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A Companion to the

Anthropology of the Body and Embodiment

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VIRTUALITY
Placing the Virtual Body: Avatar, Chora, Cypherg

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INTRODUCTION

What does it mean to have a body? How might virtual worlds transform understandings of the body, online but also offline? How might these virtual worlds also recall us to enduring conceptualizations and experiences of embodiment?

Bringing together my ethnographic research in the virtual world Second Life, anthropological work on embodiment, and a range of philosophical insights, my objective is to think toward a theory of the virtual body that responds to these questions. I push myself in this chapter to risk significant claims, but my argument is intentionally incomplete; I mean to contribute to a conversation rather than work in anything remotely resembling a mode of definitive closure. With this goal of setting up a provisional conceptual framework, vulnerable to ethnographic contextualization, I will emphasize that avatars are not merely representations of bodies but forms of embodiment, centered on constitutive emplacement within a world.

Thus, the key point I seek to advance is that virtual embodiment is always embodiment in a virtual place; as a result, the pluralization of place that virtual worlds entail holds foundational implications for online corporeality. (For the sake of synonyms, I will treat "virtual" and "online" as equivalent, as well as "embodiment" and "corporeality," though of course one could also develop rubrics in which these terms differed in meaning.) In working to make strange the Western cultural logics that have dominated the development and dissemination of virtual worlds, I seek an analytic of defamiliarization internal to that Western tradition. As I discuss briefly in the

conclusion, by historicizing and analytically unpacking the Western cultural logics that strongly shape contemporary virtual worlds I hope to contribute to analyses of how various forms of cybersociality further or undermine colonial, patriarchal, heterosexist, and capitalist hegemony. Rather than pursue the stubbornly elusive goal of transcending the binarisms of mind/body and culture/nature so embedded in this tradition, we can redirect the conversation by refracting these binarisms through a third binarism, virtual/actual. To advance my analysis of how this pivotal refraction pluralizes being-in-the-world, I will set forth three new concepts that I see as naming key aspects of dominant understandings of virtual embodiment: virtual chora, being-inworld, and the cypherg. By the latter part of this chapter, I will suggest that this theory of virtual embodiment implies a new understanding of the "digital" itself.

AVATAR'S AVATAR

Given the time in which I write this chapter, almost any imaginable opening to the discussion must address the motion picture *Avatar*. Written and directed by James Cameron and employing groundbreaking visual effects, this film, first released in December 2009, had by April 2010 already become the highest-grossing work of artistic production in human history, having earned more than 2½ billion dollars. *Avatar's* plot, for which Cameron insisted on sole credit, recalls (a less generous verb would be "is derivative of") the storylines of films from *Pocahontas* to *Dances with Wolves* in its tale of a "native" race threatened by a technologically advanced colonizer, saved only when the protagonist, Jake Sully, a member of the colonizers, turns against them.

Cameron allegorized this colonial conflict, setting *Avatar* in the year 2154 and locating its humanoid "natives," the Na'vi, on Pandora, a jungle-like moon in the Alpha Centauri star system. In place of settler colonialism or missionizing, the narrative centers on corporate capitalism: humans have come to Pandora seeking a rare metal, and the Na'vi present little more than an ethical irritation, since mining the metal necessitates relocating them. The irritation is significant enough that the corporation has created "avatars," artificially grown bodies that look "native" but are in fact Na'vi/human hybrids. Each can be controlled only by the human whose DNA has been used to create a particular avatar (or by an identical twin of that person, as in the case of Jake Sully). These matched humans control their avatars by lying inside sensory deprivation chambers, outfitted with electronic equipment that allows them to remotely control the avatar bodies. Because Pandora's atmosphere is toxic to humans, they can live there only by using these avatars on the one hand, or by wearing gas masks or robotic exoskeletons on the other (these mutually exclusive possibilities will prove theoretically significant).

In three ways *Avatar* is surprisingly conservative in its portrayal of virtual coreality. First, the film assumes a strict isomorphism between the virtual body and what I term the "actual" or "physical" body. (I never oppose "virtual" to "real;" such an opposition wrongly encodes presumptions that the online is not real, and that the real is technology-free.) Never in the film do we see Jake Sully operating an avatar other than his own, nor is there a plot twist revealing that some other person is controlling Jake Sully's avatar. Second, in the world of the film the destruction of an avatar does

not kill the human with which it is paired; fears of death apply only to human bodies. This is one of the strongest contrasts between *Avatar* and the best-known filmic representations of the virtual body that appeared before it, the *Matrix* trilogy (the first of which was released in 1999). In these movies, humans also go into sensory deprivation to control avatar bodies, but the death of an avatar body while under human control causes that human's death as well. Third, in *Avatar* the avatars are not online entities and are thus "virtual" only in a limited sense. In fact, the dénouement of the film occurs when the Na'vi are able to successfully transfer Jake Sully's consciousness into his (physical) avatar body, leaving his human body to die – the ultimate act of "going native" in the actual world, and one linked to fantasies of settler colonialism.

Virtual Embodiment in Practice

To understand how *Avatar*'s understanding of embodiment differs from virtual corporeality, consider the meaning of "avatar" in the virtual world Second Life. At the time I write this chapter you can join Second Life for free, without providing any actual-world information about yourself; you create an account by making up a first name and choosing a last name from a predefined list. You then download and run the Second Life program (usually known as a "viewer" or "client") to enter the virtual world. In the language now standard across a range of virtual worlds, you are now "inworld," a term probably coined by Bruce Damer (Damer 1998). Once inside Second Life you find yourself in a virtual landscape built primarily by other residents and which can thus include anything from private homes to parks, from abandoned factories to glittering temples. These landscapes often have a rural feel to them – newcomers to Second Life often say it seems empty or abandoned. One reason for this is that to distribute server load, only a certain number of objects can be created or "rezzed" on a parcel of land. But as I discuss later, the predominant feel of Second Life as a countryside reveals something crucial about virtual embodiment.

