

The Narrative Construction of Cyberspace: Reading Neuromancer, Reading Cyberspace Debates

Author(s): Daniel Punday

Source: College English, Nov., 2000, Vol. 63, No. 2 (Nov., 2000), pp. 194-213

Published by: National Council of Teachers of English

Stable URL: https://www.jstor.org/stable/379040

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at https://about.jstor.org/terms



National Council of Teachers of English is collaborating with JSTOR to digitize, preserve and extend access to College English

# The Narrative Construction of Cyberspace: Reading *Neuromancer*, Reading Cyberspace Debates

## **Daniel Punday**

he Internet seems to have spawned a community with fundamentally new conditions for social interaction. As Shawn Wilbur notes,

"Virtual community" is certainly among the most used, and perhaps abused phrases in the literature of computer-mediated communication. This should come as no surprise. An increasing number of people are finding their lives touched by collectivities which have nothing to do with physical proximity. A space has opened up for something like community on computer networks, at a time when so many forms of "real life" community seem under attack. (5)

Where traditionally individuals have interacted with each other using face-to-face verbal and physical cues limited by their own physical and material conditions, cyber-space's conditions of interaction are much more constructed. Individuals can leave their physical characteristics undefined in some types of online communication or can create virtual identities for themselves in others. Many critics have seen this fluidity of identity as an inherent part of the value and power of this new communal space. In an influential early article about online culture, for example, Pavel Curtis describes men who adopt female identities online: "to some degree, they are interested in seeing 'how the other half lives,' what it feels like to be perceived as female in a community. From what I can tell, they can be quite successful at this" (273).

We have come recently to recognize, however, how profoundly conventional social practices shape this new noncorporeal space. When individuals define new identities in an online environment, they frequently rely on stereotypes built up in the real world or learned through mass media. Even when they seem to be experimenting with identities, critics have charged, individuals online most often are actually play-

**Daniel Punday** is Assistant Professor of English at Purdue University Calumet. He has discussed narrative and contemporary writing in journals such as *New Literary History, Genders*, and *Narrative*. He is currently at work on a book on the body in narrative theory.

College English, Volume 63, Number 2, November 2000

ing out conventional stories with easily recognizable roles for men and women, whites and minorities. Although many critics take this as a sign that the claims made about the liberatory potential of cyberdiscourse are mistaken, I argue in this article that precisely this intertextuality is what gives online discourse its radical potential. The concept of cyberspace itself, after all, is novelistic in origin. William Gibson has noted that when he invented the term "cyberspace" for his 1984 novel Neuromancer he did so as a way to solve specific narrative problems. Gibson remarks in an interview with Larry McCaffery, "When I arrived at the cy[b]erspace concept while I was writing 'Burning Chrome,' I could see right away it was resonant in a lot of different ways. By the time I was into Neuromancer, I recognized that it allowed for a lot of moves, because characters can be sucked into apparent realities-which means you can place them in any sort of setting or against any backdrop you want" (226). According to Gibson, the concept of cyberspace developed as a way of manipulating traditional narrative elements to produce new effects. In this essay I suggest that Gibson offers us a way to negotiate the conventional discursive elements used within online communication. Ultimately cyberspace discourse appears to be at its best not when it tries to minimize the effects of the conventional narratives out of which it is built, but instead when it exploits those discourses most fully to reveal their sources and conflicts.

## NARRATIVE AND SOCIAL CONTACT IN ONLINE COMMUNICATION

To see why cyberspace raises the hope of a fundamentally new kind of social space and very different ways of understanding human identity, let us consider the most extreme and perhaps most typically "cyberspatial" form of online interaction as an example: the participation of individuals in a MUD (multi-user dungeon) and MOO (MUD, object oriented). A MUD or a MOO is a computer program that allows many individuals, connected to that program through the Internet, to create "characters" and move simultaneously through a virtual "place." (Environments are usually called MUDs when they have a fantasy adventure theme and allow characters to become stronger and richer through virtual battles; MOOs are more open-ended, social MUDs that lack such concern for combat and power.) Such places may be as large as a galaxy of many worlds or as small as an individual house and essentially comprise a series of room descriptions. Here, for example, is a central room in the LambdaMOO:

## The Living Room

It is very bright, open, and airy here, with large plate-glass windows looking southward over the pool to the gardens beyond. On the north wall, there is a rough stonework fireplace. The east and west walls are almost completely covered with large, well-stocked bookcases. An exit in the northwest corner leads to the kitchen and, in a more northerly direction, to the entrance hall. The door into the coat closet is at the north end of the east wall, and at the south end is a sliding glass door leading out onto a wooden deck. There are two sets of couches, one clustered around the fireplace and one with a view out the windows.

Individuals can move through this space through simple commands like "west" or "south" and can also "look" at objects that exist within those rooms. Moving to a new room or looking at an object calls up a programmed description. "Looking" at the fireplace in the living room, for example, calls up the following:

An old fireplace taken from an Irish castle that was destroyed in the 16th century. Kindling and logs are piled high along side it. Its mantel is nearly ten feet off of the ground and is supported by two stone gargoyles. On the mantel are several familiar portraits and the unusual sort of bricabrac that you have come to expect, including a cuckoo clock, Graffiti, a compass, Player Database, An Atlas (1999 Edition), LambdaMOO Central Clearinghouse, and the key to the Pearly Gates. The fireplace is filled with cold ashes.

Individuals moving through such spaces not only see rooms and objects, however; they also see other "players" who happen to be moving through these rooms. The appearance and name by which a player will be represented within the world-his or her "avatar"-are defined by the individual and often reflect some role or identity that the individual wishes to take on in this virtual world. Although in some MUDs individuals can have quasi-material effects on other characters-MUDs based on fantasy worlds often allow characters to fight each other, to give each other objects, and so on-the majority of time on a MUD or MOO is spent in conversation. Individuals have a variety of communicational commands available depending on the site they are visiting. The most universal commands are "say" and "emote." When a user gives the command "say hello," every individual within the "room" occupied by that user sees the message tagged to the character's name: "Dan says 'hello.'" (The user himself or herself will see "You say 'hello.'") In addition to "saying" things, characters can also "emote," or express themselves physically. Sending the command "emote smiles" causes all others in the room to see the message "Dan smiles." As I discuss at the end of this article, emotes can be used for many very nuanced forms of communication, from indirectly expressing one's opinion about other characters or the things that they are saying ("Dan looks troubled and confused by what John is saying" or "Dan moves warily away from Mary") to offering explicit information or even narration ("Dan just wants everyone to know that he'll be going in a moment").1

