# Representing Bodies in Virtual Space: The Rhetoric of Avatar Design

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This article discusses the rhetorical aspects of avatars, or virtual selves, within multiuser graphical virtual realities (GVRs). In both text-based and graphical virtual worlds, users are represented in the world by discursive or visual avatars. Because the manner in which users in a synchronous shared environment are represented affects how they are able to communicate, the design of an avatar affects the communicative possibilities within a virtual world. This essay examines the development of GVRs in order to question how representations of selves in these newer versions of cyberspace relate to on-line communication. The focus here is particularly on how bodies in GVRs are gendered, and how differing modes of gender inscription might affect online interaction. Ultimately, GVRs raise the issue of how the visual affects the verbal when both are mediated by technology.

## THE MYTH OF THE DISAPPEARING BODY

Early portrayals of computer-mediated communication (CMC) suggested a diminishing correlation between one's physical self and an on-line presence. Fictional depictions of electronic discourse in particular described the liberation of going on-line as one discarded the "meat" of the physical body and wandered placeless 'nets with cross-dressing abandon. Separating oneself from the constraints of a world fraught with tension and prejudice was appealing, and the lure of CMC as a venue where minds could interact without the limitations of preconceived categories proved understandably compelling. While scholarly representations of CMC largely resisted the actual "disappearing body" line, they often focused on the fluidity of on-line identity, developing a kind of mediated electronic body that resulted in certain inconsistencies between the virtual and physical self. Such play of identity came to be associated with possible liberatory and educational potential; on-line experiences provided participants with the chance to see how others live and relate, get outside of the constraints of social mores, and develop a sense of how different components of their identity affected how they were treated in the face-to-face world. Driving these narratives of a "disappearing" or "mediated" body were admittedly laudable goals of innovative communication strategies that would help assuage all manner of discrimination in interpersonal communication. Without a physical body to mark gender, race, or age, it was argued, speakers would be freed to exist in the realm of ideas; it was a world where it could be "taken for granted that many of the old assumptions about the nature of identity [have] quietly vanished under the new electronic dispensation" (Stone, 1991, p. 83).

For teachers experimenting with computer-assisted instruction, this conviction led to the belief that students would be free to participate in classroom discourse unencumbered by the elements of physical presence that women and minorities have often felt to be the most silencing: the unbroken stares of strangers who appear more "entitled" to be there, the visual awareness that one is unlike audience members, etc. And while these impulses informed a good bit of innovative and well-intentioned pedagogy, teachers and students alike came to realize that the body does not disappear in cyberspace, and that the on-line interactions of a mediated body have consequences in the mundane world of the classroom (Madden, 1993; Takayoshi, 1994).

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In social interactions, a disappearing body came to represent freedom from restrictions and mores, allowing experimentation with identity and sexuality. Again, commitment to this ideal was grounded in many positive ideals, but the enactment of identity-play generated varying, and at times negative, results (Stone, 1995; Turkle, 1996). Perhaps the best-known story of embodiment within CMC is Julian Dibbell's 1993 "Rape in Cyberspace" piece, one of the first popular press accounts of virtual worlds that acknowledged the impact CMC and on-line interactions have on individuals. Dibbell's article recounts the uniqueness of electronic discourse within a virtual world, and the difficulty of applying such bedrock notions of human society like responsibility, accountability, and propriety in a realm where the relationships among language, action, and self are blurred.

As Dibbell's account and subsequent research have proven, determining precisely how the physical self is manifested in virtual space is more complicated than establishing a one-to-one correlation with the face-to-face world. Elements that inform one's virtual self include internal elements such as gender as well as external factors such as geography, economic status, education level (formal or informal), literacy skills, dialect, language, and cultural literacy. To this end, in recent years, a growing body of scholarship has demonstrated that language connects bodies to selves, even in cyberspace.

That electronic words are not separable from the physical self has become the focus of the most recent work on CMC. In addition to Stone, Turkle, and Dibbell, Marcos Novak (1991) and Brenda Laurel (1993) variously address how the physical self is implicated in on-line communication. In conjunction with general work calling into question the disappearing body in cyberspace, numerous other scholars, including L. Jean Camp (1996), Michele Evard (1996), Susan Herring (1994, 1996), and Dale Spender (1995), have investigated the specific ways that gender affects on-line communications in terms of patterns of discourse, participation, and community formation.