Of course, a key aspect of virtual corporeality is the "avatar." Avatars in Second Life are almost limitlessly customizable. You can appear as any ethnicity or gender, and by rendering parts of your avatar body invisible, folding your avatar body upon itself, and attaching virtual objects, almost any imaginable embodiment is possible. Second Life residents have appeared as hundred-foot-tall dragons, two-foot tall baby animals, glowing balls of light, robots, enormous noses, walking trees, mermaids inside of fish tanks. Additionally, in Second Life (like many virtual worlds) it is possible to have more than one avatar (additional avatars are often known as "alternates," or "alts"). You can log off of one avatar's account and then log back in using a different account. By running two simultaneous instances of a Second Life viewer, being embodied by two avatars at once is feasible, as is having multiple actual-world people be embodied by a single avatar, either by taking turns or by collaboratively controlling the single avatar. The actual-world isomorphism between single person and single body can be transgressed in either direction, with significant consequences for virtual embodiment.

Residents do not always make use of these possibilities: most people, most of the time, have singular virtual embodiments that they see as resembling their actual-world embodiment, or that reflect dominant actual-world ideals of beauty and status. This often means light-skinned avatars, female avatars with large breasts, male avatars with

bulging biceps, and so on. However, even in such cases our critical impulse should not foreclose examining how such ostensibly normative embodiments may have different meanings and consequences online – not least because, for instance, the male avatar with bulging biceps may be female in the actual world.

Regardless of the form an avatar takes, a fundamental way in which it constitutes a kind of embodiment is as an anchor for subjectivity. It is common in Second Life (and a range of other virtual worlds and online games) to view one's avatar in a "third-person" perspective, such that you see your avatar from a slight remove, glancing over its shoulder so to speak. But it would be incorrect to construe such a perspective with being disembodied, for regardless of whether or not one is using a first-person perspective, a third-person perspective, or switches between them, the avatar is the locus of perception and sociality.

To succinctly illustrate some consequences of virtual embodiment, I will recount two stories chronicled by the Second Life journalist Wagner James Au. In the first, Au describes the story of CyFishy Traveler, a Second Life resident who created a female avatar, "Beginning Thursday," after a difficult romantic breakup in the actual world. CyFishy would sometimes run two instances of the Second Life viewer so he could embody the two avatars simultaneously. One day, feeling despondent about his lost romance, CyFishy moved the Beginning avatar up to his CyFishy avatar and "offered myself a hug." At that point, "Something shifted," as he puts it…Something moved him about that moment, so CyFishy did the next logical thing: "We started dating"…

> Their romance continued in Instant Message. "I would talk to myself, tell myself the things that I secretly wished a lover would say to me, assure myself that I am beautiful and loved…it's become a means to explore how to give myself the kind of love I was constantly seeking from outside of myself."

> But one last thing to note before you go: In [the physical world], CyFishy Traveler's owner is actually not male. "I'd shifted genders as an experiment and discovered the joys of having a hot guy to stare at any time I wanted to," explains CyFishy, who as it turns out, is just another woman imagining herself as a man imagining himself partnered to another woman who's really herself. (Au 2008a)

Another story Au recounts is that of Eshi Otawara, a Second Life resident whose actual-world husband, Glenn, died unexpectedly in 2006. In the wake of that tragedy:

> "I felt so powerless and alone," as she recalls, "that I told myself, 'You know, it might be a sick thing to do, a pathetic thing to do, whatever – but if I cannot have this guy in real life, I will MAKE him in Second Life"…

> …His widow re-created him as best she could – rather, Eshi Otawara remade herself, transforming her avatar to look like her husband. And when she was done remaking him, she took Glenn on a tour through Second Life…

> …"I get to do things with his pixel body that he'd be doing if he were alive," as she puts it. She even gave him a flat belly, something she'd known he'd wanted for some time. "I am sure he was cracking up in whatever form he exists now," she says…

> …I ask Eshi if she'd ever thought of turning Glenn into an "alt," a secondary avatar she could control from another computer, while Eshi remained in-world, as herself. That way, in a certain sense, they could be in Second Life together.

"Yes I did," she tells me, then tears up. "It is a scary thought. It wouldn't be him and me…it would be me and me." (Au 2008b)

Both of these fascinating stories are, like *Avatar*, not completely indicative of everyday virtual-world embodiment. As a journalist, Au understandably focuses on the newsworthy, the exceptional, which can of course reveal broader cultural logics. The most atypical aspect of these stories is that they hinge on knowing about the actual-world lives of the persons in question, though Au did not attempt to independently verify these details. People CyFishy and Beginning would encounter during their Second Life dates would not know they were simultaneous embodiments of the same actual-world person unless CyFishy or Beginning volunteered that information. Nor would most residents know what when Eshi transformed her avatar into the form of an older (if flat-bellied) man, this virtual corporeality was meant to invoke Eshi's deceased husband.

At first glance these two stories appear opposed. The experiences of CyFishy and Beginning are predicated on a plural personhood experienced through simultaneous multiple virtual embodiment, but Eshi rejects this possibility: for her, this would be "just me and me." It would foreclose the alternating selfhood invoked by the term "alt" itself. Yet these two stories share a sense that in virtual worlds, the body becomes a multiplicity, a supernumerary site of subject-formation, a zone of possibility that lies across a distinct gap from actual-world embodiment. A shared agreement behind debate can also be seen in the following excerpt from one of many discussions about virtual embodiment I encountered during my ethnographic work in Second Life. I was sitting around one day with several other residents when someone asked if being inworld in Second Life constituted an "out-of-body experience." The following exchange ensued between persons I will name John, Susan, Roger, and Amy:

John: I don't think it is an out-of-body experience per se. Since we are still "in our bodies" while looking at a monitor.

Susan: John, I agree at one level, but do you never feel "embodied" in your avie [avatar]?

John: No, I feel my avie is an extension of myself, but I see how it can happen for others.

Roger: I think people do feel embodied – hence all the sexual activity with add-on genitals.

John: My avie is an extension of my brain, but I don't feel embodied.

Amy: We do a certain suspension of disbelief – that lets us shift into our Second Life looks.

It is not surprising that Eshi and CyFishy disagree on the meaning of multiple virtual bodies – or that my Second Life interlocutors disagree on virtual corporeality more generally, understanding such embodiment in terms ranging from "an extension of myself" or "an extension of my brain" to "our Second Life looks" or "feeling embodied" (thus showing that for some residents at least, "embodiment" is an emic term). No culture is ever univocal, and foundational cultural logics often appear in the background assumptions against which disagreement is intelligible as such. These

stories and conversations exemplify how aspects of virtual-world embodiment sometimes distill or even concretize what it means to be embodied in the actual world – recalling, for instance, how physical-world sociality is predicated on "the inherent multiplicity and indeterminacy of the body we have and are" (Van Wolputte 2004: 259). I cannot overemphasize the importance of understanding that the very real existence of a gap between virtual and actual does not mean they are sealed off from one another and should not inaugurate an asymptotic analysis where they end up "blurring." The ethnographic evidence indicates that the theoretical framework needed is not teleological but indexical. For virtual embodiment, but for all aspects of virtual culture as well, the gap between virtual and actual is constitutive of bidirectional meaning-making, value production, subjectivation, and social praxis.