Because MUDs and MOOs provide real-time social interaction that can be continued over many visits to the same computer-generated "place" and because individuals almost always interact in such spaces through *created* identities and descriptions, MUDs and MOOs provide the most autonomous and otherworldly instance of online communication. When "mudding" culture first became a subject of serious discussion, the social space and identities it created were often treated in exaggerated, idealistic terms. Mark Dery has noted how recent virtual reality technology in general has fostered the belief that human reality and community are on the verge of undergoing a fundamental transformation. This mixture of technophilia and 1960s idealism is exemplified by Douglas Rushkoff's Cyberia, which describes a new generation of computer hackers as creating "a whole new reality, which they can enter and change." This networked reality hints at a fundamentally different relation among individuals for Rushkoff: "our world is entirely more interdependent than we have previously understood. What goes on inside any one person's head is reflected, in some manner, on every other level of reality. So any individual being, through feedback and iteration, has the ability to redesign reality at large" (qtd. in Dery 43). Other critics have been tamer in the claims that they have made about MUD interaction, but many early writers saw such activity as providing fundamentally new modes of social interaction. Sherry Turkle, for example, claims that in chat rooms "we enter another reality and have the opportunity to develop new dimensions of self-mastery" (204) that would otherwise be very difficult to foster. As a consequence, individuals who operate within such virtual environments play out a multitude of roles, leading to an increased fragmentation of identity and suggesting a fundamental change in the relations among individuals:

Now, in postmodern times, multiple identities are no longer so much at the margins of things. Many more people experience identity as a set of roles that can be mixed and matched, whose diverse demands need to be negotiated. A wide range of social and psychological theorists have tried to capture the new experience of identity. Robert Jay Lifton has called it protean. Kenneth Gergen describes its multiplication of masks as a saturated self. Emily Martin talks of the flexible self as a contemporary virtue of organisms, persons, and organizations. (180)

Even when critics avoid Turkle's rather sweeping claims about changes in identity, quite a number have pointed out ways in which cyberspace seems to promise to rework fundamentally the basic conditions of human interaction. Howard Rheingold's influential early study, The Virtual Community: Homesteading on the Electronic Frontier, reflects the image of cyberspace as a place free from the socio-physical limitations on human interaction: "Because we cannot see one another in cyberspace, gender, age, national origin, and physical appearance are not apparent unless a person wants to make such characteristics public. People whose physical handicaps make it difficult to form new friendships find that virtual communities treat them as they always wanted to be treated—as thinkers and transmitters of ideas and feeling beings, not carnal vessels with a certain appearance and way of walking and talking (or not walking and not talking)" (26). Other critics have hailed MUD environments as promising to give individuals the chance to experience life from different social, racial, and gendered positions. Amy Bruckman, who helped to develop MediaMOO, a site for research into computer-mediated communication, reflects something of this optimism: "Without makeup, special clothing, or risk of social stigma, gender becomes malleable in MUDs. When gender becomes a property that can be set with a line of code, one bit in a data structure, it becomes an 'object to think with,' to use Seymour Papert's terminology" (EFC5). Cyberspace here seems to be a space that allows a fundamentally new and considerably freer form of social contact.

While such idealistic talk of the revolutionary potential of virtual identities dominated early writing about cyberspace, more recent critics have pointed out the ways in which a multitude of real-life biases and limitations are imported into cyberspace. Critics such as Lynn Cherney have studied the speech patterns of men and women in cyberspace and found that real-life gender affects how this new medium is used (Cherney, "Gender Differences"). More importantly, a number of feminist theorists have questioned the ways in which online communication itself, with its fondness for abstract claims about freedom from the body and real-life entanglements, repeats gendered styles of speaking. Anne Balsamo describes an online "discussion list" exchange in which a female participant was the first to raise "imminently practical concerns" about an imagined utopia: these concerns were not

raised until the female participant emerged from the silence she was lurking in. Her original point was passed over quickly, even as it was enacted in the course of the subsequent discussion: electronic discussion lists are governed by gendered codes of discursive interchange that often are not hospitable to female participants. This suggests that on-line communication is structured similarly to communication in other settings, and is overtly subjected to forms of gender, status, age, and race determinations. (149)

In contrast to Bruckman's suggestion that online communication gives participants perspective on conventional gender roles, Balsamo suggests that this method of communication itself is carried out using such gender roles. If this is the case, the very claim that online communication can offer some kind of escape from previous forms of social interaction may be gendered (male) and itself repeat the traditional, patriarchal metaphysical striving towards disembodied intellectual exchange.<sup>2</sup> In this sense, online communication of all sorts seems to be not an alternative to traditional forms of exchange, but rather merely a product of those forms and the assumptions behind them.

The persistence of real-world communicational assumptions and roles in online communication is frequently described as a kind of narrative in order to emphasize its ultimately textual nature. An example is Lisa Nakamura's critique of racial stereo-types in MUD and MOO discourse. Nakamura notes that characters described as Asian in sites like the LambdaMOO tend to "fit into familiar stereotypes from popular electronic media such as video games, television, and film, and popular literary genres such as science fiction and historical romance" (184).<sup>3</sup> Nakamura goes on to explain why the presence of these stereotypes is so damaging to the upbeat reading of online activity that critics such as Turkle offer:

The choice to enact oneself as a samurai warrior in LambdaMOO constitutes a form of identity tourism which allows a player to appropriate an Asian racial identity without any of the risks associated with being a racial minority in real life. While this might

seem to offer a promising venue for non-Asian characters to see through the eyes of the Other by performing themselves as Asian through on-line textual interaction, in fact the personae chosen are overwhelmingly Asian stereotypes blocks this possibility by reinforcing these stereotypes. (185)

Nakamura's critique challenges the belief that cyberspace is a new mode of social interaction capable of producing independent identities that users engage in. It especially suggests that online discourse is above all *text* imported from other, socially and politically charged sources. It is not new, of course, to suggest that online discourse is not only textual (it obviously is) but also a kind of "story" being told by the participants. Rheingold suggests this even in his more optimistic study of cyberspace: "Narrative is the stuff of which MUDworlds are made. Everyone and everything and every place has a story. Every object in a MUD, from your character's identity to the chair your character is sitting in, has a written description that is revealed when you choose to look at the object" (155). It is a significant leap from Rheingold's suggestion that cyberspace is a kind of story to Nakamura's claim that it is made up of popular cultural narratives and mass-media stereotypes. Nakamura suggests specifically that cyberdiscourse is *intertextual* in the specific sense that it draws on those texts that are most familiar, even cliché, in mass culture. Shannon McRae observes such clichés at work in the online performance of gender:

In order to enact "female" and hope to attract partners, one must not only assume the pronouns, but craft a description that falls within the realm of what is considered attractive. Most people do not stretch their imaginations, much beyond the usual categorizations. (81)

The result, as Stephen Shaviro says, is a "monotonously self-referential" loop in which men act like they think women act when they act the way that men want them to act (qtd. in McRae 79). Quite in contrast to the early belief that cyberspace offers a way to escape gender, race, and class as conditions of social interaction, these recent critics suggest that online discourse is woven of stereotypical cultural narratives that reinstall precisely these conditions.

