americans, women, and citizens of the Third World. Instead, computer writing specialists should move to understand, in the first place, that the mere fact of computer use renders the computer writer a cyborg, which is not merely a postmodern subjectivity but also the hegemonic, albeit self-destructive, subject position that orders cyberspace. Thereafter, they should embrace the fact that while “humanistic” composition research correctly registers that online experiences lead to the development of “heterotopia, spaces to be negotiated and transformed as a result of the conflict that arises within them” (Blair 318), and then inflects this understanding from the perspective of gender (Sullivan), sexual orientation (Comstock and Addison), race (Taylor), class (Whitaker and Hill), second language acquisition (Belcher), and physical disability (Buckley), “humanistic” compositionists cannot help commodity students address their cyborg-specific problems and create counter-hegemonic cyborg heterotopia without the aid of a posthuman pedagogy that stands upon this understanding: chances for radically democratic cyborg writing wane to the degree that cyborg writing spaces are populated by animate-product subjectivities that have yet to critique and rearticulate the cyborg prob-
lematic, or, life as the salable, self-destructive conflation of posthuman subject/object relations.

To be sure, even the gross particulars of this proposed posthuman pedagogy are unknown to us. Yet, the necessity of posthuman pedagogy for the improvement of commodity students requires us to speculate on the shape it might take, the directions it might lead. I suggest that computer writing specialists can take a meaningful step in the direction of posthuman pedagogy by opening the doors on their classrooms, looking in on their commodified cyber-students, and seeing that commodity students are flush with the desire to buy and destroy themselves, even as they are humiliated in this regard because they cannot spend the $2,313.80 it would cost to build, but not upgrade, a competent cyborg writer (see Table 1).

A shortened list of the writing tools that our students need “to become” before they leave college justifies the estimated cost and makes daunting Haraway’s characterization of cyborg writing as survival on “the basis of seizing the tools to mark the world that marked them as other.” Obviously, cyborg writers need to own and operate a word processing prosthesis (that is, a program) that saves text in the most widely supported word processing format (.doc). But can they afford this prosthetic device and the others they will need to complete themselves? They will want to use both mind mapping and tree outlining prostheses when developing and organizing their texts. They will also need a portable document file distiller (.pdf) so they can open and print files on any computer without producing changes in the document’s original layout and design. Next, commodity students will require both a file compression and file splitting utility, for times when large files must either be shrunk down or split up and distributed over many disks. They will want to enhance their oral presentations with slideshows saved in the popular PowerPoint format (.ppt). Then, too, students will need to learn how to compose and maintain databases, if only so they can create and update a bibliographic database. Those serious about group writing will want to establish an Internet Relay Chat (IRC) room and use an IRC client to log group chat, send private messages, and exchange files in “real time.” Being able to create virtual network interfaces (networking personal computers via the Internet) will prove helpful because writers on virtual networks can view and edit documents at the same time, connect to and write on home computers while on location, and provide direct technical support to writing group partners with computer troubles. Because students will want to produce help documents that will make
computer documents and environments more accessible to the public, they will want to procure and learn to use a good HELP editor. All of our students should design and draft extensive academic Web sites that, on the one hand, comply with the current HTML standard and, on the other, support students in research and writing that happens while away from home; therefore, they will need to have and know how to use a high powered HTML editor with strong support for cascading style sheets. The need to program internet servers to accept HTML files and, thereafter, to upload files to the world wide Web makes a working knowledge of

### Table 1
Costs of Establishing Minimal Cyborg Writer Competence

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<tr>
<th>Competency</th>
<th>Program</th>
<th>Cost</th>
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</table>

telnet and FTP clients essential. Of course, cyborg writers will want to send e-mail and participate in Usenet news groups, so they will need an e-mail client and newsreader. Increasingly pressured to conduct effective internet research, student commodities will want to acquire both a desktop searchbot and an offline browser, so they can query search engines and save their search results and, also, download entire Web sites for extended offline study. Finally, the frequency with which cyborg writers transfer files during group work necessitates that they procure reliable anti-virus protection.

By all outward appearances, the cost of becoming a competent cyborg writer exceeds the immediate grasp of most commodity students. And this is to the advantage of posthuman pedagogy, which demands that we exploit our students' inability to satisfy themselves through self-consumption, doing what we can to drive a wedge between the cyborg and the cyborg's consuming lust for self. We need to make our students aware, in their moment of financial weakness, that they need not purchase very much of themselves at all and, also, that cyborg writers may join with others of their kind in, for example, Usenet newsgroups that promote an alternative to commercial cyberspace. Our students must know that they can satisfy the cyborg's real need for software without activating the cyborg's infantile desire for disposable happiness through self-consumption. Indeed, compositionists who take time to become familiar with both Usenet freeware culture and the art of freeware self-fashioning—as opposed to pay, ad, and spyware self-fashioning—can advance their cyber-students toward this next understanding: living commodities should write their cyborg bodies with freeware software alternatives where possible, if only because this will help them to imagine and compose alternatives to the hegemonic subject position that the ideology of multinational capitalism privileges.