THEORIZATIONS OF EMBODIMENT

While even a remotely comprehensive review of literatures on embodiment is obviously beyond the scope of this chapter, questions of the body have certainly been central to human thought, harking back to the earliest written records and even prehistoric archeological data, particularly in regard to death and burial. It is not coincidental that "avatar," first used to refer to online bodies in the 1980s, is a Sanskrit term referring to the incarnation of a Hindu deity (Boellstorff 2008: 128). Despite the centrality of the body to biological anthropology and archeology (see Joyce 2005), in cultural anthropology it has held a rather odd position. On the one hand, many paradigms have de-emphasized or downplayed the centrality of embodiment to culture, indicative of an "intellectualist tendency to regard body praxis as secondary to verbal praxis" (Jackson 1989: 122). A result of these trends is that for many cultural anthropologists "the body, despite its ubiquity, has [been] ... in effect simply 'bracketed' as a black box and set ... aside" (Lock 1993: 133). Yet cultural anthropologists have also built up a broad literature on embodiment stretching back to the beginnings of the discipline (for overviews see Farnell 1999; Lock 1993; Reischer and Koo 2004; Scheper-Hughes and Lock 1987; Van Wolputte 2004). This scholarship has shown how the body is produced, reproduced, and disciplined though contexts of culture and power (Martin 1992; Reischer and Koo 2004), and that as a result "the fact of our embodiment can be a valuable starting point for rethinking the nature of culture and our existential situation as cultural beings" (Csordas 1994: 6).

Embodiment has also been a longstanding concern in work on virtual worlds and internet-mediated sociality, even in the early days of non-graphical virtual worlds and their textual avatars (e.g., Argyle and Shields 1996; Balsamo 1996; Doyle 2009; Gee 2008; Heim 1995; Hillis 1999; Ihde 2002; Ito 1997; McRae 1997; Mitchell and Thurtle 2004; Nakamura 2007; Reid 1996; Stone 1991; Sundén 2003; Taylor 2002; Van Gelder 1991; White 2006; Yee and Bailenson 2007). Embodiment even inspired the first virtual world in the contemporary sense. In 1970, Myron Krueger and a colleague were working in different rooms but collaborating using cameras trained on their respective monitors, so that their hands appeared superimposed:

> As I moved my hand to point to the data my friend had just sent, the image of my hand briefly overlapped the image of his. He moved his hand ... I was struck with the thought

> that he was uncomfortable about the image of my hand touching the image of his… Without saying anything, I subtly tested my hypothesis. Sure enough, as I moved the image of my hand towards his, he repeatedly, but unconsciously, moved the image of his hand to avoid contact (Krueger 1983: 12–127).

For Krueger, then, the pivotal moment in realizing virtual worlds were possible was a moment of virtual embodiment. Significantly for my later discussion, this moment of embodiment was a moment of two hands pointing toward each other (see Boellstorff 2008: 43–44 for further discussion of this historical period and an image of these pointing virtual hands nearly touching).

Feminist and queer work (among other communities of scholarship) has shown how white, male, heterosexual bodies often stand as paradigms for embodiment (e.g. Bordo 1993; Burlein 2005; Prosser 1998; Salamon 2006). In only an apparent paradox, such scholarship has also shown how in many cultural contexts "the body has been and still is closely associated with women and the feminine, whereas the mind remains associatively and implicitly connected to men and the masculine" (Grosz 1995: 32; see also Bigwood 1991; Probyn 1991). This attention to gender, race, and sexuality is crucial and I have addressed these topics in my work on virtual worlds as well as on sexuality and national belonging (e.g., Boellstorff 2005, 2007), but I have come to realize that the question of place must be central to any theory of the virtual body. I contend that virtual embodiment is always embodiment in a virtual place, and that this placeness of virtual worlds holds foundational implications for online corporeality.

Virtual Chora

In previous research I have emphasized that virtual worlds are places (see Boellstorff 2008, chapter 4), as encapsulated in a telling prepositional distinction: in English you typically go "on" a website but "in" a virtual world. Richard Bartle, a pioneer in the design of virtual worlds, noted succinctly that "virtual worlds are not games. Even the ones written to *be* games aren't games. People can play games *in* them, sure, and they can be set up to that end, but this merely makes them venues. The Pasadena Rose Bowl is a stadium, not a game" (Bartle 2004: 475; emphasis in all quotations is in the original). In this sense it is "wrong to conceive of the virtual as a kind of indetermination, as a formless reservoir of possibilities that only actual beings identify" (Badiou 2000: 50; see Deleuze 2004).

I have also emphasized the importance of *techne* to virtual worlds. Briefly, Greek thought differentiated *episteme*, or knowledge, from techne, the root of "technology." Most translations of *techne* interpret it as meaning something like "art" or "craft;" Heidegger frames it as meaning as "to make something appear, within what is present, as this or that, in this way or that way" (Heidegger 2001 [1971]: 157). Heidegger's emphasis on "this or that," on what linguists would term an indexical relationship, underscores how techne introduces a gap between the way the world was before and after its application – in the way that, for instance, a simple tube made from a reed allows a person to breathe underwater, an ability the person would not have prior to the techne in question (this example is from Beniger 1986: 9; see Boellstorff 2008: 55). What makes virtual worlds distinctive – for, despite their antecedents, they

cannot be reduced to that which came before them – is that for the first time techne works not on the actual world, but upon a virtual world that is already the product of techne. Techne turns wood and ideas into a chair, but techne does not just turn ideas and silicon into a virtual world: techne becomes recursive and can also take place "inworld." This has consequences for how we theorize labor and value online, and offline as well (Ulmer 1994: 66).

