Novel Realities and Simulated Structures: The Posthuman Fusion of Forms and Simulacra in Richard Powers's *Plowing the Dark*

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Abstract: This article examines the articulations of representation and being in Richard Powers's novel *Plowing the Dark* (2000) from a posthuman perspective. In its double-narrative structure, the novel introduces a dialectic relationship between Plato's theory of the forms and Baudrillard's notions of the simulacra as its rudiments for exploring the boundaries of reality. N. Katherine Hayles's theory of the posthuman provides an apt mediating lens to examine the competing visions of Platonic and Baudrillardian reality as presented in the novel. Examined in this way, *Plowing the Dark* not only asks questions about the representation of reality but ultimately performs narratively the patterns of reflexivity and virtuality unique to the posthuman world. The article concludes by arguing that Richard Powers employs the form of the novel to manipulate the semi-stable parameters of various systems of reality while engaging with the paradigms of the posthuman to explore the relationship between the construction and mediation of the real.

I mitations produce pain or pleasure," wrote Samuel Johnson in his preface to the works of William Shakespeare in 1765, "not because they are mistaken for realities, but because they bring realities to mind" (ix).[1] With an Aristotelian appreciation for the boundary between art and life, Johnson suggests that reality, mediated by art, can exist in the mind.[2] In this well-ordered early modern worldview,

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1   Johnson's preface to the works of Shakespeare was originally published in 1765. This passage is quoted from the 1833 edition.

2   In his *Poetics*, Aristotle presents an ontology of mimetic composition, asserting that representations are separate from reality. He argues that humans are "by nature [...] given to representations" (5; iv, 1448b), from which they can both learn and derive pleasure. For Aristotle, reality is difficult to study, and thus representations have a particular utility (3-4; iii, 1448a).

imitations are derivatives of reality, and the boundary between the cognitive and the real is comprehensible, if not definite. Yet what would happen if Johnson's aesthetic framework were to fail? What would happen if imitations were to begin producing realities? What would happen if we could not tell the difference between the two? These are some of the questions posed by Richard Powers's *Plowing the Dark* (*PtD*), a novel that manipulates Platonic ideals and Baudrillardian perspectives as its rudiments for exploring the boundaries of reality. "*The mind is the first virtual reality*," posits Lim, one of the novel's myriad computer programmers: "He groped for the concept, by smoky torchlight. *It gets to say what the world isn't yet. Its first speculations bootstrap all the others . . .*" (*PtD* 130).[3] In Lim's compliment to Johnson's claim, "[i]*t*" refers to "[t]*he mind*," which is not only the place for the reception of imitations but the site of production as well. Here, Powers situates Lim within Plato's allegorical cave, wherein by "[groping] for the concept, by smoky torchlight" (*PtD* 130), Lim plays the role of the Platonic prisoner who has remained "fettered" in dusky illusion, believing that "the truth is nothing other than the shadows of those artifacts" on the dim walls of the cave (Plato 187; bk. VII, 514a, 515c). For Lim, as for Plato's unenlightened prisoner, "*virtual reality*" (*PtD* 130) and reality appear to be the same thing. Yet Lim conjures an image of the mind as both metaphor and literal speaker of that what "*the world isn't yet*" (130). In this moment, the mind—and likewise the illusion—produces something that seems very much like a new reality.

A cavernous puzzle of aesthetics, *Plowing the Dark* measures and blurs the boundaries of reality through the unfurling of two strikingly disparate narratives. In the first of these, visual artist-turned-advertising professional Adie Klarpol is recruited by former schoolmate and sometimes-lover Steve Spiegel to help design the "Cavern," a "total-immersion environment modeler," which is the pet project of the TeraSys Corporation's "Realization Lab" (24). Lured from New York to Seattle, Adie joins an eclectic team of programmers, hackers, and dreamers to create a virtual reality (VR) experience that culminates with the virtual replication of Byzantium's Hagia Sophia. The second narrative explores the torturous isolation of Taimur Martin, an Iranian American prisoner held by Arab terrorists in Beirut. Narrated primarily in the second person, this narrative refers to Taimur as "you" (20) as it presents the exertions of imagination that keep him from losing his mind. While concerns over the construction of reality are primary throughout the entire novel, these dual narratives nevertheless

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3   Like many of Powers's other novels, *Plowing the Dark* is marked by typographic differences that identify the different narratives. In the virtual reality (VR) narrative, the dialogue is presented in italics. Quotation marks are used in the imprisonment narrative for the present tense while italics indicate dialogue that took place in the past. The 'room' passages are unmarked, with italics used primarily for emphasis.

remain almost entirely unconnected: They are not only set apart geographically and typographically but also rendered in strikingly different narrative modes. Yet correspondence does exist, for the narrative boundaries become permeable in moments of exchange and reflexivity when the different and seemingly unrelated narrative levels interact with and influence each other. These instances unfold in descriptions of constructed 'rooms' that alternate unstably and uncertainly between the two narratives, culminating with a striking miracle of narrative intersection.