Such work on gender and CMC to date has largely addressed words exchanged in text-based mediums, both synchronous and asynchronous. The scholars already mentioned have investigated listservs, e-mail, MUDs, and newsgroups. The latest versions of CMC, though, combine visual elements with text-based communication. In these recent incarnations the concept of "presence" takes on radically more complicated meaning, in part because what had been referred to as human–computer interaction (HCI) is perhaps best redescribed as the substantially more various human–computer–human interaction (HCHI). That is, when human interaction with technology moved past the stand-alone computer and came to be determined primarily through interactions with networked machines, it likely became time to add to HCI the concept of HCHI.

Contemporary interactions with computers may be theater as in Laurel's formulation, but they are collaborative theater, improvisation as much as script-following.

The primary content in multiuser virtual environments, I would argue, is interaction. It is the presence of others that distinguishes a MUD or WorldsAway from Myst. Whether text-based or graphical, synchronous environments require users to interact both with the computer (in the form of the database or program) and with other users (Kolko, 1995). In the multiuser environments where players can create objects and actions within the world, users can interact with those logged on simultaneously, or with the traces (creations) of others left behind during the author's absence from the on-line world. Saying that the content of such on-line worlds is interaction is also claiming that the content is collaborative because a user experiences the world in tandem with others. Conversations are also storytelling—narrative collaborations within the environment—and as such the human's interaction is not just with the computer, but also with other humans. I would argue that this modification is not just cosmetic. On the contrary, it alters the meaning of the human–computer exchange. Consequently, the human–computer–human exchange must be analyzed with different criteria, specifically with attention paid to the rhetorical nature of the interaction. What human–computer interface design tells us about how individuals negotiate the machine can be revised to question also how humans negotiate the presence of other humans within the framework of the computer.

Like the shift from HCI to HCHI, the development from text-based versions of cyberspace to the visually oriented World Wide Web and graphical virtual realities (GVRs) has presented a series of constantly shifting challenges to understanding communication in virtual spaces. GVRs are server-based two- or three-dimensional multiuser environments that allow participants to log on and interact with others. Like text-based MUDs, the activities driving GVRs are exploration and interaction. The worlds tend to be richly rendered with nuanced landscapes and multiple rooms. Communication techniques vary by world, but many try to allow for some version of multimodal communication, using a combination of speech, writing, emoting, and gesture.

This article examines the development of GVRs in order to question how representations of selves in these newer versions of cyberspace relate to on-line communication. Because of my own research interests and larger issues associated with cyberspace, I focus particularly on how bodies in GVRs are gendered, and how differing modes of gender inscription might affect on-line interaction. The discursive selves of MUDs and MOOs (which, as synchronous cyberspaces, are the closest correlation to GVRs) forced researchers to confront the relationship of language

use to identity; GVRs raise the issue of how the visual affects the verbal when both are mediated by technology.

While the portrayal of gender in social GVRs often follows stereotypical versions of femininity and masculinity (not terribly surprisingly), analyses are more complicated than they first appear. For example, GVRs share much of their tradition with graphical computer games, and it is important to read them within this market-focused context (Clarke-Willson, 1998). In addition, a close reading of avatar systems in the perhaps rudimentary GVRs of 1998 would have to distinguish among default avatars provided by commercial GVRs, avatars designed by individual users from original or publicly available component parts, and avatars created by commercial design firms.[1] Each of these populations will have different motivations and concerns that inform their decisions about what kinds of avatars to create.[2] In addition, even taking the most gender-stereotyped of avatars requires deciding which egregious bodily representation is the result of cultural conceptions and which the result of technological limitations. Rather than stopping at an analysis of current avatars, then, this article considers avatar design as a rhetorical act. I would argue that what will no doubt someday seem a quaint transitional moment from textual to visual representations of virtual worlds holds great promise as a cultural indicator of how bodily presence affects communication.

The work that goes into conceptualizing systems for avatars necessarily highlights the different ways we rely on the representation of the physical self to communicate meaning. As synchronous communication environments move into three dimensions, the challenge of how to represent the physical self visually has come to the fore. Among the range of issues raised in this movement is the way gender tends to be unarticulated (or undertheorized) as a variable. It appears that the conversation about avatars has largely ignored questions of how a gendered body in virtual space will affect communication patterns. Subsequently, early programming forays provide some valuable lessons in how gender continues to be marked, its representation not just seemingly prescribed by cultural mores, but also how gender operates as its own channel in multimodal communication. It has become almost an assumption in cyberspace that knowing the gender of one's conversational partner provides a kind of shorthand, a discursive/visual cue that automatically delimits the conversation, a cue without which "real" or "meaningful" conversation and connection cannot take place.