To push further on this relationship between place and the virtual body, I will now link techne with another concept from ancient Greek philosophy: *chora*, a term best known from its centrality in *Timaeus*, one of Plato's late dialogues. Although philosophers have debated this term for two millennia, most would agree that in Plato's view chora is the basis of being, such that "forms come to be *in* it without ever being *of* it" (Sallis 1999: 109). Analogies Plato uses to illustrate chora include the wax upon which an image is stamped, the odorless oil used to make a perfume, and a mass of gold:

> That is modeled into all possible figures or shapes [for instance, a triangle …] if someone were to point to one of the figures and ask what it *is*, the safest answer would be that it is gold; but as for the triangle and other figures formed from the gold, one should avoid speaking of them as being, since they are changing even while one is thus speaking […] The gold is an image of that which receives all the fleeting images, an image of what Timaeus has called [chora] (Sallis 1999: 107–108).

One way to think about this triple relation between idea, chora, and thing is that of father, mother, and child (Ulmer 1994: 63–64), and indeed chora can connote receptacle, or even "the image of the nurse, a kind of surrogate mother who holds, aids, and succors the newly born child" (Sallis 1999: 99; see also Derrida 1990; Derrida and Eisenman 1997). A range of feminist thinkers have drawn upon this meaning of chora to develop feminist theories of embodiment (Bianchi 2006; Braziel 2006; Burchill 2006; Grosz 1995; Kristeva 1984; Margaroni 2005).

These theories are immensely valuable, but as Grosz admits, they sideline another set of meanings for chora (Grosz 1995: 112). Elsewhere in Plato's dialogues – and in ancient Greek society more generally – "chora" appears in statements like "Crete is not a level chora," or in debates over adapting the sport of horse racing to the nature of the chora (Sallis 1999: 116). In these contexts, the antonym of chora is *polis*, the city – and chora clearly means something like landscape, land, country, or simply "place," for "Plato never seems to abandon the reference to country or land expressed in ordinary uses of the term *chora*. Rather, he extrapolates from those meanings to form a technical usage in which *chora* expressed *shared space or common visual field*" (Ashbaugh 1988: 103). In fact, "*chora* stands out as the oldest Greek word for place, appearing in Homer and Hesiod" (Walter 1988: 120). Recall that Second Life and many other virtual worlds have a rural feel to them: with chora in mind, we might ask if there could be more to this sense of virtual world as countryside than the mere need to reduce server load.

If we go back even further, to the first written records in the *Iliad* of "*choron*" and "*choros*," which are linked to chora, we find that these terms "refer to both a dance and a dancing floor … we see here an emerging recognition that a precondition for activity is a place for it to occur, as dancing requires a dancing floor … the growing realization that place and making are conjoined" (Rickert 2007: 254). Chora was

distinguished from *topos*, also often translated as "place," in that chora is place made meaningful through the embodied human engagement of techne. For instance: "At the opening of Sophocles' *Oedipus at Colonus* ... [Antigone] tells Theseus that he will show him the *choros* where Oedipus must die, but warns Theseus not to reveal the *topoi* in which it lies. Here, *topos* stands for the mere location ... of the sacred *choros*, the grave" (Walter 1988: 120).

Virtual worlds are thus chora recursively constituted through the work of techne itself, as if dancing bought a dancing-floor into being. Virtual worlds show the value in conceptualizing chora not in terms of topography, but in terms of choragraphy (see Ulmer 1994), or even a "choreography" of techne with chora. In an eerie anticipation of virtual worlds, Sallis summarized the effect of chora as follows: "[Chora] grants, furnishes, supplies an *abode* to all things ... [chora], in which the phantoms come and go, is that other that secures the image in whatever trace of being it has ... One could call it ... a ghost scene that, enshrouding precisely in letting appear, endows the fleeting specters with whatever trace of being they might enjoy" (Sallis 1999: 122).

In 1985, Richard Mohr emphasized that Plato's analogy of gold was inadequate because gold is a thing of the actual world – a physicality – while in contrast the notion of chora does not entail:

> ... viewing space as a material constituent out of which substances are created. Rather space is a medium or field in which phenomena appear as (non-substantial) images. If Plato had lived into [the twentieth] century, he might very well have chosen, not gold, but a movie screen or television screen as his analogue to a field across which ceaselessly changing non-substantial images may flicker. (Mohr 1985: 94)

Writing 25 years after this statement, I contend that had Plato lived into the 21st century, he might very well have chosen, not a movie screen, but a virtual world as analogue and exemplar of chora. Virtual worlds underscore how chora is not place per se, but place-making or worlding (Zhan 2009), the embodied "dance" of techne making possible "being-in-the-world." As this last term suggests, this reframing of chora links it to a phenomenology of the virtual body.

BEING-INWORLD: THE DIGITAL RELATION

Pivotal to my theoretical framework is the phenomenological insight that embodiment, as part of being, is always "being-in-the-world," like a dancer on a dance floor. Embodiment is always emplacement, suggesting that there is more to the virtual body than avatars: as in the actual world, the virtual body is always a " 'spatial body' ... produced and ... the production of space ... [and] immediately subject to the determinants of that space" (Lefebvre 1991: 195). Virtual body and virtual world constitute each other, recalling the broader phenomenological conclusion that "the body can no longer be regarded as an entity to be examined in its own right but has to be placed in the context of a world" (Macaan 1993: 174). The notion of being-in-the-world has been used to examine human–computer interaction in the actual world (e.g., Dourish 2004), and its productive utility extends to virtual contexts. It may not be coincidental that going back to "Videoplace" and "Habitat," and continuing through "World of

Warcraft," "There," and "Free Realms," the names of many virtual worlds have emphasized place rather than avatars: we can transform the idea of "being-in-the-world" to "being-in-the-virtual-world" or just "being-inworld." This crucial pluralization of worlding underscores how virtual embodiment cannot be understood apart from its manifestation in specific virtual worlds, though of course we will discover commonalities between virtual worlds as well as differences.

The centrality of world to embodiment has been a common theme of phenomenological thinking. Husserl's notion of the "life-world," for instance, highlights "the intersubjective, mundane world of background understandings and experiences of the world" (Dourish 2004: 106), which can now include a set of background understandings and experiences about virtual worlds. Merleau-Ponty approached this question of co-constitution of body and world though his notion of "flesh," through which distinctions like body versus world were "redefined as relational, intertwined and reversible aspects of a single fabric. [He] uses the term the flesh to designate this fabric. And he refers to both the flesh of the body … and the flesh of the world … The perceiving subject, from this point of view, forms part of the visible world" (Crossley 1995: 47; see also Leder 1990). We may thus think of virtual flesh as the intertwined fabric, emerging from virtual chora, that forms a shared fabric of virtual embodiment and virtual world.