Given the reflexive techniques embedded in the narrative, as well as the novel's preoccupation with the role of technology in mediating human experiences of reality, it will be helpful to consider N. Katherine Hayles's theory of the posthuman as articulated in *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. In Hayles's terms, these instances of reflexivity are examples of "informational feedback loop[s]," wherein "*that which has been used to generate a system* [...]*, through a changed perspective* [...] [becomes] *part of the system it generates*" (8). Like any feedback circuit, an informational feedback loop operates when informational outputs are fed back into the system that generated them in the first place, resulting in transformation and change of the whole system. In the case of *Plowing the Dark,* the narratives as informational outputs are fed back into the novel, which is then, as a system, transformed and changed. Yet the "*system*" of the novel is even more complicated, for it directly involves the reader, given Powers's evocative use of the second-person present tense. This has the effect of problematizing the boundary between reader and character at the same time as it both describes and simulates an experience of virtual reality. This narrative technique deepens the text's posthuman performance: By expanding the boundaries of the reflexive system to include the reader, the novel enacts the history of cybernetic theory by engaging with "reflexive," "autopoietic" (Hayles 10), and "virtual" systems of information (13).[4] Thus, examined through the posthuman lens, *Plowing the Dark* not only asks questions about the representation of reality but ultimately performs narratively the patterns of reflexivity and virtuality unique to the posthuman world.

The novel itself thus becomes a stage for the exploration of both representation and being, a dramatization of different modes of reality from the ancient to the postmodern. To provide a foundation, this analysis will begin with an examination of

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4   In 1948, Norbert Wiener, one of the founding fathers of cybernetics, coins the term in his work *Cybernetics: Or Control and Communication in the Animal and the Machine*. He uses the term to describe his field of "control and communication theory, whether in the machine or in the animal" (Wiener 11). Essentially, this is a theory about the ways in which information is communicated and what effects the communication has in regard to the control of the system in which the communication takes place. The history of cybernetic theory as it pertains to the evolution of the posthuman is discussed in greater detail below.

the novel's overt articulations about the nature of reality. The next section will give an overview of Hayles's views of the posthuman and apply them to the novel. Specifically, I will analyze the way two of the novel's artworks—Vincent van Gogh's *Bedroom in Arles* and Byzantium's Hagia Sophia—form 'rooms' that function reflexively to transform the narratives surrounding them. The final section will employ the posthuman as a system that mediates and measures the difficult conflict the novel introduces between the competing models of reality as put forth by Plato and Jean Baudrillard. For Plato, reality is essential and universal, based on the idea of a fundamental, universal, and inviolate truth.[5] Writing in the 1980s, Baudrillard argues that the "real" no longer plays a central role in society (6). Rather, signs have replaced reality and truth, and all reality is reduced to a "simulation" of itself (6).

Richard Powers thus employs the form of the novel to manipulate the semi-stable parameters of various systems of reality while engaging with the paradigms of the posthuman to explore the relationship between the construction and mediation of the real. This is a profoundly novelistic endeavor, for *Plowing the Dark* ultimately suggests that reality is best rendered as an aesthetic system in which the line between what is represented and what simply *is* becomes blurred. It is the function of Powers's novel to identify this line and to ask its readers to do the same.

BOUNDARIES OF THE REAL

Unfolding in two twisting narratives spliced by startling descriptions of unusual 'rooms,' *Plowing the Dark* begins nowhere, out of time, and without a concrete relationship to any referent. The novel's first italicized line unfurls in a timeless *here*: "*This room is never anything o'clock*" (3). This abstract declaration introduces the notion of unbounded temporality and at the same time involves the reader in the space of "*this room*," referring to both the novel itself as well as the narrator's present position. The collapse of here and now develops throughout this first section. Heinz Ickstadt has referred to this collapse as an evocation of "an island space of confinement (out of

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5   Plato's theory of the forms is articulated generally throughout *Republic*, and specifically in regard to art and imitation in "Book X," where Plato uses the allegory of the form of a chair to illustrate his idea of form as universal idea, or essential truth. In his allegory of the cave, Plato describes the "truth" of the "form of the good" that is visible to the enlightened, educated man who has emerged from the cave of illusion: "In the knowable realm, the form of the good is the last thing to be seen, and it is reached only with difficulty. Once one has seen it, however, one must conclude that it is the cause of all that is correct and beautiful in anything, that it produces both light and its source in the visible realm, and that in the intelligible realm it controls and provides truth and understanding" (189; bk. VII, 517c).