## THE VIRTUAL SELF AS A RHETORICAL ACT

To consider GVRs as wholly independent of their technological aspect is impossible. The fact is, replicating the complexity and richness of human facial expressions and vocal intonations is unattainable with current technology. However, the fact that computing power, bandwidth, and other associated resources are limited is an *explanation* for design choices, not an excuse. This is not to say that the goal of any avatar design is (or ought to be) to replicate the details of face-to-face interaction.[3]

Text-based MUDs are minimal-bandwidth creations. A MUD can run on a 486 computer; a participant with a 9600-baud modem can easily participate in the world. While today there are MUDs and MOOs that incorporate various multimedia elements, and MUD clients that are designed for just such "enhanced" worlds, the original MUDs were text only, and characters and the world were wholly discursive creations. The limitations placed upon interaction were extreme. With just conversational ability, a "say" verb, it was impossible to communicate tone, facial expression, or movement. However, relatively early in the MUD time continuum, participants began to compensate for the lack of such information. At first, communicating actions such as a smile or dancing a jig was accomplished through a cumbersome and purposeful misuse of another verb. Within a few months, an actual "emote" or "pose" verb was programmed to provide visual cues (Reid, 1997). This addition to the core database that is used to begin a new virtual world changed the nature of text-based virtual reality. By altering the genres of communication allowed in the world, a new rhetorical schema was created. The communicative desires of participants drove the evolution of the technology; players' values affected the structure of the world and, ultimately, the way to make meaning in the world.

While the case of "emoting" in MUDs is not really a place to read gender difference, it is a site for rhetorical analysis. In the case of avatar design, similar rhetorical decisions are being made regarding allowable methods of communication. Decisions to make the perspective of a GVR first person or third person, the kinds of facial expressions to allow, whether to automate and randomize gestures, and the detail of movement to convey are all components of avatar design, and all are integral to the communicative environment. At the same time, avatar design is a gendered issue because, as Laura Mulvey (1990) has amply documented, there is a demonstrable tendency for visual narratives to fetishize the female body. Designing a visual projection of a physical self for use in a communicative environment is clearly a rhetorical act with consequences for gender representation. Reading avatar design not from a technological standpoint, then, but with a desire to chronicle the kinds of conversations that developers and consumers of technology have as they consider, from their varying perspectives, how physical bodies can be represented in electronic spaces, ultimately reveals how gendered bodies come to affect gendered voices.

In part, creating a virtual self is a rhetorical act because speaking through an avatar incorporates the realm of

gestures and visual representation. Different self-presentation choices make different gestures available. In a MUD, for example, a multiple-person avatar can perform simultaneous gestures that a conventional "he" or "she" cannot; a genderless "spivak" can assert a bodily presence that has none of the vulnerabilities of primary and secondary sex characteristics. In a GVR, a human avatar will have arms and legs with which to express; an animal, bird, or insect avatar will have different appendages with which to gesture. A male avatar has conventions of masculinity to augment or subvert, as does a female avatar. As Peter Bull illustrates in a study of how gestures relate to tonal stress in conversation, we can identify "a close relationship between body movement and vocal stress . . . gesture also appears to be related to syntax" (1992, p. 120). Designing limbs for avatars predetermines the range of possible gestures, and thus communicative acts. The act of programming will control questions such as whether hands can be placed on hips, an arm draped across the shoulders of another avatar, legs crossed at ankles, or head lowered slightly. Each gesture of a real body is a communicative act, or, as Bull further argues, "gesture is not simply secondary to speech; it also conveys distinctive information about the speaker's level of commitment to the process of communication itself" (p. 121). The same dynamic governs gestures of the virtual body. How avatars can *move* will govern what they can *communicate*; the scope of a rhetorical act in a GVR is specifically scripted by the abilities of the avatars inhabiting the world.

In addition to large motion gestures such as torso or hand movement, facial features communicate a host of subtle meanings. At MIT, for example, two projects currently investigating related issues merit mention. The MIT Media Lab Affective Computing research group houses a research project called "Affective Avatars," a group that describes itself on its website as interested in "Virtual Reality avatars which accurately and in real time represent the physical manifestations of affective state of their users in the real world." The MIT Media Lab Gesture and Narrative Language Group is another research group that focuses on avatars; in their words, "The Gesture and Narrative Language Group is looking at ways to make communication, mediated through avatars, more lifelike and natural through appropriate and meaningful animation of the avatar's body and face." Both groups are an acknowledgment that face-to-face conversation makes extensive use of the visual channel for interaction and that any attempt to recreate in virtual space the complexity of physical interaction will rely in large part on the development of avatars that can represent suitably large amounts of information, that can operate as meaning-full rhetorical devices.