## SOCIAL CONNECTION AND GIBSON'S NARRATIVE

Online communication creates, then, a space of social contact out of intertextual materials that may end up relying on the very conventional social narratives that many participants hope to escape when they turn to this new medium. These hidden, insidiously conventional structures within social interaction are the subject of the novel that gave us the term "cyberspace"—William Gibson's *Neuromancer*. A discussion of Gibson's novel not only provides a glimpse of the very different understanding of identity that results from this intertextuality, but also suggests how best to negotiate these narratives. At the most general level *Neuromancer* is the story of Case's quest to be re-integrated with cyberspace and the information that it possesses. The story opens with Case's nervous system intentionally harmed in subtle ways by a past employer so that he is unable to access cyberspace and perform his past role as a "cowboy" who infiltrates computer networks and steals information. Case is mysteriously offered surgery to repair his system if he participates in a complicated scheme to free an artificial intelligence named Wintermute from the limitations placed on it by its creator. Gibson describes Case's experience of cyberspace in terms of the pleasure of reintegration:

Found the ridged face of the power stud.

And in the bloodlit dark behind his eyes, silver phosphenes boiling in from the edge of space, hypnagogic images jerking past like film compiled from random frames. Symbols, figures, faces, a blurred, fragmented mandala of visual information.

Please, he prayed, now-

A gray disk, the color of Chiba sky.

Now-

Disk beginning to rotate, faster, becoming a sphere of paler gray. Expanding— And flowed, flowering for him, fluid neon origami trick, the unfolding of his distanceless home, his country, transparent 3D chessboard extending to infinity. Inner eye opening to the stepped scarlet pyramid of the Easter Seaboard Fission Authority burning beyond the green cubes of Mitsubishi Bank of America, and high and very far away he saw the spiral arms of military systems, forever beyond his reach.

And somewhere he was laughing, in a white-painted loft, distant fingers caressing the deck, tears of release streaking his face. (52)

In this passage, Case's movement into cyberspace is a kind of homecoming that brings him back into contact with a network of human information. Given the lyrical tone of this passage, it is not surprising that interpreters of *Neuromancer* have concluded that the connection to networks of human information that Case pursues is a uniformly positive thing. As we have seen, cyberspace subculture frequently takes the disembodied integration into electronic information systems quite literally as a next stage in human evolution. The connections between individuals are more obviously ambivalent, however, in a short story that Gibson wrote with John Shirley, "The Belonging Kind." This is the story of a socially awkward academic, Michael Coretti, who becomes fascinated by a woman who is able to fit into social circumstances perfectly. Coretti follows this woman as she moves from bar to bar, her clothes, appearance, and manner changing mysteriously en route. In the end, Coretti discovers that this woman is part of a species of creatures that have evolved to mimic human social behavior perfectly:

A kind of animal that lives only on alcoholic beverages. With peculiar metabolisms they convert the alcohol and the various proteins from mixed drinks and wine and beers into everything they need. And they can change outwardly, like a chameleon or a rock-fish, for protection. (55–56)

In particular, the story describes how the introvert Coretti gradually realizes the power of this species that constantly transforms to fit into any situation; it is the "belonging kind." The integration that Coretti experiences at the end of the story, as he joins these creatures and undergoes physical changes, is ambivalent. Rather than asserting the value of social integration for its own sake, this story treats such connections as a matter of protection and evolution—nothing more.

The links between individuals are similarly ambivalent in *Neuromancer*. Probably the novel's clearest statement of the ambivalence of social connection comes late in the novel when Case reflects on his involvement with unseen "bosses." Case has been hired by the mysterious Armitage, who turns out to work for Wintermute. As Case realizes the degree to which Armitage is a puppet or even a construction of Wintermute, he reflects on his involvement with larger political and social powers:

Case had always taken it for granted that the real bosses, the kingpins in a given industry, would be more and less than *people*. He'd seen it in the men who'd crippled him in Memphis, he'd seen Wage affect the semblance of it in Night City, and it had allowed him to accept Armitage's flatness and lack of feeling. He'd always imagined it as a gradual and willing accommodation of the machine, the system, the parent organism. It was the root of street cool, too, the knowing posture that implied connection, invisible lines up to hidden levels of influence. (203)

Case's reflections about the nature of social connection suggest both its positive and negative qualities from the perspective of the individual. Positively, these connections position the individual as a kind of parasite within the "parent organism," sheltering the individual who may not share the goals of the larger system to which he or she belongs. This positive connotation of connection is evident in perhaps Gibson's bestknown single comment, from his story "Burning Chrome": "the street finds its own uses for things" (186). In one sense, Gibson's narrative seems to celebrate the ways that individuals marginalized by corporate culture retain freedom by virtue of their very position on the margins. There is, however, another implication to Case's description of "the accommodation of the machine." The very urge to appear "street cool" seems to drive individuals to these larger power systems. Like the "belonging kind" of Gibson's story, individuals have an urge to become connected to others and to larger social patterns, even though that urge changes them and seems to make them less than human. Just as we have seen critics such as Balsamo and Nakamura worry that the seemingly liberatory space of online communication is based on conventionalized social narratives, so too characters driven to maintain distance from conventional social links in Gibson's novel may simply fall into other power relations of which they are unaware.