time and out of world) that may refer to either of the two realms"—that is, either of the two narratives (5). This rendering emphasizes the ambivalence of the narrative space as well as time. For the novel's first few paragraphs, the reader is trapped in "*this chamber,* [where] *now and forever combine. This room lingers on the perpetual pitch of here*" (*PtD* 3). Exempt from the effects of the passage of time, "*this world*" contrasts with the dynamic and temporal "*template world*" where "*flowers still spill from the bud. Fruit runs from ripe to rot*" (3). The word 'template' refers to a pattern or model used for the production of copies. This suggests that this "*template world*" serves as a pattern for the manufacture of imitations and thus may also serve as the structuring pattern for "*this room*" (3). With its opposition between "*this room*" and the "*template world,*" the opening section introduces the logic of difference, imitation, and the representation of signs that undergirds the novel. This section also introduces the novel's preoccupation with boundaries, for one might ask where the "*template world*" and "*this room*" begin and end. Finally, this first moment emphasizes the reality-producing capacity of language: For a moment, both the "*template world*" and "*this room*" exist, juxtaposed textually.

Out from this timeless vortex emerges the first of the novel's two storylines. It is the late 1980s, and disillusioned painter Adie Klarpol takes a job to collaborate on a virtual reality project. Here, within the Realization Lab's "Cavern," her mandate is to "see," and "draw [...] walk-in, graphical worlds" (*PtD* 9). The characters working in the lab engage in a recursive process of defining the nature of reality as they repeatedly redefine their own roles in the creation of the Cavern. For the "*lab rats* [...] *reality is basically computational, whether or not we'll ever lay our hands on a good, clean copy of the computation*" (82). That is to say, reality is a product of the technical coding language. This also happens to be a measurable phenomenon. Pondering how much data needs to be refreshed in order to "start to deliver believability without a lag," one of the programmers asserts, "*reality demands something on the order of a hundred million. Reality . . . is ten to the eighth surface-filled polygons a second. Minimum*, Spider agreed, and sat down. Freese nodded. *You see? This is the problem. Reality is always a problem*, Spiegel said" (272). With their casual reference to "*reality,*" Powers's programmers suggest that reality is a valid and calculable category. Furthermore, they assume that reality is something that can be technologically reproduced. Adie takes a slightly more cynical view by locating the real within corporate and capitalist systems of production: "*TeraSys. Exxon. GM. Things that make this world. Things people believe in. I'll tell you what's real. Microsoft is real*" (95). For both the programmers and Adie, reality is tied to production, either of language or of goods. While variable clever articulations about the nature of reality persist throughout the narrative, there exists a consistent tension between the "[t]*hings that make this world*" and the verisimilitude of the products. Thus, the discourse about reality is also a discourse about the boundaries of representation and mediation.

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For Adie and her cohort, reality has a social and experiential quality. Their conceptions of reality reflect their faith in the meaningfulness of their creative productions, for they seem to believe that their work maps onto something 'real,' something outside of their own imaginations. Yet for Taimur Martin, the primary character in the second narrative, reality seems a more abstract, if not altogether relative and individually cognitive, phenomenon. Taimur's narrative unfolds in the unusual second person, which results in an emphatic, direct, and somewhat confrontational tone that insists on syntactic collision between the reader and Taimur. As time passes in his stimulation-deprived environment, Taimur begins to witness a breakdown of his mental capacities. "Your mind rebels against the smallest admission of your fate," the narrator tells Taimur/the reader: "Thought becomes a blur. Nothing there. No more than a reflection of the formless pit where they've pitched you" (*PtD* 99). Here, Taimur's mind refuses to accept the fact of imprisonment, and effectively shuts down. The conflict between the mind and the body's actual situation is severe, for it only takes two sentences for the mind that actively "rebels" to transform into a passive "reflection" or mirror of the prison cell (99).

While at first a victim of his "fate" (*PtD* 99), Taimur's mind soon becomes his only tool for survival. Early in his captivity he begins to imagine the newspaper reports of his abduction: "[Y]ou force your two column inches of captivity to materialize on the crazed plaster ceiling. And along with it, you summon up the whole front section of today's *Tribune* [...] the first image of any resolution to grace your private screening room" (101). With imagery evocative of the prison of Plato's cave, this passage suggests an important connection between the imaginary and the sensual, for Taimur's thought actually "materialize[s]," and his reverie becomes something like a silent-cinema experience wherein the text of the imagined newspaper column becomes the "image" in his "private screening room." Taimur begins "replaying every detail of your life you can remember" (188), where "replaying" suggests the performance of recorded visual or audio media, much like the "private screening room" above. This media-saturated diction suggests a connection between the mind's imaginative capacities and its relation to, if not reliance upon, mediated forms of knowledge.