Reading facial movements necessitates an eye for detail, a task made difficult in the virtual realm because of the

scarcity of computing resources. While machines today are tremendously powerful compared to those of a decade ago, the speed and memory necessary to render details like a raised eyebrow or the twitch of lips are staggering. Daniela Bertol, in her book *Designing Digital Space* (1996), addresses the issue of computing power limitations when she writes of modeling objects:

> The simulation of a real object can be achieved at different degrees of realism, according to the level of detail (LOD) present. In VR the real-time generation of stereoscopic images at a certain rate per second demands a clear organization of the objects which are present in the field of view of the observer. A realistic representation of a three-dimensional scene would require an extremely high number of polygons, usually too large to be handled at the number of frames per second required in VR simulation. But not all the elements present in the observer's field of view *deserve* the same level of detail. (1996, p. 97, my emphasis)

At some point, a designer has to decide which details in virtual space to render, and these decisions include the details of bodies and gestures. Bull concludes his study of gesture and meaning by asserting that one reason

> speakers supplement the spoken word in this way through gesture [is because] . . . One advantage of conveying information through a number of different channels is that if a listener misses the information from one source, it is always possible to obtain it from another . . . it can also be argued that gesture conveys a distinctive type of information in its own right . . . [and] . . . that gesture indicates a *wish* to communicate. (p. 120)

When a programmer decides which gestures to render, then, she is deciding not what to communicate, but what possible messages to allow; such decisions dictate the communicative potential of the space. Bertol hints at the larger relationship between programming design and conceptual design, a link that is often obscured by arguments about technical limitations and computing power.

Wendy Sue Noah is an industry professional who recognizes the influence of the social on the evolution of the technical. Noah is the chairperson of Women Entering Avatar Virtual Environments (WEAVE), which is a special interest group of the Contact Consortium, an organization of individuals and companies involved in the creation and populating of virtual worlds. The women responsible for forming WEAVE started it as an organization that "combines the abstract and technical into a working premise about cybercultures and women's place within them as well as women's roles as architects of these worlds" (*EBusiness*, 1997). Their work takes a gendered perspective on virtual realities, and, working from comments such as Kathy Rae Huffman's that "Real or virtual—the computer graphics business is a MAN's world" (Huffman & Jahrmann, 1997),

they seek to insert alternative perspectives and values into the conversation about virtual worlds.

The members of WEAVE see themselves as working to "influence and change" the culture of virtual worlds; their interest in broadening the range of influences on the industry is a recognition that the trajectory of technology influences society generally. WEAVE is an example of one response to this realization; there are clearly others. Simply put, how the realm of the virtual evolves will affect business, education, and entertainment in the future. The theory informing this development will dictate how such growth proceeds, what it includes, and what it excludes. The stakes are significant. Bruce Damer, one of the founders of the Contact Consortium and perhaps the best known voice in the avatar community, recently published a full-length study of GVRs and avatars. He introduces his topic with enthusiasm and by providing an indication of the importance of this emerging technology:

> When you don your avatar and join thousands of other people who are trying out life in virtual worlds you are joining in a great new experiment in human contact. As you will see in the following pages, this contact goes far beyond simple chat to become *a whole new way of being with people.* (Damer, 1997, p. 5)

Damer's book is important for a number of reasons, and as a trade book it performs a valuable service. However, his narration of avatar space is particularly focused; that is to say, his perspective leaves out a variety of approaches and the idea of accommodating or representing difference in cyberspace. In this light, it is crucial to keep in mind that WEAVE and similar groups are an attempt not to balkanize cyberspace, but to broaden the range of influences on this developing realm. When Dale Spender (1995) claims that "women have fewer rights to discourse in cyberspace" (p. 195), she is commenting on a theme that appears to varying degrees, but that remains a palpable trend in technology-related fields. Subsequently, it becomes all the more important that women have a voice in GVR design. If we consider Mulvey for a moment, and the majority of influences on images of cyberspace in popular culture—caricatured women in anime, Stepford-like robots, the female crew members of Star Trek—we can guess where avatar trends might head. We've seen that world; we know what it holds; give us another. Damer's "new way of being with people" is appealing, indeed, but equally appealing is the idea of virtual selves that need not ascribe to tired and narrow constructs.