This understanding of dangerously "connected" identity arises naturally from the kinds of indirect power relations that we have already characterized as a concern of critics of cyberspace. Such connections are the basis for the novel's characterization of people as mechanical "assemblages" of disparate elements. The best example of the

"assembled" quality of Gibson's characters is Wintermute's agent Armitage, who Case discovers has been "reassembled" from Willis Corto. Corto was an American Colonel who was shot down in a military assault on Russia designed to fail. He is reassembled surgically so that he can participate in a Congressional probe into the CIA's and Pentagon's involvement in the failed raid: "He'd need eyes, legs, and extensive cosmetic work, the aid said, but that could be arranged. New plumbing, the man added" (83). Corto provides evidence for these hearings, but later becomes schizophrenic and is cured and shaped through Wintermute's indirect involvement:

But where have you been, man? he silently asked the anguished eyes. Wintermute had built something called Armitage into a catatonic fortress named Corto. Had convinced Corto that Armitage was the real thing, and Armitage had walked, talked, schemed, bartered data for capital, fronted for Wintermute in that room in the Chiba Hilton... And now Armitage was gone, blown away by the winds of Corto's madness. But where had Corto been, those years? (193–94; ellipsis in original)

Corto is described as a space inhabited by many, potentially conflicting, entities—he is called a "fortress" and asked "where have you been?" The novel continually returns to the uneven spaces where the parts of individuals are assembled into some whole. Early in the novel Case's friend, Linda Lee, is described using the same language of parts: "He'd watched her personality fragment, calving like an iceberg, splinters drifting away, and finally he's seen the raw need, the hungry armature of addiction" (8). Likewise Case is described as "coming apart at the seams" (29). Treating individuals as made up of parts echoes the novel's claim that political systems create gaps where their power is uneven or unpredictable. Case's marginal existence is described in terms of the larger "outlaw zone" that he occupies:

There were countless theories explaining why Chiba City tolerated the Ninsei enclave, but Case tended toward the idea that the Yakuza might be preserving the place as a kind of historical park, a reminder of humble origins. But he also saw a certain sense in the notion that burgeoning technologies require outlaw zones, that Night City wasn't there for its inhabitants, but as a deliberately unsupervised playground for technology itself. (11)

Gibson describes a kind of space that, while ultimately functioning in the service of larger corporate powers, remains relatively free of their direct control. The same thing seems to be true of the characters themselves, who are likewise assembled from many different elements in ways that make the whole unstable and partially free from direct control. Critics often note that Gibson's own writing is characterized by extensive lists of specific, often brand-name, objects. If Gibson's prose seems to be a mixture of consumer objects, his characters also seem to be assembled out of many parts, each of which has its relations to larger systems of power and which coexist in uneasy ways.

The conflict between Molly and Peter Riviera, both of whom work for Wintermute, makes clear the implications of thinking about individuals as made up of parts. Molly is a cybernetically enhanced bodyguard, with lenses that allow her to see in the dark and retractable razor blades hidden in her fingernails. Riviera is a holographic artist, who has an amazing visual memory and is able to project and modify those memories for anyone present:

Case had seen the medium before; when he'd been a teenager in the Sprawl, they'd called it, "dreaming real." He remembered thin Puerto Ricans under East Side streetlights, dreaming real to the quick beat of a salsa, dreamgirls shuddering and turning, the onlookers clapping in time. But that had needed a van full of gear and a clumsy [elec]trode helmet. What Riviera dreamed, you got. (141)

Riviera puts on a kind of holographic performance art piece, in which he acts out the creation of a dreamgirl part by part: "I decided that if I could visualize some part of her, only a small part, if I could see that part perfectly, in the most perfect detail . . ." (139; ellipsis in original). Riviera builds up an image of what turns out to be Molly, "Molly as Riviera imagined her" (140), by imaging one part at a time. Once complete, "Riviera and the Molly image began to couple with renewed intensity. Then the image slowly extended a clawed hand and extruded its five blades. With a languorous, dreamlike deliberation, it raked Riviera's bare back. Case caught a glimpse of exposed spine" (140-41). The logic of the performance piece, Case reflects, is obvious: "Riviera puts the dreamgirl together, the dreamgirl takes him apart" (141). This scene not only makes clear how individuals are understood to be assembled from distinct parts, but also suggests that this process of assemblage depends on a fundamental tension between the physical and the imaginative. Riviera's act of construction is imaginative, but Molly can quite literally deconstruct Riviera because she is able to see the physical elements that make up the whole body image. In a broader sense, we can say that assemblage is always imaginative and that some physical quality works against this unity. This relation is particularly clear in the case of Armitage, whose created consciousness holds his constituent parts together until the tensions within them become too strong and he collapses psychologically at the end of the novel. Cynthia Davidson sees the clash between Riviera and Molly as based on the degree to which each foregrounds their material tensions:

Both Peter and Molly pervert expectations generated by their initial appearances. Molly sports external technological enhancements—her lenses and razor-nails—which distort her natural (organic) appearance, making her appear boldly transgressive. . . . Riviera's image is nearly the opposite of Molly's. He looks organically natural, with a classically "beautiful" appearance and riveting blue-gray eyes. However, this calm demeanor masks seething and contradictory impulses exercised with a gleeful disdain for their effect on humanity. (194)

Riviera's striving toward unity, then, is dangerous because it makes invisible the disunities that exist at a material level.

Imagining people as "assemblages" whose subjectivity is constructed from sources of which they are rarely aware and whose elements do not necessarily cohere certainly seems unappealing at first glimpse, since it works against traditional ideas of self-consciousness and personal coherence. But Neuromancer also suggests that much more dangerous than this disunified subjectivity is the attempt to deny multiplicity and to hide behind some apparent unity. Precisely this tension between unity and incoherence is at issue in debates between critics who praise cyberdiscourse for its ability to raise our consciousness about our own identity-to "develop new dimensions of self mastery," to use Turkle's phrase-and those critics who see this discourse as nothing more than an intertextual mélange of mass media clichés and stereotypes. These critics are debating whether participants in online discourse are constructing coherent identities that shed light on the real world or whether they are merely tacking together an identity from media sources. As critics have gradually begun to accept the latter, they have lost confidence in the socially transformative possibilities of online discourse. In many ways, this debate about the power or danger of online discourse has become a site in which broader arguments within the academy about the nature of language have been staged all over again. Idealistic claims about the power of online discourse to lift participants out of everyday roles and to give them an appreciation for other identities echo traditional humanist belief in the power of literature to expand human understanding; recognition of the intertextual construction of this same language has led other critics to embrace or reject cyberspace because it appears to deconstruct subjectivity.