But how do we do this? How should we teach a living commodity to compose the self in opposition to the self? My immediate recommendation would be to create projects that force cyborg writers to do two things. First, they must confront their status as consumers who buy, use, and destroy the self in a never-ending cycle of self-sacrifice that has no purpose except to stimulate the self to buy the self. Second, students need to participate in newsgroups, like alt.comp.freeware, for the purpose of working with others to establish freeware collectives that will, among other things, satisfy the cyborg's real need for advanced writing programs.

Significantly, such projects will teach cyborg student writers to
upgrade themselves at a cost to them of $0.00 (see Table 2). Even more importantly, such projects should help cyber-students to understand that the conjuncture of cyberspace and consumer culture manufactures self-consuming subject/object commodities, and not human beings; that cyborgs—cultural fictions that they are—cannot be made powerful by

Table 2
Actual Costs of Establishing Minimal Cyborg Writer Competence

<table>
<thead>
<tr>
<th>Competency</th>
<th>Program</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• MS Office Compatible Document Database, Spreadsheet, Slideshow, Desktop Publisher</td>
<td>Open Office</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Idea Generator</td>
<td>MindMan Personal</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Outliner</td>
<td>KeyNote</td>
<td>$0.00</td>
</tr>
<tr>
<td>• HTML Editor</td>
<td>1st Page 2000</td>
<td>$0.00</td>
</tr>
<tr>
<td>• CSS Editor</td>
<td>Balthisar</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Portable Document File Creator</td>
<td>GhostScript, Ghostview</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Anti-Virus Protection</td>
<td>AVG Anti-Virus</td>
<td>$0.00</td>
</tr>
<tr>
<td>• IRC</td>
<td>XiRCON</td>
<td>$0.00</td>
</tr>
<tr>
<td>• File Compressor</td>
<td>Ultimate Zip</td>
<td>$0.00</td>
</tr>
<tr>
<td>• File Splitter</td>
<td>Chainsaw</td>
<td>$0.00</td>
</tr>
<tr>
<td>• FTP</td>
<td>Max-FTP</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Help Editor</td>
<td>Microsoft HTML Help</td>
<td>$0.00</td>
</tr>
<tr>
<td></td>
<td>Workshop</td>
<td></td>
</tr>
<tr>
<td>• Offline Browser</td>
<td>WinHTTrack</td>
<td>$0.00</td>
</tr>
<tr>
<td>• Searchbot</td>
<td>FirstStop WebSearch</td>
<td>$0.00</td>
</tr>
<tr>
<td>• E-mail Client, Newsreader, Telnet</td>
<td>Pegasus Mail, X-News, EasyTerm</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$0.00</strong></td>
</tr>
</tbody>
</table>

Source: Harrison Center Supply Closet <http://helios.acomp.usf.edu/~sharriso/supply-closet/index.html> and the writers/readers of the Usenet newsgroup alt.comp.freeware
appeals, implied or stated, to the idea that *human beings* should be agents in the creation of their computer tools/environments; and, finally, that others of their own kind will join with them in common struggle to seize the tools to mark the world that marked them as other. Indeed, students in posthuman classrooms, when they have done with their work, will have perceived, however dimly, a political alternative to the present version of life in cyberspace. They will have participated in the counter-hegemonic manufacture of a cyborg self that is still a subject/object relation but that is not, at one and the same time, a commodity.

It would be too much to say that projects such as the one alluded to above will stand any chance of redirecting the trajectory of cyborg culture on its current path through a morass of self-acquisition, self-absorption and self-destruction. Yet, a pedagogy of the posthuman should awaken living commodities to the truth that capital has finally succeeded in turning life itself into a commodity fetish and, also, to the unlikely possibility that cyborgs will someday exist as something other than the manufacturers of the self that exists as slave to the self that lives in political isolation from selves who would free the self from the manufacturers of the self if only they were free.

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**Notes**

1. Those who MOO will no doubt be familiar with the terms e, em, eir, eirs, emself—namely, the “Spivak” neuter gender pronoun sequence. For readers new to these terms, the Spivak pronouns supersede the more common alternative—s/he, him/her, his/her, his/hers, and (him/her)self—and are useful to writers who have become uncertain of their capacity to attach dual sex/gender identities to socially constituted subjects. I decided to use Spivak pronouns when discussing my students because, given their increasingly intimate relationship with technology, they often seem as much like ambiguously gendered posthuman biotech workstations as they do biologic men and women.

2. *Omega* is derived from descriptions, pictures, and accounts taken from the Web site of MIT wearable-computing-specialist Steve Mann: http://www.eecg.toronto.edu/~mann.

3. Other kinds of cyborgs, principally those derived from pharmaceutically driven biotech applications, may appear in computer writing centers, overlapping in the bodies of computer-tech cyborgs, but these biotech cyborgs should have little impact, at least in this analysis, on the formation of posthuman computer writing pedagogies.
Works Cited