## POPULATING CYBERSPACE

Virtual worlds, both textual and graphical, are populated by a variety of genres. There are markers of seeming diversity: In text-based MUDs, players can select from a variety of genders, including male, female, spivak (gender neutral), and royal (plural). In many nascent GVRs, avatars can be based on humans, cartoons, animals, or some hybrid thereof. However, despite the seeming diversity of avatar choices, an examination of industry debates, users' selections, and the worlds themselves illustrates that given technological limitations, users and designers' first impulse is to create versions of physical bodies that conform to a predictably narrow band of stereotypes. Given that any assertion of a virtual self is itself a rhetorical act, this tendency to create avatars that serve as stereotypical shorthand is indicative of a host of attitudes underlying our interaction with computers. I would like to present an example from MUDs that illustrates the subtlety of some of these issues before discussing issues specific to gender and GVRs. Studies of MUDs have provided numerous lessons about interactions in cyberspace and the dynamics of community formation in virtual space. By learning from these analyses of text-based interaction, we can gain insight into the challenges facing the design of virtual worlds that are visual as well as textual (Reid, 1997).

A variety of bodies currently roam cyberspace. On the one hand, there are the discursive bodies of text-based MUDs and MOOs. These are the personae Turkle describes, MUD players like Matthew, Gordon, and Stewart (Turkle, 1995, pp. 177–209). While Shannon McRae (1996) claims that "In virtual reality, you are whoever you say you are," (p. 245), both her work and Turkle's ultimately argue that virtuality cannot erase physical reality. Both show cases of MUD users whose physical worlds intrude into their virtual lives, and whose role-playing cannot exist wholly compartmentalized from the rest of their selves.

In addition, work by Lisa Nakamura (1995), Cameron Bailey (1996), and Turkle illustrates clearly how the frameworks of race and gender relations are transported to cyberspace via the description and presentation of text-based avatars. Nakamura's analysis of LambdaMOO, currently the most populated MOO, for example, shows precisely how described virtual selves recreate patterns of gender and racial discrimination. Her argument about "identity tourism" in MUDs is a powerful testament to problems of representation in cyberspace.

In her article, Nakamura provides examples of the few characters in Lambda who are marked as Asian. As a corollary, her argument raises the troubling issue that to be "unmarked" is to be Caucasian; to be anything else requires an explicit discursive act, one that is often taken by other members of the MUD as confrontational. As she writes:

> While the textual conditions of self-definition and self performance would seem to permit players total freedom, within the boundaries of the written word, to describe themselves in any way they choose, this choice is actually an illusion.

This is because the choice not to mention race does in fact constitute a choice—in the absence of racial description, all players are assumed to be white. (p. 184)

As Nakamura details, almost all of the characters who self-present as Asian in LambdaMOO use stereotypical language that creates narrow identities. In the case of male Asian characters, they "fit into familiar stereotypes from popular electronic media such as video games, television, and film, and popular literary genres such as science fiction" (p. 184). For characters self-presenting as Asian females, the stereotypes cut across both racial and gendered lines.

> Performances of Asian female personae in LambdaMOO are doubly repressive because they enact a variety of identity tourism which cuts across the axes of gender and race, linking them in a powerful mix which brings together virtual sex, Orientalist stereotyping, and performance. A listing of some of the names and descriptions chosen by players who masquerade as "Asian" females at LambdaMOO include: AsianDoll, Miss_Saigon, Bisexual_Asian_Guest, Michelle_Chang, Geisha_Guest, and MaidenTaiwan. They describe themselves as, for example, a "mystical Oriental beauty, drawn from the pages of a Nagel calendar," or, in the case of the Geisha_Guest, a character owned by a white American man living in Japan: "a petite Japanese girl in her twenties. She has devoted her entire life to the perfecting of the tea ceremony and mastering the art of lovemaking. She is multi-orgasmic... She is not wearing panties, and that would not be appropriate for a geisha. She has spent her entire life in the pursuit of erotic experiences." (p. 187)

While Nakamura's analysis deals primarily with race, I find it useful in light of this argument not as a way to blur the distinction between patterns of race and gender discrimination and stereotyping, but rather as an example of the power of scripted (here via text) identities. These discursive identities of MUDs provide central lessons in how avatars occupying the communicative arena of cyberspace enact rhetorical stances. In GVRs, surface design issues differ from those dominating MUDs since avatars become visual rather than discursive, but the underlying power dynamics remain the same.

The temptation to focus resources on creating intricate and attractive surroundings in a GVR is strong, but what remains central is the idea of multiparticipant environments (Morningstar & Farmer, 1991). The game Myst might be an exemplary instance of engaging HCI, but virtual worlds are HCHI: The collaborative and community elements define the experience, and thus the environment is by necessity rhetorical.