Because these identities are so obviously constructed and because this discourse continues to have such obvious power for participants, online discourse is a perfect place to challenge the opposition between social engagement and intertextuality. Indeed, Neuromancer offers precisely this: a narrative in which "assembled" subjectivity nonetheless creates spaces that can be inhabited effectively by characters. In other words, Neuromancer offers a partial answer to the question of how best to negotiate these conventional social relations in online discourse. Neuromancer does this precisely by exploring the problem that Nakamura sees at the core of online discourse the relation between cyberspace and narrative forms. Nakamura characterizes online discourse as narrative more to emphasize its intertextual qualities, I think, than to suggest that these stories script the actions of the participants within this virtual world. When Gibson represents identity in cyberspace, however, it becomes clear that the concept of narrative is especially effective in describing the latter issue, in capturing the ambiguities of agency in this online discourse. Gibson suggests that cyberspace can exploit fundamental ambiguities in the agency implied by these narratives to complicate stereotypes and to contextualize discourse.

Critics have, in fact, vigorously debated *Neuromancer's* own treatment of narrative. Some critics have suggested that, while the novel raises narrative issues, its own methods are very conventional. Brian McHale, for example, has suggested that cyberpunk fiction in general translates the formal experimentation of postmodernist fiction into speculation about narrative and meaning at the level of theme. Claire Sponsler takes this to signal a fundamental flaw in Gibson's writing: Cyberpunk would have us believe that the selves it posits are indeterminate and fragmented, no longer unique, autonomous individuals, but this is not the case for Gibson's protagonists. In seeming contradiction to the decentering of the subject that occurs with many of his minor characters, Gibson's protagonists still fit the well-known mold of the free-willed, self-aware, humanist subject. (637)

Other critics have argued quite the opposite—that cyberpunk in general and *Neuro-mancer* in particular deploy characters in fundamentally new ways. Katherine Hayles, for example, claims that Gibson's characterization emphasizes not the traditional metaphysical opposition between presence and absence, but instead the tension developed in contemporary information theory between pattern and randomness:

Like the landscapes they negotiate, the subjectivities who operate within cyberspace also become patterns rather than physical entities. Case, the computer cowboy who is the novel's protagonist, still has a physical presence, although he regards his body as so much "meat" that exists primarily to sustain his consciousness until the next time he can enter cyberspace.  $(267)^4$ 

Resolving this critical disagreement about Gibson's writing is not as simple as it might seem and reveals an ambiguity that is important to the novel's treatment of identity and power. When Hayles claims that Case and other characters in the novel are really simply "patterns," is she speaking at the level of theme or praxis? Clearly she cannot simply be speaking thematically, since her claims are part of a larger argument about how contemporary novels' "corporeal anxiety" affects their construction. At the same time, however, her reading of narrative praxis proceeds by examining what the novel has to say about its characters, rather than how it is actually organized and how it develops. This is not, I think, critical sloppiness on Hayles's part so much as a reflection of the fundamental problem of speaking about narrative issues in this novel. Consider, for example, one of the typical exchanges in which Gibson raises issues of subjectivity and characterization. Case is forced to work for Armitage (and Wintermute) because the surgery that repaired his nervous system also inserted sacs, which after a certain period will undo the repair unless he is given the appropriate antidote. Case asks what keeps Molly working for Armitage, and she responds, "I'm an easy make. . . . Anybody any good at what they do, that's what they are, right? You gotta jack, I gotta tussle" (50). This passage suggests a broader way in which characters are defined by their roles. Is this definition a transformation of the nature of the characters, or simply an opinion about subjectivity? Clearly, the answer to this question depends on our perspective. From a certain perspective, Molly is a free-willed character self-consciously choosing to associate herself with Wintermute because it gives her the opportunity to do what she is good at. From another perspective, however, she is simply the tool of an economic system that has created her. Early in the novel, she remarks about her potential for violence, "I guess it's just the way I'm wired" (25)-a line that certainly suggests a recognition that she has been wired by someone for some purpose. The ambiguity that critics encounter when they describe the narrative construction of Gibson's novels is precisely

the ambiguity that Gibson's characters face when trying to understand their own degree of self-control. Critics such as Sponsler, who take the gap between these two definitions of character in Gibson's work to be unintentional, tend to find in *Neuromancer* a narrative that conceptually overreaches Gibson's novelistic ability. Critics who excuse this gap for the sake of emphasizing Gibson's radical redefinition of character, conversely, seem less worried about the novelistic execution of these radical narrative ideas.

This point of debate is ultimately, then, a matter of knowing the proper perspective from which to interpret the characters' actions. This perspective in turn depends on who we believe to be the real agent in the novel. In many ways, this ambiguity is inherent to narrative in general, since in stories we are frequently aware both of the action of the events retold and the act of retelling them.<sup>5</sup> When critics describe online discourse as a "narrative," then, they are not only pointing out its intertextual or conventional qualities; they are also noting an ambiguity of agency-a vague line between our free creation of a story with other participants online and our interpellation into a conventional narrative script. Neuromancer uses this ambiguity to create a degree of interpretive indeterminacy. This indeterminacy is similar to the space of relative freedom in the "outlaw zones" of Chiba City and suggests that Gibson's way of writing may work to replicate this limited freedom through such ambiguities. We get a glimpse of life without this indeterminacy in the self-replicating urge of the Tessier-Ashpool corporation. Case describes Tessier-Ashpool's corporate aspiration as the "human equivalent" of a wasp's nest that he saw years ago and that filled him with horror (171). Case describes the nest itself in the following passage:

He saw the thing the shell of gray paper had concealed.

Horror. The spiral birth factory, stepped terraces of the hatching cells, blind jaws of the unborn moving ceaselessly, the staged progress from egg to larva, near-wasp, wasp. In his mind's eye, a kind of time-lapse photography took place, revealing the thing as the biological equivalent of a machine gun, hideous in its perfection. (126)

Case recalls this image in the context of a dream, which ends "just before he'd drenched the nest with fuel, he's seen the T-A logo of Tessier-Ashpool neatly embossed into its side, as though the wasps themselves had worked it there" (127). This passage defines the hive as self-replicating and inwardly oriented. What seems to horrify Case about the hive is the way that it creates a complete continuum of production: each stage of the wasp is present without break.<sup>6</sup> In contrast to other systems that create "outlaw zones" of relative freedom as part of their very functioning, the hive image describes a corporation that has no gaps and whose control is complete. As a narrative, these actions are unambiguous: all the elements of the hive not only work to one end, but are reducible to stages within that production. There is, in other words, no question about the perspective from which we should read the hive—indeed, the hive literally spells out its message in the Tessier-Ashpool logo. Gibson's method of writing, which draws our attention to the inherently ambiguous status of characters, can be seen as a way of not allowing his narrative to be a seamless hive. When we become aware of the ambiguous status of Gibson's characters, they appear to be assemblages in the sense that I have just described and walk the fine line between being independent agents and dupes of conventional power relations.