When he finally receives a book from his captors, Taimur rations and cherishes the words, the "gorgeous human thoughts [that] detonate in space all around you, extending their subordinate clauses, flinging their nouns around like burgeoning tracts of starter homes airlifted into arid wastes" (*PtD* 255). This diffuse cluster of images demonstrates the profoundly active and material potential of thoughts-as-words that "detonate" in Taimur's mind, "extending" and "flinging" the parts of language into physical existence. Here, written language has striking physical properties, for the grammatical elements metaphorically possess the potential to shelter the floundering

human, alone in his wasteland, in their hopeful "starter homes." While "[i]n real life, this book wouldn't hold your attention for five minutes," now it shelters Taimur from destruction because "it bears the key to your continued existence" (255). The narrator contrasts Taimur's present circumstances with his "real life," specifically underscoring both the unreality of this nightmare of captivity as well as the notion that 'real life' need not refer to one's actual circumstances. Real life may be as unreal as the contents of a storybook.

Taimur's pictorial description of the capacity of imagination as a process rooted in the experience of media can be seen as the echo of Adie's first experience of virtual reality, wherein she too experiences the 'materialization' of text:

> Up from a hidden seam in the whiteness, a stone slab emerged: a chunk of burnished marble chiseled with text, something Herod would have slapped up on an imperial stele to appall the natives, as deep into rebellious Judaea as he could get away with. The plaque twirled about in space before settling back down in midair, to be read. [...] More stone tablets materialized from on high. They fell into formation alongside one another, forming the beveled buttons of a menu. A floating finger moved upon this list, a disembodied digit that tracked the waves of Spider's wand. (*PtD* 13-14)

Like the tablets presented to Moses on Mount Sinai, the stone slabs carry the significance of a supreme edict. This is at once ironic, for the tablets only represent computer menu items. At the same time, the Biblical import granted to these representations underscores the profound power and potential of VR technology. Furthermore, the fact that this is a textual experience—the icon of entry into the virtual world is itself an image "to be read"—suggests that text mediates the relationship between the virtual and actual worlds.

Reading serves as the process by which both the Cavern's inventors and Taimur negotiate the differences between their physical circumstances and their alternative realities. In this process, the body takes on an unusual role of being both absent and present, as in the passage above, in which "a floating finger moved upon this list, a disembodied digit that tracked the waves of Spider's wand" (*PtD* 14). The "floating" and "disembodied" representation created by the programmer's "wand" suggests at once a kind of magic as it simultaneously emphasizes the transformation and dissolution of the body. Significantly, however, the body stays present: The "floating finger" remains, as does the human operator.

This experience of virtual disembodiment is central throughout *Plowing the Dark*. When Adie learns to manipulate the design software, she realizes that "this was the way the angels in heaven painted: less with their hands than with their mind" (*PtD* 55).

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This idea of the body's subservience to the mind develops throughout the novel, as does that of the body's subservience to the mediations of artistic production. Yet, however much the body may become intertwined with the novel's technologies of representation, the body never entirely disappears. Following a night of vigorous and "desperate" lovemaking (320), Steve recites to Adie the first four lines of the final stanza of W. B. Yeats' "Sailing to Byzantium": "[O]*ut of nature I shall never take / My bodily form from any natural thing, / But such a form as Grecian goldsmiths make / Of hammered gold and gold enamelling . . .*" (*PtD* 321). The speaker rejects the influences of nature in forging the body, preferring instead the inhuman metallic and mechanical creation of the "*Grecian goldsmiths.*" Spiegel's recitation prompts Adie to close her hand "on the skin around his eyes. Her nails clenched, as she pressed back into him. He held still in pain, ready to be blinded" (321). The negation of the natural "*bodily form*" in verse is accompanied by the near obliteration of Spiegel's ability to see, and it seems for a moment that the mechanical body is poised to overwhelm and destroy the natural body. Yet, rather than resulting in an act of bodily obliteration, this becomes a moment of imaginative revelation, for it inspires Adie to undertake the project of creating Byzantium in the Cavern. This instance underscores the relationship between the linguistic-poetic artifact and the material body's ability to both see and imagine. Significantly, Adie's vision of the virtual world intersects inextricably with the physical world, illustrating Hayles' central argument that "for information to exist, it must *always* be instantiated in a medium" (13). Hayles would identify this moment as symptomatic of the condition of the posthuman, a "material-informational entity" for which "there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals" (3). Here, the body is not simply *represented* as a production of the Grecian goldsmiths; it *becomes* an integral part of the system of representation.

POSTHUMAN POSTMODERNISM

The narratives of Adie and Taimur share a preoccupation with the threat of the virtual disembodiment of experience. What happens, then, to the body in the virtual world? As Spiegel articulates, the VR project is an endeavor of "[t]*ime travel* [...]. *The matter transporter. Embodied art; a life-sized poem that we can live inside. It's the grail we've been after since the first campfire recital. The defeat of space and time. The final victory of the imagination*" (*PtD* 159). For Spiegel, VR at once gives art a body at the same time as it eliminates the "*space and time*" of the physical world. Virtual reality is more than a representation of