Despite the interactive nature of GVRs that defines the environment as social, most design decisions are not articulated as related to interpersonal dynamics. Three general trends can be identified in current thinking about avatars, none of which focuses substantially on how it is people interact via technology. These design trends include a refinement of CUSeeMe technology and incorporation of video conferencing principles for "realistic" and "true" representation of participants; a wholly new representative sign system that obscures details of the physical self and provides mechanisms for gauging audience reactions without worrying about the identifying characteristics of individual members of that audience; and an attempt at graphic representation of participants that relies on polygons and rendering and that is confronting the obstacle of how to capture the nuances and detail of facial expression.

While the first approach is most common in business applications of GVRs, the third approach dominates current commercial products. Examples of social GVRs include WorldsAway, Vchat, Onlive Traveler, the Palace, Active Worlds, and Blaxxun (formerly Black Sun), each of which I visited while researching this article. A quick tour of these worlds provides some insight into design choices.

Each world attempts to replicate real-world physical geography in substantial ways, while breaking from the metaphor of real space in other instances. The worlds strive to balance the fantastic with the realistic. Onlive Traveler uses avatars that are disembodied heads, for example, and yet even with such a clearly implausible representation of the physical self, it is still possible to bump into someone. It is a world, in other words, where even heads need some elbow room.

Active Worlds is actually a series of different worlds that are thematically driven and that can be expanded by users. Participants can leap among the extensive list of worlds, talk out loud by typing in commands as well as send person-to-person telegrams, toggle back and forth between first- and third-person perspective, and cycle as often as desired through a preset list of avatars that vary world by world. Athough the avatars in many of the worlds are distinctly human, within parts of the universe avatar choices such as birds, tanks, and sharks exist. And whether you are a punk rocker or a bluebird, in the world "America" or on "Mars," avatars in Active Worlds can fly.

WorldsAway provides some of the most extensive choices regarding avatar creation. The new member of the WorldsAway Dreamscape universe (one of four WorldsAway worlds, each with a separate subscription fee) gets the opportunity to build a customized avatar. Without the extra money that comes later in one's life there, choices at the outset are restricted to one of six bodies (athletic male, stocky male, average male, athletic female, stocky female, average female) and one of nine heads. At the body modification parlour, choices abound if one has enough money; you can discard your initial head and attach instead a lion's head, a boombox, or a smiling sun to the base of your neck. Embracing the fantastic at the level of avatar heads, WorldsAway also walks a curious line between the physical and filmed realms by creating

a proscenium-like world where characters move in a $2\frac{1}{2}$D plane, gathering in rooms like a television family along one side of the dinner table.

GVRs vary substantially in how they approach questions of perspective, gesture, and user creation. Rather than focus primarily on the specifics of these worlds, then, I would prefer to discuss how the choices made thus far, at the early stages of this form of CMC, tell us a great deal about how we rely on gender as an unspoken visual aid when communicating. To that end, I focus on the range of worlds encompassed by Active Worlds.

In Active Worlds, a collection of multiple and discrete worlds among which one can travel, the question of avatar design is worth investigating because each world contains its own default avatars. That is, a member can create and customize an avatar to use when interacting in different worlds, but upon login there are also default settings that vary from world to world. The original default is presumably established by the creators of Active Worlds, but within the worlds created by participants—Brasil, American, Castles, Patagonia, Atlantis, Utopia, to name a few—the default avatars vary.

When initially logging into Active Worlds, and entering the default world, a participant finds herself or himself in a default body based on gender choice made at the level of menu bar: Mr Tourist or Ms Tourist. Both are dressed in unremarkable gray outfits, and each has a camera looped around the neck. Other gray figures scatter the landscape, and the marker of "tourist" serves to both make visible and make invisible. Interestingly, the facial features such as skin tone, hair color, and eye shape of Mr and Ms Tourist seem the result of a morph program that has run a vast number of faces through its filter and generated a bland and uncommitted identity.

Many of the worlds within the Active Worlds universe use the Mr Tourist and Ms Tourist defaults. Others, however, have taken the time to create defaults appropriate for their "theme." The range of defaults in Active Worlds provides an effective starting point for this analysis.

In Brasil, for example, the defaults are Isadora and Brasil (it's not just that the nation makes the man; the man makes the nation too, apparently). Brasil is dressed as a soccer player in shorts, high socks, athletic shoes, and a numbered jersey. Isadora has blue eyes, black hair, and could easily be called busty. She is dressed in tight black jeans, a white tank top, and stiletto heels. In another world, Patagonia, the male default is Helmut, a black-eyed bald man dressed in black pants and a green shirt. Kelley, the female default for Patagonia, is a redhead dressed in a mid-calf jumpsuit, black vest and belt, and blue high-heeled shoes. In America, both defaults, Cindy and Butch, are Caucasian, blond, and overtly sexualized.