Indeed, the key way that *Avatar* accurately represented virtual corporeality was its identification of emplacement as essential to embodiment. As noted earlier, this took one of two mutually exclusive modalities on Pandora: humans had to embody using either Na'vi avatars or some combination of masks and robotic exoskeletons. This neatly sums up the difference between the avatar and the "cyborg," a now-classic future in science and technology studies (Haraway 1991). In distinction to the still-earlier figure of the android (a robotic approximation of the human body), the cyborg is part human and part machine – predicated on relationships of interpenetration and attachment, as in the prosthetic relationship between artificial hand and severed arm. In contrast, the avatar is based upon a gap – there is a clear and ontologically foundational gap between Jake Sully's avatar body and Jake Sully's actual-world body in a control pod, just as there is a clear and ontologically foundational gap between an avatar and an actual-world person, and between any virtual world and the actual world. Ideas, metaphors, power relations, and even forms of materiality routinely move across this gap between the virtual and actual, but it is the gap and attendant movements across it – works of techne – that make the virtual possible at all. It is instructive to consider the prosthetic relationship between artificial hand and severed arm in light of Merleau-Ponty's ruminations on phantom limbs:

> To have a phantom arm is to remain open to all the actions of which the arm alone is capable; it is to retain the practical field which one enjoyed before mutilation. The body is the vehicle of being in the world, and having a body is, for a living creature, to be intervolved in a definite environment, to identify oneself with certain projects and be continually committed to them. (Merleau-Ponty 1962: 81–82)

Merleau-Ponty here emphasized how embodiment involves "action" in a "practical field." The body is constitutive of being-in-the-world, a "definite environment" of projects, of techne, and a changed body can retain a memory of the "definite

environment" before the change (for instance, via the phenomenon of a phantom limb). We do not know how Merleau-Ponty might have revised his understanding of phantom limbs were the idea of avatar limbs available to him. However, it seems possible that his rethinking would include how virtual bodies, limbs and all, make possible human action in the "definite environment" of a virtual world, and how being-inworld thus enables new possibilities for corporeality.

Embodiment as emplacement involves what Heidegger termed "dwelling." For Heidegger – for whom only one world, the earth, was thinkable – "to be a human being means to be on the earth as a mortal. It means to dwell" (Heidegger 2001 [1971]: 145). Heidegger noted that the Old German and Old English term *buan*, meaning "to build or dwell" and still discernible in the modern English term "neighbor" (near-dweller), is also the root of the modern German copula *Ich bin*, I am, I exist. To exist is to dwell in a place and to draw upon techne in order to participate in the building of that place: "being-in-the-world … has to be understood in terms of tasks, actions to be accomplished, a free space which outlines in advance the possibilities available to the body at any time" (Macaan 1993: 174). This is why Merleau-Ponty regarded embodiment not as "a thing in objective space, but as a system of possible actions, a virtual body with its phenomenal 'place' defined by its task and situation. My body is wherever there is something to be done" (Merleau-Ponty 1962: 250). Until January 2005, in Second Life the amount of time an avatar spent in a location was in fact termed "dwell" (Boellstorff 2008: 95), and notions of dwelling remain central to notions of virtual embodiment in Second Life and beyond.

It is helpful to think about this dwelling-relationship between embodiment and place in terms of indexicality. When Heidegger referred to techne as making something appear "as this or that, in this way or that way," he emphasized an indexicality, a relation of pointing, that lies behind the mutually constitutive being of body and world. This indexical relation of making something appear "as this or that" is predicated on chora: it links chora to techne. In this regard Plato's analogy of chora to gold is telling because:

> that analogy tells us that whenever we observe objects regularly exchanging their look or their shape, we cannot call those things *this* or *that* if we wish to remain close to the truth. But if … something remains constant throughout the change, we can rightly say that the enduring item deserves both the fixed reference of the definite indicative pronouns and a specific name [chora]. (Ashbaugh 1988: 115).

This indexical relation is emergent in the relation between actual bodies and their emplacement in landscapes of perception and sociality: "the forms of the landscape – like the identities and capacities of its human inhabitants – are not imposed upon a material substrate but rather emerge as condensations or crystallizations of activity within a relational field" (Ingold 2004: 333).

In my prior work, I have noted that oftentimes "digital" (as in some uses of "digital media") does little more than stand in for "computational" or "electronic" (Boellstorff 2008: 18). However, a very different approach would begin by noting that the etymologies of digit as "finger" and index as "forefinger" converge on a relation of pointing that draws together "digit-al" and "index-ical." Invoking Heidegger's indexical understanding of techne, the digital might be said to "point to" virtual

embodiment as being-inworld – as made possible by the "digit-al" gap. This recalls the gap between 0 and 1 in digital binary code, or the gap between the fingers of God and Adam that in Michelangelo's famous Sistine Chapel painting marks the moment of the human body's creation.

Because virtual worlds allow techne to become recursive, virtual embodiment is digital in the sense that it enables indexicality within virtual worlds: it allows the digital to "point at" itself. Indeed, there is a striking difference between the Sistine Chapel image and Krueger's drawing of his virtual hand pointing at his colleague's virtual hand in 1970. Both images feature a constitutive gap between two pointing hands, but in comparison to a creator/created hierarchy, with God above and Adam sitting below, Krueger's image shows an act of recursive creation – the fingers point at each other in a mutually constitutive circle – recalling not Michelangelo so much as the famous Escher drawing of two hands drawing each other into being. Indexicality provides a different way of understanding the digital relation with regard to the virtual body.