reality, for it *virtually* eliminates the boundaries between art and life, the boundaries of time, and the limits of the imagination. This, of course, is the purpose of the technology. The philosopher Mark C. Taylor looks at *Plowing the Dark* and contends that "[t]he dream inspiring VR technology is to render the virtual real and the real virtual by erasing the interface separating mind and matter" (92). Hayles expands upon this notion and focuses on perception to question whether the material world is, in fact, a 'real' one: "Virtual reality technologies are fascinating because they make visually immediate the perception that a world of information exists parallel to the 'real' world, the former intersecting the latter at many points and in many ways" (14). Virtual reality eliminates boundaries by manipulating the perceptions of the mind and simultaneously problematizes the role of the body, or "matter," in the experience of reality (Taylor 92). What results is a reconsideration of the very nature of being. Spiegel articulates as much: "*VR reinvents the terms of existence*," he tells Adie, "[i]*t redefines what it means to be human*" (*PtD* 160). As Hayles would argue, this process simultaneously renders the subject, as well as reveals the subject to be, posthuman.

Hayles, working with a term that had been introduced to academic discourse in the 1970s,[6] defines the posthuman as a "point of view" characterized by a set of four assumptions that have played out over a period of history since the end of the Second World War (2). The first of these assumptions is that the posthuman view "privileges informational pattern over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life" (2). In other words, posthumanism has a hierarchical understanding of information and embodiment: Information and patterns are privileged over bodies and physical presence, but materiality nevertheless remains. The second assumption of the posthuman view disrupts the traditional hierarchy of seeing consciousness as the "seat of human identity" (3). Rather, consciousness is a "minor sideshow" (3), secondary to the informational patterns described above. The third assumption "thinks of the body as the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we

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6   Ihab Hassan was one of the first promoters of the term 'posthuman,' which he used in his keynote address to the International Symposium on Postmodern Performance held at the University of Wisconsin in Milwaukee in 1976. Hassan's notion of the posthuman centers on the ways in which the stable binary categories belonging to the tradition of liberal humanism—such as the self/other and science/culture for example—begin to break down in a postmodern context. "We need first to understand that the human form—including human desire and all its external representations—may be changing radically, and thus must be re-visioned," he argued, "[w]e need to understand that five hundred years of humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism" (212). Hayles draws upon Hassan's foundation and reshapes it to address the changes in the human form in the context of cybernetics and computer technologies.

were born" (3). This leads to the fourth and final assumption, that is, that human beings can be "seamlessly articulated with intelligent machines" (3).

As situated by Hayles, posthumanism emerged in tandem with what she refers to as the "third wave" of cybernetic theory, which began around 1980 (10-11). Cybernetics as a scientific discipline emerged in the late 1940s as a theoretical tool to explore the effects of transmission of information within a given system. Hayles describes the first wave of cybernetic development from 1945 to 1960 as emphasizing the concept of homeostasis, which Hayles defines as, "[t]raditionally, [...] the ability of living organisms to maintain steady states when they are buffeted by fickle environments" (8). The focus shifts away from homeostasis and toward reflexivity during the very influential period of "second-order cybernetics" from 1960 to 1980 (10). As discussed above, reflexivity refers to the idea in which the generating elements of a system become part of said system generated ad infinitum. The second wave of cybernetics was profoundly influential as a result of its so-called "reflexive turn" (10), which shifted the interest from "the cybernetics of the observed system to the cybernetics of the observer" (11), thereby redefining the boundaries of a system to *include* the observer as part of the system. This radically changed the understanding of a system's structure. At the same time, it gave rise to the ideas of self-organization and "autopoiesis," or self-making, which organisms within a system undergo to "continually [...] produce and reproduce the organization that defines them as systems" (10). These ideas of self-making and self-organization soon gave way to the idea of "emergence," or artificial life (11). Thus began the "third wave" of cybernetics around 1980 (11), a phase that asks fundamental questions about the relationship between information and different forms of life. Hayles defines this "third wave" (11) as being marked by "virtuality" (7), which refers to the ways in which "informational patterns" and materiality become enmeshed (14). It is during this phase that the posthuman emerges as "an informational-material entity" (11).

The idea of the posthuman thus emerged from efforts to devise different theories of the flows of information within a system. For Hayles, posthumanism is not only an informational framework but also a system of thought that has a special relationship to literature, and narrative in particular. In contesting the idea that the posthuman actor is a disembodied actor, Hayles employs "the resources of narrative itself, particularly its resistance to various forms of abstraction and disembodiment" to essentially defend the materiality of information and "liberate the resources of narrative so that they work against the grain of abstraction running through the teleology of disembodiment" (22). Because the literary text functions to give "scientific theories and technological artifacts [...] a local habitation and a name through discursive formulations whose effects are specific to that textual body" (22), this analysis of the

posthuman performance of Powers's narrative benefits from posthumanism's sensitive consideration of literary texts and the wider function of narrative itself.