The rough image one gets jumping from world to world is that in those place' where the default avatars are not the Tourists, and where they are human, images decry subtlety. Conventional markers of femininity such as long hair and breasts are common, as are markers of masculinity like broad shoulders and sports identifiers. Even in the worlds where human figures are avoided, sex is visually marked. That is, when entering a world that has established nonhuman default avatars, one's selection of "male/female" on the menu bar dictates which avatar one assumes upon connecting to the world, and that avatar is marked in similarly conventional ways.

The world of Castles provides Clyde and Betsy as default avatars. Clyde is a horse, a large, broad-shouldered horse who travels solidly down the stone pathways of Castles, past the water and the gardens. Betsy is a cow, a cow with tremendously pink and hugely swollen udders hanging from her belly. Both Betsy and Clyde, like any pair of default avatars in Active Worlds, will adequately conduct a user through the world; both have the option of first- or third-person perspective. Both can adopt the stock menu-bar listed emotional options such as smiling, frowning, and jumping. Like the avatar pair of Guppy and Jaws in the world Atlantis, Clyde and Betsy take a user out of the human paradigm and allow a fanciful exploratory mood. What is more relevant, however, is that this figure pair specifically rejects the human figure for avatar design, and yet continues to rely on overtly sexualized figures (in this case Betsy's relentlessly obvious secondary sex characteristics) to navigate virtual space.

My point here is not actually to dismiss these or any other avatar choices. I don't think of Isadora as an example of "reprehensible" avatar design. I do think it is in our best interests, however, to create figures for cyberspace that do not fall back on stereotyped notions of female and male. While the avatars we can see now, at the beginning of 1998, are the result of limited computing resources, what we can learn from Active Worlds and avatar design firms like Black Mantis is that the default in our minds is an almost cartoon-like example of what it means to have a body—whether human or bovine. These avatars are what I would call visual aphorisms, and like verbal aphorisms, they reveal what a culture takes to be "self-evident truths."

Such an approach to avatar creation prevents us from paying attention to the important work a visual representation of the self performs in the virtual environment. As I argued earlier, creating a virtual self is a rhetorical act, and the parameters of that virtual self also establish communicative limits. Hannes Högni Vilhjálmsson, in a 1997 study of avatar design entitled "Autonomous Communicative Behaviors in Avatars," sets out in part to explain how avatars have been, and could be, made to communicate with others in various graphical virtual environments. His critique of automated behaviors that do not correlate with a user's actual speech, for example, is an incisive look at the precision required to effectively synchronize gesture

and language. He carefully explains the complexity of understanding the multiple channels of communication that occur off-line, and he illustrates how this difficulty extends to on-line interaction. He writes:

> Researchers from different disciplines, such as linguistics and sociology, have conducted the search for [the] principles of multimodal communication, each from a different point of view.
>
> Even though methods differ and approaches to explanation vary, it is made clear that our body, be it through gesturing or our facial expression, displays structured signals that are an integral part of communication with other people. These are behaviors that should be exploited in the design of autonomous and semi-autonomous characters that are intended to be a part of or assist in a natural dialog. (Section 3.1)

As part of his project, Vilhjálmsson created a graphical virtual environment called BodyChat that seeks to incorporate the richness of multimodal communication into the on-line world. His primary concern was to include the communicative channels of gaze and facial expression, as well as autonomic body functions, within the avatar design. As he explains, within BodyChat, "The animation is based on parameters that reflect the intention of the user in control as well as the text messages that are passed between users" (Section 1.1).

The move to incorporate the communicative potential of physical expression is significant. Rather than the randomized and prescribed physical actions found in Active Worlds, for example, Vilhjálmsson's BodyChat would animate a user's avatar based on what the user was actually saying. He writes of BodyChat, "For instance, when you approach an avatar, you will see from its gaze behavior whether you are invited to start a conversation, and while you speak your avatar will take care of animating its face and to some extent the body. In particular it animates functions such as salutations, turn-taking behavior and back channel feedback" (Section 1.1). Clearly, the intention of a user is well accounted for in this formulation. However, the components of multimodal communication that are attached to the specific physical body in face-to-face interaction are not wholly present in such a system.

An environment like BodyChat can animate an avatar based on what a user says in the text input window. This successfully integrates participant intention. However, in face-to-face interaction, turn-taking and saluations, for example, will vary as gestures; part of this variance can be tied to gender differences (as well as cultural differences.) Consequently, it stands to reason that animation decisions, even when they are tied to text input by the user, will in some way relate to the gender of an avatar, either by scripting different sets of animations or by capping the multimodal at the point of gesture, but not gender. I'm not willing to claim whether or not it is necessary to have an

avatar's gaze, turn-taking, or other gestures vary based on gender. However, it is necessary to recognize the broad strokes in which masculinity and femininity are represented in many GVRs because it is clear that how avatars are created defines the communicative possibilities of a participant. If female avatars can only signal stranger salutation with downcast eyes, for example, we've returned to the Active World of America, where the default is a narrow channel of stereotyped images.