In developing this line of analysis, I have found it illuminating to turn to the phenomenologist Karl Jaspers's notion of the cypher, an "objectivity which is permeated by subjectivity and in such a way that Being becomes present in the whole" (Jaspers 1959: 35). Derived from the Arabic word for "zero" – the binary "0" to the pointing "1" of the digit – the originary meaning of "cypher" is "an arithmetical symbol or character of no value by itself, but which increases or decreases the value of other figures according to its position" (OED 2010). In other words, its value is not symbolic – predicated on signifying meaning – but indexical, predicated on positionality and pointing. Extended meanings include "a person who fills a place, but is of no importance or worth, a nonentity, a 'mere nothing,'" and "an intertexture of letters, esp. the initials of a name, engraved or stamped on plate, linen" (OED 2010). Recall how one image of chora provided by Plato is "a mass of wax or other soft material on which the imprint of a seal can be made" (Sallis 1999: 108). In a virtual-world context, to "fill a place" is the effect of a virtual body's being-inworld. If virtual worlds can be considered instances of "the world of the cyphers" (Jaspers 1959: 49), then the avatarized subject of that being-inworld would be not the cyborg, but the "cypherg." The cypherg is virtual corporeality through which "a *participation* in Being takes place" (Jaspers 1959: 61), a participation through techne that makes possible the conditions for emplaced being itself. A recursive indexicality, made possible by the pluralization of being-inworld, is quite literally the "point" of the virtual body.

CONCLUSIONS: POLITICS OF VIRTUAL EMBODIMENT

In this chapter, I have sought to develop a theory of the virtual body that links (1) ethnographic insights from prior work by myself and other scholars with (2) a theoretical architecture drawing from a range of philosophical perspectives and (3) the introduction of three new concepts: virtual chora, being-inworld, and the cypherg. Given limits of space and scope, my argument is clearly provisional and heuristic, intended to suggest directions for ethnographic inquiry. A blockbuster movie like *Avatar* may grab headlines for a few years, but it is through everyday online practices that new virtual embodiments will emerge.

Over a hundred million persons already participate in virtual worlds: future research will be crucial to understand differing and shared ways that these virtual worlds effect actual-world socialities, as they increasingly imbricate with them in a staggering range of indexical relationships. One fascinating issue involves the question of how the pluralization of worlding offered by being-inworld might act as a form of internal destabilization, challenging the Western cultural logics of place and embodiment that I have worked to trace and defamiliarize in this chapter.

In addition, the growth of virtual worlds raises new possibilities for non-Western critiques and transformations of virtual embodiment. As the notion of "avatar" suggests, non-Western genealogies of embodiment have shaped virtual worlds since their beginnings, but these are clearly minor influences in the context of a dominant Western (indeed, American and even Californian) ideology of the virtual (Barbrook and Cameron 2001). In analyzing how indigenous persons of North and South America have understood embodiment, Viveiros de Castro notes that "the Amerindian emphasis on the social construction of the body cannot be taken as the culturalization of a natural substrate but rather as the production of a distinctly human body, meaning *naturally* human" (Viveiros de Castro 1998: 480). Such a notion of the human body as a production of nature through social engagement would offer just one of many possible alternative genealogies of virtual embodiment.

Developing our ethnographic and theoretical understandings of the virtual body can thus provide powerful new ways of apprehending not just virtual worlds, but also how "the computer and the worlds it generates reveal that the world in which we live, the [actual] world, has always been a space of virtuality" (Grosz 2001: 78). The virtual body can teach us about actual-world embodiment. For instance, for Merleau-Ponty bodily movement "superimposes upon physical space a virtual or human space" (Merleau-Ponty 1962: 111). But when virtual bodies and virtual worlds enter the picture, the verb "superimpose" becomes inadequate for capturing reconfigurations of "world" and thus of ethnographic fieldsite. Might some anthropologists find treating virtual worlds as fieldsites unsettling not so much because of their virtuality, but because of their corollary ability to destabilize notions of physical place, radically demonstrating the cultural constitution of the "fieldsite" (Gupta and Ferguson 1997)? In this sense "it is interesting that at just about the time the last of the untouched 'real-world' anthropological field sites are disappearing, a new and unexpected kind of 'field' is opening up incontrovertibly social spaces in which people still meet face-to-face, but under new definitions of both 'meet' and 'face'" (Stone 1991: 85).

For anthropologists and others interested in culture, the great advantage of a phenomenological approach to the virtual body is that it highlights how new possibilities exist for embodiment when it is not just culture that can be multiple, but the world as well, for "the notion of the virtual … provid[es] a new way of thinking *multiplicity*" (Ansell Pearson 2002: 4). This opens up new possibilities for forms of multinaturalism (Viveiros de Castro 1998: 472) that can reconfigure the multiculturalist logics of inclusion and belonging that typify much contemporary anthropological thinking. Where Merleau-Ponty stated that "consciousness projects itself into a physical world and has a body, as it projects itself into a cultural world and has its habits" (Merleau-Ponty 1962: 137), I would argue that being-inworld productively reframes this distinction between physical and cultural worlds. It does so by making acts of projection constitutive of worlds as well as bodies: the virtual body provides crucial clues to

cultural practices of worlding. Too often, only the first term of the phrase "virtual world" receives theoretical and ethnographic attention; only by deepening our understanding of "world" can we truly understand virtual embodiment and virtual worlds more generally.

This has political consequences, because it suggests that an attention to the politics of placemaking may have crucial consequences for virtual embodiment. My theoretically informed hunch is that what might at first seem to be marginally relevant topics like virtual terraforming, property, building, and commodities are crucial to the politics of the virtual body. Many critics of Heidegger, particularly Levinas, emphasized how "thinking in terms of visualizable totalities necessarily leads to totalitarian ways of acting" (Keyes 1972: 122). In other words, the idea of being-in-a-singular-world shapes a totalitarian understanding of selfhood and society. In contrast, virtual worlds pluralize being-in-the-world. Since no one lives 24 hours a day in a single virtual world without any form of actual-world sociality, and few persons participate in only one virtual world (many of which take the form of online games), being-inworld is always a form of being-in-multiplicity. This opens possibilities for internal and external reconfigurations of Western ontologies of place, body, and the social (and thus new deconstructions of the internal/external dichotomy itself).

Any truly anthropological approach to embodiment "begins from the methodological postulate that the body is not an *object* to be studied in relation to culture, but is to be considered as the *subject* of culture, or in other words as the existential ground of culture" (Csordas 1988: 5). The fascinating, possibly revolutionary potential of virtual worlds for embodiment lies in how virtual corporeality co-grounds culture with a being-inworld founded in new pluralizations of place and sociality. From virtual chora emerges the cypherg, a figure of online corporeality, a figure whose recursively indexical being-inworld stands to fundamentally reconfigure what it means to be human – even while drawing upon and even concretizing longstanding notions of the human. To what new possibilities does placing the virtual body "point?" At stake is nothing less than the "the digital" itself.