Central to this investigation is the idea of reflexivity, for it is specifically this concept that not only propelled the development of cybernetic history but also had profoundly far-reaching theoretical implications.[7] Reflexivity operates within the context of literary studies as both a tool for analysis as well as a literary phenomenon. As Hayles asserts, "[i]t is only a slight exaggeration to say that contemporary critical theory is produced by the reflexivity that it also produces (an observation that is, of course, also reflexive)" (9). This is not only true for the posthuman context: Reflexivity evolved from posthumanism's predecessor, the postmodern. Linda Hutcheon describes the "intensively self-reflexive" (x) quality of postmodern art—that is, art that by its very quality of reflexivity "does not innocently reflect or convey reality; rather, it creates or signifies it, in the sense that it makes it meaningful" (220). Reflexivity, in other words, is not a mimetic quality that reflects or represents reality but rather part of a system that generates meaning and signification. The results of this can be profound. "[R]eflexivity has subversive effects," Hayles asserts, "because it confuses and entangles the boundaries we impose on the world in order to make sense of that world" (8-9). Reflexivity has cognitive repercussions that stem from its inherently slippery positioning of boundaries.

Given the significant feature of reflexivity in the postmodern and posthuman,[8] as well as in its contemporary worldview, the instances of reflexivity in *Plowing the Dark* are worth evaluating, particularly since they appear by the dozen:

> Every fully modeled object became a machine. And every change in an object's catalogue altered the way that machine ran. Leaves programmed the light that fell on them. [...] A branch in the air modeled the wind that waved it, and wind bent that bough through the arc of its own prediction. For there was no real difference, finally, between property and behavior, data and command. (37)

The conflation of "behavior, data and command" neatly exemplifies Hayles' subversive loop, in which the system-machine endlessly self-regulates and redefines its

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7   As Hayles notes, reflexivity has played a large role in contemporary work in cultural studies, critical theory, and other areas in that these works "make the reflexive move of showing that an attribute previously considered to have emerged from a set of preexisting conditions is in fact used to generate the conditions" (9).

8   Certainly, the categorization of Powers's work as postmodern has been contested. In his introduction to *Intersections: Essays on Richard Powers*, Stephen J. Burn, for example, places Powers as "writing on the fault line between postmodernism and whatever comes after" (xvii). I intend for Hutcheon's designation "postmodern" (x) to be useful in its limited sense as a chronological marker of categories.

boundaries of representation. These moments of reflexivity extend their reach outside of the system of VR representation, for they not only model the simulation within the Cavern, they begin to shape and transform the very notions of reality. "*Every new machine—every line of code that we write*," argues one of the team's visionaries, "*changes what we think of as realistic*" (193). Computer code represents *and* invents. Reality is a production *and* a process. Significantly, VR technology "*changes what we think of as realistic*" through a linguistic process.

The novel's first description of the Cavern's command menu discussed above reveals the vitality of the text as a component in the mediation of the experience of reality. The implications of this deepen when considering the reflexive relationship of the posthuman subject to technology; in the broadest sense, this means that 'technology' refers to the discourse, or study (*-logia*) of skilled craftsmanship (*techne*). Adie realizes this when she

> saw this primitive gadget morph into the tool that humans have lusted after since the first hand-chipped adze. [...] It was not even a tool, really. More of a medium, the universal one. However much the Cavern had been built from nouns, it dreamed the dream of the unmediated, active verb. It lived where ideas stepped off the blackboard into real being. It represented humanity's final victory over the tyranny of matter. (*PtD* 267)

The VR technology undergoes a magnificent transformation in this passage. Beginning with the image of the primitive and very physical "adze," a prehistoric axe, the logic flows then to consider tools as a category, before dismissing the physicality of the tool for the greater abstraction of a "medium, the universal one." The definite article here emphasizes both the universality of this technological medium as well as its singularity. What seems to result is an epistemic process, specifically rooted in language. This is the language not of representation ("nouns") but of invention and creation ("the unmediated, active verb"). Thus, Powers represents VR as both a physical technology (tool) as well as a symbolic, communicative technology (language). Yet, while the VR technology privileges its relationship to language, this passage expresses ambivalence regarding the relationship between language and reality. Language does not absolutely produce reality, given that "ideas" exist on a kind of essential Platonic "blackboard" before they "[step] [...] into real being." Yet, as discussed above, the Cavern itself is a construct produced by the language of coding. Does the language of the coders create the reality? Or does reality exist a priori outside of a linguistic system? What is this virtual "blackboard" of "real" ideas?