## **REVISITING CYBERDISCOURSE**

Having recognized the conventionalized, narrative quality of online discourse, but having also missed the radical potential of the "assembled" intertextual subjectivity to which Neuromancer alerts us, social critics seem to have soured on cyberspace as a vehicle for challenging conventional identities and empowering new forms of social interaction. Partially for practical and legal reasons, but also because of a loss of confidence in the revolutionary potential of online discourse, recent MOOs often emphasize the link between one's online character and one's real-world identity.<sup>7</sup> The anonymity that used to be provided by MUDs and MOOs is limited on many sites; most MOOs, for example, now reveal the site, at least, from which guest players are connected to the MOO. Partially this is a simple, practical way to discourage irresponsible behavior by players who are not seriously involved in the MUD or MOO. But this identification probably also reflects an awareness that the real world does intrude on the MUD, like it or not. Recognizing that such virtual identities are not independent of the real world has also probably been influenced by the migration of the medium towards more "serious" applications. Such applications include Internet research sites such as MediaMOO, a forum for system administrators and discourse critics to discuss computer-mediated communication. Other serious uses of online communication also include special interest MOOs such as BioMOO, a virtual meeting place for biologists, and JennyMUSH, a MOO dedicated to counseling survivors of sexual trauma. Likewise, MOOs are beginning to be used for online conferencing, potentially alleviating the need for participants to travel across the country or overseas to participate in business or research meetings. MOOs are also being tested by many universities as a component of online distance learning. In general, MOOs seem to have developed from the adventure games of early MUDs to the open-ended structure of social MOOs towards more serious business and educational applications.

In this migration towards taking MOO identities more seriously and seeing more firm links between real-life and virtual personas, critics and researchers in online communication are missing, I think, the positive potential of cyberspace intertextuality. The interpretational ambiguity of narratives in cyberspace is important not because it can lead us to some non-narrative identity or some position free from these systems of power, but because making ambiguous one's location within narratives offers a temporary perspective from which these systems can be understood. Although critics such as Nakamura show that we cannot treat cyberspace as a place where individuals simply try on identities and learn about themselves free from the stories and clichés that circulate through popular culture, cyberspace may well represent a different way of manipulating these real-world elements. Because it is so obviously *only* discourse and cut off from the physical basis upon which conventional narratives of gender and racial identity are traditionally built, online discourse draws our attention to how these narratives are constructed and manipulated. This possibility of using narratives imported from the real world to achieve effects that would be more difficult to accomplish in the real world is precisely what Gibson's notion of cyberspace captures. Cyberspace in this sense does not represent a place of otherworldly identities, but rather a way of manipulating texts.

Some critics have noted, in fact, that the hypertextual format of much online discourse implies just such a linking between many source texts. Hypertext linking is frequently used in Internet Web pages, where individual words or phrases can be selected to load other documents or sites with information about that particular term. As critics have noted, such hypertextual links make the intertextual nature of communication more explicit. In his well-known book on the subject, George Landow describes hypertext as "a fundamentally intertextual system [that] has the capacity to emphasize intertextuality in a way that page-bound text in books cannot" (35). Landow argues that hypertext represents a transformation in the nature of writing in which texts become "borderless" and all discourse is seen as collaborative. Hypertext need not, of course, be online or have any connection to the Internet. Indeed, some of the most successful and widely distributed hypertext documents-especially research tools such as interactive encyclopedias-have appeared first on CD-ROM rather than online. And, of course, not all online discourse is hyperlinked. Most MUD and MOO programs, for example, lack any sort of such links. Nonetheless, we can say that along with the explosive popularity of the networked communicational linkages embodied in the Internet has come a growing recognition of the collaborative, intertextual nature of communication. Like Landow, Gibson suggests that rather than denying or resisting this intertextuality, we would be best to embrace it and seek the most effective ways to use it. For Gibson, this adjustment means seeking out the representational ambiguities in cyberspace in order to interrogate the sources of the narratives out of which we are constructing identities.

We can see cyberspace discourse creating representational ambiguities in the mechanics of MUD and MOO conversations. Commentators on the Internet often focus on the conditions of online interaction (the construction of MUD or MOO characters, the anonymity of communication, and so on) without sufficiently appreciating the communicational tools available to online users. Lynn Cherney is an important exception to this generalization, and her detailed analysis of online behavior provides rich examples of how online communication departs from other forms of communication. In particular, Cherney is interested in how the particular forms of MUD

discourse can be and are used in a way that we might not expect if we view these forms merely as a parasitical imitation of real-life discourse. For example, Cherney observes how emote commands are used by MUD players to provide information that would seem more naturally to be "spoken" within the MUD room (through the "say" command). Cherney provides the following example of how an emote can be used to provide such exposition:

- 1. lynn [to Damon]: so Kit thinks you and I would be a cute couple.
- 2. Damon says, "um"
- 3. Damon says, "how nice"
- 4. lynn laughs.
- 5. Damon hasn't, well, met you, lynn ("Modal Complexity")