REFERENCES

Ansell Pearson, Keith, 2002   Philosophy and the Adventure of the Virtual: Bergson and the Time of Life. London: Routledge.
Argyle, Katie, and Rob Shields, 1996   Is there a Body on the Net? *In* Cultures of Internet: Virtual Spaces, Real Histories, Living Bodies. Rob Shields, ed. pp. 58–69. London: Sage.

Ashbaugh, Anne Freire, 1988   Plato's Theory of Explanation: A Study of the Cosmological Account in the *Timaeus*. Albany: State University of New York Press.

Au, Wagner James, 2008a   Friday's Traveler: The Avatar Who Loved Himself. New World Notes, <http://nwn.blogs.com/nwn/2008/06/thursdays-trave.html>, accessed February 28, 2010.

Au, Wagner James, 2008b   The Husband That Eshi Made. New World Notes, <http://nwn.blogs.com/nwn/2008/05/the-husband-tha.html>, accessed February 28, 2010.

Badiou, Alain, 2000   Deleuze: The Clamor of Being. Minneapolis: University of Minnesota Press.

Balsamo, Anne, 1996   Technologies of the Gendered Body: Reading Cyborg Women. Durham, NC: Duke University Press.

Barbrook, Richard, and Andy Cameron, 2001   Californian Ideology. *In* Crypto Anarchy, Cyberstates, and Pirate Utopias. ed. Peter Ludlow. pp. 363–387. Cambridge, MA: MIT Press.

Bartle, Richard A., 2004   Designing Virtual Worlds. Indianapolis: New Riders.

Beniger, James R., 1986   The Control Revolution: Technological and Economic Origins of the Information Society. Cambridge, MA: Harvard University Press.

Bianchi, Emanuela, 2006   Receptacle/Chora: Figuring the Errant Feminine in Plato's Timaeus. Hypatia 21(4): 124–146.

Bigwood, Carol, 1991   Renaturalizing the Body (With the Help of Merleau-Ponty). Hypatia 6(3): 54–73.

Boellstorff, Tom, 2005   The Gay Archipelago: Sexuality and Nation in Indonesia. Princeton: Princeton University Press.

Boellstorff, Tom, 2007   A Coincidence of Desires: Anthropology, Queer Studies, Indonesia. Durham, NC: Duke University Press.

Boellstorff, Tom, 2008   Coming of Age in Second Life: An Anthropologist Explores the Virtually Human. Princeton: Princeton University Press.

Bordo, Susan, 1993   Unbearable Weight: Feminism, Western Culture, and the Body. Berkeley: University of California Press.

Braziel, Jana Evans, 2006   Being and Time, Non-Being and Space … (Introductory Notes Toward an Ontological Study of "Woman" and Chora). *In* Belief, Bodies, and Being: Feminist Reflections on Embodiment. Deborah Orr, Linda López Mcallister, Eileen Kahl, and Kathleen Earle, eds. pp. 103–125. Oxford: Rowman & Littlefield.

Burchill, Louise, 2006   Resituating the Feminine in Contemporary French Philosophy. *In* Belief, Bodies, and Being: Feminist Reflections on Embodiment. eds. Deborah Orr, Linda López Mcallister, Eileen Kahl, and Kathleen Earle. pp. 81–102. Oxford: Rowan & Littlefield.

Burlein, Ann, 2005   The Productive Power of Ambiguity: Rethinking Homosexuality through the Virtual and Developmental Systems Theory. Hypatia: A Journal of Feminist Philosophy 20(1): 21–53.

Crossley, Nick, 1995   Merleau-Ponty, the Elusive Body and Carnal Sociology. Body & Society 1(1): 43–63.

Csordas, Thomas J., 1988   Embodiment as a Paradigm for Anthropology. Ethos 18(1): 5–47.

Csordas, Thomas J., 1994   Introduction: the Body as Representation and Being-in-the-world. *In* Embodiment and Experience: The Existential Ground of Culture and Self. ed. Thomas J. Csordas. pp. 1–24. Cambridge: Cambridge University Press.

Damer, Bruce, 1998   Avatars! Exploring and Building Virtual Worlds on the Internet. Berkeley: Peachpit Press.

Deleuze, Gilles, 2004   Difference and Repetition. London: Continuum.

Derrida, Jacques, 1990   A Letter to Peter Eisenman. Assemblage 12: 6–13.

Derrida, Jacques, and Peter Eisenman, 1997   Chora L Works. New York: The Monacelli Press.

Dourish, Paul, 2004   Where the Action Is: The Foundations of Embodied Interaction. Cambridge, MA: MIT Press.

Doyle, Denise, 2009   The Body of the Avatar: Rethinking the Mind-body Relationship in Virtual Worlds. Journal of Gaming and Virtual Worlds 1(2): 131–141.

Farnell, B., 1999   Moving Bodies, Acting Selves. Annual Review of Anthropology 28: 341–73.

Gee, James Paul, 2008   Video Games and Embodiment. Games and Culture 3(3/4): 253–263.

Grosz, Elizabeth, 1995   Women, Chora, Dwelling. *In* her Space, Time and Perversion: Essays on the Politics of Bodies. pp. 111–124. London: Routledge.

Grosz, Elizabeth 2001   Architecture from the Outside: Essays on Virtual and Real Space. Cambridge, MA: MIT Press.

Gupta, Akhil, and James Ferguson, 1997   Discipline and Practice: "The Field" as Site, Method, and Location in Anthropology. *In* Anthropological Locations: Boundaries and Grounds of a Field Science. Akhil Gupta and James Ferguson, eds. pp. 1–46. Berkeley: University of California Press.

Haraway, Donna J., 1991   A Cyborg Manifesto: Science, Technology, and Socialist-feminism in the Late Twentieth Century. *In* Simians, Cyborgs, and Women: The Reinvention of Nature. Donna J. Haraway, ed. pp. 149–82. London: Routledge.

Heidegger, Martin, 2001 [1971] Building Dwelling Thinking. *In* Poetry, Language, Thought. pp. 143–159. New York: Harper Perennial Modern Classics.