## CONCLUSION

What is taken as a self-evident truth in cyberspace is no playing matter. Damer argues the common "it matters" line about on-line interactions, yet more evidence that how we build lives and locations in cyberspace invokes various political and social issues. Damer writes:

> One of the reasons I and many other people refer to this new medium as *virtual worlds* and not *virtual reality* is that the worlds we visit are virtual (they exist nowhere else but Cyberspace and in our minds) but we go there to meet and interact with *real* people. There is nothing *virtual* about the *reality* of your interactions and relationships with other people in these spaces. You can feel just as thrilled, offended, titillated, intrigued or bewildered by your remote conversations in an avatar community as you do on the telephone. (Damer, 1997, p. 12)

Avatar design is an important enterprise, then, because it directly affects the nature of the "real" interaction on-line. Avatars are "supposed to provide new ways for people to interact with their computers and with other users on a network" (Halfill, 1996); the parameters of their construction—either innovative or derivative—will affect that interaction. And while gendered considerations are at the forefront of the social and rhetorical implications of avatar design, a variety of other identity factors come to play.

There is tremendous implicit power in designing visual representations of bodies from which people select their "selves." Because of the design situation, it is one of those authorial situations where the producer of the artifact (the avatar) is somewhat masked. As Gunther Kress and Theo van Leeuwen argue, when multiple producers are involved in the creation of an image, the disjunctions of producer and receiver of the image "cause social relations to be *represented rather than enacted*" (1996, p. 121). The closing off of representational possibilities, the denial of agency encompassed by this dynamic is key.

Designing an avatar is never solely the act of an end user. To start, the user enters a virtual world that has been coded to particular specifications. In text-based MOOs, for example, end users can set an @gender category because the designers of the database decided that having

knowledge of specific gender was important to discursive interaction. Designers could very well have chosen a universal gender-neutral pronoun rather than defaulting to the male/female dichotomy that governs the nonvirtual world. Similarly, those same designers (as multiple and dispersed as they were) decided that an @race characteristic was not essential to discursive social interaction.[4] So, in a textual world where identity is only that which is described, someone, somewhere, decided that marking gender was crucial, but that marking race was not. This is exactly the kind of control that designers of GVRs hold.

The producers involved in the generation of an avatar are multiple. The designers of the technical details of the system, the conceptualizers of the world, the interface designers, the developers of the library of avatars for users, the designers of components of avatars that users mix and match, and, finally, the end user, who may exercise some control in the development of an avatar that is able to inhabit a particular world, all collaborate on the creation of a virtual self, a self that inhabits a particular rhetorical stance. When Kress and van Leeuwen state that "social interactions and social relations can be encoded in images" (1996, p. 120), they provide the background urgency for conceptualizing avatar design as significant and relevant to larger social critiques. And when they add that the "semiotic code of language and the semiotic code of pictures each have their own quite particular means of realizing what in the end are perhaps quite similar semantic relations" (1996, p. 44), they point to why making the electronic equivalent of paper dolls is a rhetorical act equivalent in weight to any broadcast polemic.

Virtual worlds, Damer and many others argue, are more than playing fields. Not only are the interactions affective, but these are the places where increasing numbers of people will be doing business and getting educated. If avatar design remains focused on the production of visual aphorisms, the semantic code of cyberspace will be numbingly monochromatic. A global economy has forced business to adapt to a broader channel of input. The virtual landscape occupies the same globalized culture, and demands similar modification.

## NOTES

1. Commercial enterprises such as Black Mantis contract to build or modify custom avatars for users. Black Mantis can be reached at http://www.labyrinth.net.au/~bmantis/bmops/html/body_custom_avatars.html. At their web site you'll find samples of their current offerings and advance information about future work.

2. An interesting project would entail a reading of different avatar creators based on what they create, with particular attention paid to the context within which each creates. In this essay, though, I am limiting myself to establishing the correlation between avatar possibilities and communicative possibilities.

3. See later discussion for more information on how various approaches to avatar have different goals regarding replicating human expression online.

4. The question of why to include an @race property in a text-based world is part of a larger discussion. I am currently in the process of building a MOO that incorporates such a property in order to take a longitudinal look at how participants make use of such variables in a discursive on-line environment. See Kolko (In press).

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