Hayles articulates the paradoxical position that Powers flirts with here in terms of a dialectic shift from the "dominance" in the "Western tradition" of the binary of

"presence/absence" toward the parallel of "pattern/randomness" (28-29). This shift results from "the contemporary pressure toward dematerialization" (29) and the attendant emergence of "virtuality," which Hayles defines as "*the cultural perception that material objects are interpenetrated by information patterns*" (13-14). The construct, or "*cultural perception*," of virtuality is based upon a duality of materiality and information that holds that "information and materiality are conceptually distinct and that information is in some sense more essential, more important, and more fundamental than materiality" (18). In her defense of the materiality of information, Hayles is emphatically critical of the current ideology of the "information/materiality hierarchy," which, she argues, "privileg[es] the abstract as the Real and downplay[s] the importance of material instantiation," such that "disembodied information becomes the ultimate Platonic Form. If we can capture the Form of ones and zeros in a nonbiological medium—say, on a computer disk—why do we need the body's superfluous flesh?" (12-13). In the passage from the novel quoted above, the idea of a "victory over the tyranny of matter" plays into this contemporary ideology that vilifies matter. At the same time, however, the "medium" of the Cavern represents "*humanity*'s final victory over the tyranny of matter" (*PtD* 267; my emphasis), which is notably different from the idea of *information*'s victory over the same. Like Hayles, Powers problematizes the absolute hierarchy of information/materiality by introducing the idea of humanity, which he idealizes in the information-dominated landscape.

In many ways, Taimur represents one such example of humanity by the manner in which he does not easily fit into Hayles's framework of the posthuman. This is despite the fact that he moved to Beirut to "escape human connection" (*PtD* 187) in the first place, for it takes the experience of extreme isolation for him to realize his need for human connection. In this isolation, Taimur feels "the thing in all its nakedness: a need so great that you'd stupidly tried to shed it. Your invitation to the human party—the constant obligation [...]. Your trueing, your delight, your sanity, your only health. Others" (187). The description of Taimur's human community as his "trueing" suggests at once that human connection is "true," that is, not false. In this sense 'true' would suggest an allegiance to truth and reality, as opposed to falsity or untruth. 'True' can also be a transitive verb pertaining to the positioning of an object. In this sense, "trueing" would suggest that human connection is balanced or level. Thus, human connection can be seen not only as Taimur's "sanity" and "health" but as both his reality and the force of balance in his life. Prior to his captivity, Taimur eschewed human connection and found himself inescapably alone. Despite the boundaries between the narratives, however, the language and patterns of the novel allow for Taimur to *rehumanize*, to connect. As we shall see, Taimur's "trueing" is Adie.

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Architecture of the Cave

Outstanding for their disorienting swirls of narrative collapse, the novel's 'rooms'—the "Crayon Room" (*PtD* 18), the "Jungle Room" (67), the "Therapy Room" (228), "imagination's room" (144), etc.—represent narrative spaces that aesthetically perform the novel's complicated notions of the nature of reality as they challenge the boundaries of narrative convention. Just as the timeless room discussed above relates fluidly to both narratives, the rooms throughout the remainder of the novel alternate between the parallel story lines. Some boundaries are more permeable than others, with the differences becoming increasingly blurred as the novel progresses. Confined to single chapters, the rooms are described by a distant yet knowing narrator, who seems similar to that of Taimur's narrative, for this narrator often addresses "you." Some rooms possess specific aesthetic functions. One example would be the "Therapy Room," which is an "idea [that] is as old as ideas themselves: to break the terror of existence by depicting it" (228). A walk-in catharsis generator, this room operates upon the Aristotelian principle that art imitates life in such a way that experiences accessed through art might have lasting, curative effects on the spectator.[9] In the "Therapy Room," "[m]odels reveal to her [the patient] the model she has lived in. Symbols cure her of the fears those symbols stood for. Terror flattens into its empty sign. The same cure promises help for all those disabled by the real" (229). A specific site for engagement with "the real," this room is a model of a model, populated by symbols and signs.

The analysis of one room in depth will facilitate the discussion of how and why these spaces function in the novel as a whole. One of the most interesting rooms in the novel is "the room life lends you to sleep in" (*PtD* 170), introduced with these words in the novel's twenty-second chapter. This chapter is set apart from the one proceeding it by a change in register and voice. The narration changes from that of reported dialogue between Adie and her colleague Jackdaw about Adie's "*favorite place in existence*," something she "*can go inside of*" (169), to an intimate and knowing second-person description of this room. Following the description of the room, the chapter ends and the next resumes the dialogue between Adie and Jackdaw. Given the narrative chronology, the "room life lends you to sleep in" could arguably be interpreted as a dreamy representation of Adie's description of her favorite space, which just happens to be Vincent van Gogh's famous painting *Bedroom in Arles*, a print of which decorated

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9   Aristotle's discussion of catharsis, or the cleansing or purification of emotions, as it relates to representation is mentioned in his *Poetics* when he defines tragedy: "Tragedy is a representation of a serious, complete action [...] [represented] by people acting and not by narration; accomplishing by means of pity and terror the catharsis of such emotions" (7; vi, 1449b).