Heim, Michael, 1995 The Design of Virtual Reality. *In* Cyberspace/Cyberbodies/Cyberpunk: Cultures of Technological Embodiment. Mike Featherstone and Roger Burrows, eds. pp. 65–77. London: Sage.

Hillis, Ken, 1999   Digital Sensations: Space, Identity, and Embodiment in Virtual Reality. Minneapolis: University of Minnesota Press.

Ihde, Don, 2002   Bodies in Technology. Minneapolis: University of Minnesota Press.

Ingold, Tim, 2004   Culture on the Ground: The World Perceived Through the Feet. Journal of Material Culture 9(3): 315–340.

Ito, Mizuko, 1997   Virtually Embodied: The Reality of Fantasy in a Multi-User Dungeon. *In* Internet Culture. David Porter, ed. pp. 87–109. New York: Routledge.

Jackson, Michael, 1989   Paths toward a Clearing: Radical Empiricism and Ethnographic Inquiry. Bloomington: Indiana University Press.

Jaspers, Karl, 1959   Truth and Symbol. Translated and with an Introduction by Jean T. Wilde, William Kluback, and William Kimmel. Albany: NCUP, Inc.

Joyce, Rosemary, 2005   Archaeology of the Body. Annual Review of Anthropology 34: 139–158.

Keyes, C. D., 1972   An Evaluation of Levinas' Critique of Heidegger. Research in Phenomenology 2: 121–142.

Kristeva, Julia, 1984   Revolution in Poetic Language. New York: Columbia University Press.

Krueger, Myron W., 1983   Artificial Reality. Reading, MA: Addison-Wesley.

Leder, Drew, 1990   Flesh and Blood: A Proposed Supplement to Merleau-Ponty. Human Studies 13: 209–219.

Lefebvre, Henri, 1991   The Production of Space. Donald Nicholson-Smith, trans. Oxford: Blackwell.

Lock, Margaret, 1993   Cultivating the Body: Anthropology and Epistemologies of Bodily Practice and Knowledge. Annual Review of Anthropology 22: 133–155.

Macaan, Christopher, 1993   Four Phenomenological Philosophers: Husserl, Heidegger, Sartre, Merleau-Ponty. London: Routledge.

Margaroni, Maria, 2005   "The Lost Foundation": Kristeva's Semiotic *Chora* and Its Ambiguous Legacy. Hypatia 20(1): 78–98.

Martin, Emily, 1992   The End of the Body? American Ethnologist 19(1): 121–140.

McRae, Shannon, 1997   Flesh Made Word: Sex, Text, and the Virtual Body. *In* Internet Culture. David Porter, ed. pp. 73–86. New York: Routledge.

Merleau-Ponty, Maurice, 1962   Phenomenology of Perception. New York: Humanities Press.

Mitchell, Robert and Phillip Thurtle, ed., 2004   Data Made Flesh: Embodying Information. New York: Routledge.

Mohr, Richard, 1985   The Platonic Cosmology. Leiden: E. J. Brill.

Nakamura, Lisa, 2007   Digitizing Race: Visual Cultures of the Internet. Minneapolis: University of Minnesota Press.

Oxford English Dictionary online, 2010   "Cypher." <http://dictionary.oed.com/cgi/entry/50040044?single=1&query_type=word&queryword=cypher&first=1&max_to_show=10>, accessed March 15, 2010.

Probyn, Elspeth, 1991   This Body Which Is Not One: Speaking an Embodied Self. Hypatia 6(3): 111–124.

Prosser, Jay, 1998   Second Skins: The Body Narratives of Transsexuality. New York: Columbia University Press.

Reid, Elizabeth M., 1996   Text-based Virtual Realities: Identity and the Cyborg Body. *In* High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace. Peter Ludlow, ed. pp. 327–345. Cambridge MA: MIT Press.

Reischer, Erica, and Kathryn S. Koo, 2004   The Body Beautiful: Symbolism and Agency in the Social World. Annual Review of Anthropology 33: 297–317.

Rickert, Thomas, 2007   Toward the *Chōra*: Kristeva, Derrida, and Ulmer on Emplaced Invention. Philosophy and Rhetoric 40(3): 251–273.

Salamon, Gayle, 2006   Boys of the Lex: Transgenderism and Rhetorics of Materiality. GLQ: A Journal of Lesbian and Gay Studies 12(4): 575–97.

Sallis, John, 1999   Chorology: On Beginning in Plato's *Timaeus*. Bloomington: Indiana University Press.

Scheper-Hughes, Nancy, and Margaret Lock, 1987   The Mindful Body: A Prolegomenon to Future Work in Medical Anthropology. Medical Anthropology Quarterly 1(1): 6–41.

Stone, Allucquère Rosanne, 1991   Will the Real Body Please Stand Up? *In* Cyberspace: First Steps, Michael Benedikt, ed. pp. 81–118.

Sundén, Jenny, 2003   Material Virtualities: Approaching Online Textual Embodiment. New York: Peter Lang.

Taylor, T. L., 2002   Living Digitally: Embodiment in Virtual Worlds. *In* The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments, Ralph Schroeder, ed. pp. 40–62. London: Springer-Verlag.

Ulmer, Gregory, 1994   Heuretics: The Logic of Invention. Baltimore: Johns Hopkins University Press.

Van Gelder, Lindsey, 1991 [1985]   The Strange Case of the Electronic Lover. *In* Computerization and Controversy: Value Conflicts and Social Choices. Charles Dunlop and Rob Kling, eds. pp. 364–375. Boston: Academic Press.

Van Wolputte, Steven, 2004   Hang On to Your Self: Of Bodies, Embodiment, and Selves. Annual Review of Anthropology 33: 251–69.

Viveiros de Castro, Eduardo, 1998   Cosmological Deixis and Amerindian Perspectivism. Journal of the Royal Anthropological Institute 4(3): 469–488.

Walter, Eugene Victor, 1988   Placeways: A Theory of the Human Environment. Chapel Hill: University of North Carolina Press.

White, Michele, 2006   The Body and the Screen: Theories of Internet Spectatorship. Cambridge, MA: MIT Press.

Yee, Nick and Jeremy Bailenson, 2007   The Proteus Effect: The Effect of Transformed Self-Representation on Behavior. Human Communication Research 33: 271–290.

Zhan, Mei, 2009   Other-Worldly: Making Chinese Medicine through Transnational Frames. Durham, NC: Duke University Press.