The last line here (line 5) is produced through an emote. It reads somewhat like the voice of a narrator does in fiction, even though it is quite obviously inserted by the person controlling "Damon." The nuanced choice of providing information through a say or emote has only the loosest equivalent outside of a MUD and suggests that such communication can develop a fundamentally different set of protocols and restrictions than we would expect if we think of it merely as an imitation of real-world dialog. Cherney is not only providing a list of techniques by which writers can express themselves in online communication-although her research is a rich store of such information. She is also showing how online communication can work specifically to destabilize our normal ways of thinking and to make us aware of the textual basis of this communication. Although the use of emotes for narration is obviously a particular way of expressing oneself in a MUD, it also draws a great deal of its effectiveness from the fact that it looks like a type of textual information-omniscient narrationthat is obviously impossible within this immediate, dialogic context. In other words, such narration flirts with the idea that this dialog is just a story, that it is entirely a textual construction. Another, somewhat more directly challenging form of online communication that Cherney notes is what she calls a "null-emote." Since an emote command sends the name of the character followed by whatever the user types inthus typing "emote sits down" shows all other players "Dan sits down"-typing an emote without anything after it merely sends the name of the player to everyone in the MUD room. Although seemingly a pointless exercise likely to be mistaken for a typo, such null-emotes, Cherney shows, can be used to make an ironic comment on discourse in general or the subject matter being discussed at the moment in particular:

lynn wonders what she came here for. Shelley George psst, "I think Penfold has something hanging from his nose." Shelley ("Objectifying" 156) The joke in both cases is not wildly funny, but it does point to a way in which the emote function can be used to insinuate an answer to an implied question: "The null emote is fundamentally a joke; a null-emoter, through her null-emote response to a question intended to evoke an informative response, subverts the discourse in a playful manner" (155). Implicit in the null-emote is the same use of MUD discourse that we see in the use of emoted narration—the tendency to exploit the particular qualities of the MUD medium to draw attention to the way that language is being used. In particular, like the emotes the player's act of "saying" or providing information is not immediately evident. In other words, MUD discourse at its most extreme and playful seems to have rich tools to question the language brought to this space and the way that it is being constructed narratively.

That cyberspace works against the grain of traditional communication, rather than merely offering a different means of social interaction or a chance for identity freeplay, is also evident in the structure of many MOOs and, especially, MUDs. The kind of verbal play that Cherney describes is most typical of social MOOs, especially those in which many members are themselves interested in exploring language within cyberspace. Adventure-style and role-playing MUDs are naturally less conducive to this kind of verbal free play. Indeed, many role-playing MUDs explicitly frown on stepping out of character to make the kind of verbal references or puns that Cherney describes. If the exploitation of the medium for the sake of destabilizing traditional narratives is part and parcel of cyberspace, then such MUDs would seem initially to be quite anti-cyberspatial in their insistence on a rather literal use of language and their willingness to ignore the special qualities of this medium. These MUDs find it difficult, however, to maintain such a homogeneous use of language. One obvious and important instance where we can see narrative ambiguities making themselves evident in such MUDs is the very common use of some kind of "out-of-character" (OOC) channel within the game. Channels within a MUD or MOO are means of speaking "above" or "outside" the particular room in which one's character is located. An OOC channel allows players within a MUD to carry on conversations inappropriate to the milieu or role of their characters. In practice, many MUD sessions can produce a dizzying mixture of in-character conversations located within a particular MUD room and ongoing out-of-character dialogues with players elsewhere in the MUD-or even, more confusingly, with the same players operating the characters one is speaking to in-character within that room. The reason that most MUDs have OOC channels is partially practical-they allow players to ask technical questions about the operation of the game or to make suggestions that have nothing to do with the role they may be playing. More generally the OOC channel is a means of establishing player community. Often players will voice congratulations about other players' accomplishments, gripe about real-world events, and joke about MUD-related mistakes or conundrums. Without an OOC channel such MUDs become very different places and particularly background the distinction between players and the characters that they operate. An OOC channel constantly reminds the players of the act of role-play. What is significant in the prevalence of such channels is that the community that develops in these MUDs depends precisely on the ability to break the illusion of role-play through such channels. Gibson's writing allowed us to discover a surprising truth about cyberspace's original conception: as a means of social interaction it does not exist to create new identities or simply to destabilize all identity. Likewise these MUDs neither simply immerse players in a fantasy world-although they do this to some degree-nor simply encourage players to move fluidly between many identities. Rather, like Gibson's cyberspace, these MUDs constantly direct our attention back to the narrative construction of the social interaction in this space and to the fact that this play arises from the duality between player and character. Although most adventure MUDs fail to use this duality to critique the narratives inherited from popular culture and fantasy writing, many players sense that such gaps and dualities are important to the online medium in which this game is being played.

*Neuromancer* helps us to see, then, that an essential component of online, cyberspace discourse is an ability to reveal how this dialogue is being constructed as and from narrative. This recognition should send us back to reconsider the best uses of this discourse. While no doubt online conferences and other "serious" uses of cyberspace will continue to become more popular, we need to foster an appreciation of the kind of narrative play that Gibson describes. Such play, at its best, can be extremely effective in revealing stereotypes and bringing cultural narratives into conflict with each other. Such intertextual narrative play within cyberspace has the potential to revitalize social and educational uses of MOOs and MUDs, as well as online discourse of all types.

#### NOTES

1. On emoted narration, see Cherney ("Modal Complexity"), which is also discussed in this article.

2. The issue of gender in online discourse is further complicated by the fact that it is also part of a much larger difference in how men and women respond to technology. For an excellent overview of access to cyberspace in the context of gendered attitudes towards technology, see Dale Spender, *Nattering on the Net: Women, Power and Cyberspace.* For discussions of how gender is "performed" online see influential essay collections by Lynn Cherney and Elizabeth Weise, *Wired\_Women: Gender and New Realities in Cyberspace,* and Susan Herring, *Computer-Mediated Communication: Linguistic, Social, and Cross-Cultural Perspectives.* For a recent essay that provides an overview of debates about gender online, see Sean Zdenek, "Rising up from the MUD: Inscribing Gender in Software Design."

3. In contrast to gender issues, race online has received considerably less attention. When critics do address such issues, the emphasis is usually on access to the Internet rather than on how race is represented. An example of this approach is the recent collection of essays edited by Bosah Ebo, *Cyberghetto or Cybertopia?*, which focuses on class, race, and gender. But only in the section on gender do we find discussions of "communicational style" and extended reflections on the forms of representation. For one recent discussion of the representation of race online, see Lori Kendall's "Meaning and Identity in 'Cyberspace': The Performance of Gender, Class, and Race Online."

4. Other critics suggest that cyberpunk narrative is innovative for other reasons. Istavan Csicsery-Ronay Jr. claims that *Neuromancer* rejects the excess that we normally associate with well-rounded characters and thus transforms the economy of the text: "Like Wintermute, Gibson sets up a plot in which his characters have no excessive reality; they have nothing that is not a functional part of the program" (231). David Brande similarly sees the novel as transforming characters into functions, "While these characters' narrow self-definitions and lack of psychological depth could be taken as weak characterization . . . I would suggest that Molly and Case make explicit the form of subjectivity conditioned by the triumph of exchange-value" (520).

5. Jonathan Culler's discussion of the story/discourse distinction in *The Pursuit of Signs* brings out this problem clearly. The distinction between story and discourse is fundamental to narrative theory and claims that the individual events of a narrative (the "story") can be presented in many different ways in the "discourse" or actual narration of the story. Although narratologists have usually understood this distinction to be relatively stable and unproblematic, Culler brings out a perspective from which these two elements form not a complex unity, but rather an indeterminacy (186). Culler's analysis, which claims to be deconstructive, has drawn some criticism as overstating the contradiction between these two narrative elements. Christopher Norris, for example, complains that although it is obvious that narrative has two distinct logics, the claim that these logics are at odds seems contrived (134). While Norris is right in suggesting that Culler may be overeager to discover fundamental logical conflicts, Culler does draw our attention to how these two elements of narrative demand very different types of attention to the text.

6. Sharon Stockton argues that this image of the corporate hive is specifically feminine: "The feminized corporation (as opposed to some absent other type of corporation) is thus about closed and entropic systems.... Rebellious feminine power thus becomes a stand-in for worldwide systems failure and heat death generally" (599). While Stockton is right to draw our attention to the closed nature of this system, little in the passage cited suggests entropy.

7. Typical of some of these problems is the responsibility of individuals for the online behavior of their avatars. See Julian Dibbell's essay on a MUD "rape" for a discussion of the problem and the difficulty that online communities have in dealing with these responsibilities.

#### WORKS CITED

- Balsamo, Anne. "Feminism for the Incurably Informed." *Flame Wars: The Discourse of Cyberculture.* Ed. Mark Dery. Durham: Duke UP, 1994. 125–56.
- Brande, David. "The Business of Cyberpunk: Symbolic Economy and Ideology in William Gibson." Configurations 3 (1994): 509–36.
- Bruckman, Amy S. "Gender Swapping on the Internet." Proceedings of INET '93. Reston, VA: Internet Society, 1993. EFC1–EFC6.
- Cherney, Lynn. "Gender Differences in Text-Based Virtual Reality." Proceedings of the Berkeley Conference on Women and Language. Ed. Mary Bucholtz, A. C. Liang, Laurel A. Sutton, and Caitlin Hines. Berkeley: Berkeley Women and Language Group, 1994. 102–15.
- ——. "The Modal Complexity of Speech Events in a Social MUD." *Electronic Journal of Communication* 5.4 (1995).
- Cherney, Lynn, and Elizabeth Reba Weise, eds. Wired Women: Gender and New Realities in Cyberspace. Seattle: Seal P, 1996.
- Csicsery-Ronay, Istvan Jr. "The Sentimental Futurist: Cybernetics and Art in William Gibson's Neuromancer." Critique 33 (1992): 221-40.
- Culler, Jonathan. "Story and Discourse in the Analysis of Narrative." The Pursuit of Signs: Semiotics, Literature, Deconstruction. Ithaca: Cornell UP, 1981. 169–87.

- Curtis, Pavel. "Mudding: Social Phenomena in Text-Based Virtual Realities." Internet Dreams: Archetypes, Myths, Metaphors. Ed. Mark Stefik. Cambridge: MIT P, 1996. 265-90.
- Davidson, Cynthia. "Riviera's Golem, Haraway's Cyborg: Reading Neuromancer as Baudrillard's Simulation of Crisis." Science Fiction Studies 23 (1996): 188–98.

Dery, Mark. Escape Velocity: Cyberculture at the End of the Century. New York: Grove, 1996.

- Dibbell, Julian. "A Rape in Cyberspace: or, How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database into a Society." *Flame Wars.* 237–61.
- Ebo, Bosah, ed. Cyberghetto or Cybertopia? Race, Class, and Gender on the Internet. Westport: Praeger, 1998.
- Gibson, William. "Burning Chrome." Burning Chrome. New York: Ace, 1986. 168-91.
- ------. Neuromancer: New York: Ace, 1984.
- Hayles, N. Katherine. "Virtual Bodies and Flickering Signifiers." *Electronic Culture: Technology and Visual Representation*. Ed. Timothy Druckrey. New York: Aperture, 1997. 259–77.
- Herring, Susan C., ed. Computer-Mediated Communication: Linguistic, Social and Cross-Cultural Perspectives. Amsterdam: John Benjamins, 1996.
- Kendall, Lori. "Meaning and Identity in 'Cyberspace': The Performance of Gender, Class, and Race Online." Symbolic Interaction 21.2 (1998): 129–53.
- Landow, George P. Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology. Baltimore: Johns Hopkins UP, 1997.
- McCaffery, Larry. "An Interview with William Gibson." Mississippi Review 47/48 (1988): 7-15.
- McHale, Brian. "Elements of a Poetics of Cyberpunk." Critique 23 (1992): 149-75.
- McRae, Shannon. "Flesh Made Word: Sex, Text and the Virtual Body." *Internet Culture*. Ed. David Porter. New York: Routledge, 1997. 73–86.
- Nakamura, Lisa. "Race In/For Cyberspace: Identity Tourism and Racial Passing on the Internet." Works and Days 25/26 (1995): 181–93.
- Norris, Christopher. Deconstruction: Theory and Practice. London: Methuen, 1982.
- Rheingold, Howard. The Virtual Community: Homesteading on the Electronic Frontier. Reading, MA: Addison-Wesley, 1993.
- Rushkoff, Douglas. Cyberia: Life in the Trenches of Hyperspace. New York: Harper, 1994.
- Shirley, John, and William Gibson. "The Belonging Kind." Burning Chrome. 43-57.
- Spender, Dale. Nattering on the Net: Women, Power and Cyberspace. Melbourne: Spinifex, 1995.
- Sponsler, Claire. "Cyberpunk and the Dilemmas of Postmodern Narrative: The Example of William Gibson." Contemporary Literature 33 (1992): 625–44.
- Stockton, Sharon. "'The Self Regained': Cyberpunk's Retreat to the Imperium." *Contemporary Literature* 36 (1995): 588–612.
- Turkle, Sherry. Life on the Screen: Identity in the Age of the Internet. New York: Simon & Schuster, 1995.
- Wilbur, Shawn P. "An Archaeology of Cyberspaces: Virtuality, Community, Identity." *Internet Culture*. Ed. David Porter. New York: Routledge, 1997. 5–22.
- Zdenek, Sean. "Rising up from the MUD: Inscribing Gender in Software Design." *Discourse and Society* 10 (1999): 379–409.