Adie's childhood home (174). At the same time, the shifts in tone and point of view, the evocative description of a ubiquitous and recognizable image that exists outside of the text as well as the syntactic echoes that liken this room to some of the other rooms described earlier in the novel[10] suggest that this passage is something more than Adie's verbal description of the painting. After all, the narrative subsequently reveals that this room does in fact become a successful virtual reality representation in the Cavern. This moment, therefore, seems to be an immersive, narrative performance of the very experience of virtual reality. Recalling Spiegel's take on VR as "[e]*mbodied art; a life-sized poem that we can live inside*" (159), it is possible to see this passage as a manipulation of the novel's narrative codes, a moment that reflexively shapes the subjectivity of both its characters and its readers. The 'room' is ultimately a virtual representation of a painting that "will be your *kamer*, your *chambre*, for who can say how long. A place to enter and inhabit at will. A box whose every plank of wood furnishes your story. This life, now yours" (171). With this use of the second person, the narrator seems to address both the reader and Adie's interlocutor at once, a slip that bridges the gap between the novel and the extrinsic existence of the reader. Thus, as in the case of an autopoietic system, the reader becomes part of the system itself in this simulation not only of the experience of virtual reality but of the posthuman experience as well.

This aestheticized crossing of boundaries performs the subversive reflexivity Hayles attributes to the formation of the posthuman subject as "an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction" (3). Such reconstruction happens in several registers at once: in Adie's memory, in the reader's experience, and in the virtual experience of the Cavern's users. On every level, the relationship between the user and the room is dynamic, for "entering this painted life overhauls it. Your eyes change the bedclothes just by settling on them. Looking leaves its fingerprints on his glass. His towels take on your hand smudges. His shirts start to memorize the creases of your body" (*PtD* 171). The visual is the agent, for "[y]our eyes" are the actors and "[l]ooking" is the action. At the same time, the towels and shirts actively respond to the physicality of the user's body. The room becomes an embodiment of the user; information masks as matter. The boundary between what is material and what is informational dissolves in this moment: Materiality fuses with the informational, a gesture that exemplifies the "material-informational" status of Hayles's posthuman subject (3).

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10 Each 'room' section begins, for example, with a one-sentence paragraph statement about the room: "In the Crayon Room, all strokes are broad" (*PtD* 18); "[t]he Jungle Room feels strangely familiar" (67); "[i]n imagination's room, all things work out" (144); etc.

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The materiality/information boundary is not the only one that becomes blurred. The permeable "room life lends you to sleep in" (*PtD* 170) traverses the actual boundaries of the two narratives, creating a hybrid space that incorporates elements of both Taimur's and Adie's stories. Similar to the instance above, memory and imagination serve as the point of entry here. Like Adie's "*Gallery of Visual Instruction*" (173), comprised of fine art reproduction prints she remembers from her childhood, Taimur's "galleries of hypothetical" (352) represent a space entirely in the mind. As he struggles to maintain his sanity, Taimur recalls the failed romance with his girlfriend Gwen and imagines looking for her as he looks for a picture in the Art Institute of Chicago: "You press through the jumble of rooms, searching for that picture that you can't picture, the view that would make even death livable" (353). That a representation could "make even death livable" reveals Taimur's intense need for beauty and his unflinching belief in redemption through art. When he finally is able to recall the image, it is a moment of complete immersion, for "[y]ou step across into this straw-colored guess, the one that made Gwen cry to look on. [...] Everything here has waited for you, the look of thought. Soap and water and towel, a spare shirt, a wall of tilted pictures: what more does a life need to live?" (354). This question was answered nearly two hundred pages earlier in the novel, at which point the "room life lends you to sleep in" is described as containing "everything that you need to live" (170). This precise echo momentarily collapses the narrative distance between Taimur's memory and the Cavern's representation of Adie's recollection by making it seem as if only one form of van Gogh's *Bedroom in Arles* exists and that Adie and Taimur experience the same thing. While Adie does refer to the van Gogh painting as "the original" (198) of what becomes the Cavern's representation, she ultimately refers to the mass-produced print from her memory, which most ironically refers to one of three similar paintings van Gogh executed in the 1880s. The narrator signals the multiplicity and ambiguity in the representation of this painting by describing the room as "Bedroom. *Slaapkamer. Chambre à coucher*" (170), the three languages of which refer to the three versions of the work displayed in Chicago, Amsterdam, and Paris (Brooks). These slippery moments of equivalence of originality tempt the reader to ask about "the original" (*PtD* 198) painting or 'the real' painting, for this bedroom not only exists within both narratives, it exists—in countless multiples—outside of the novel as well. In a sense, this room is *extra*-real, for the reader has the ability not only to visit the painting in one of three museums but also to purchase a copy for herself.

At this moment, the posthuman mechanisms undergirding the operations of many of the characters in the novel give way to more fundamental questions about representation and aesthetics. Here, van Gogh's *Bedroom in Arles* serves as a prime example of Jean Baudrillard's notion of "simulation" (6). For Baudrillard,

> [r]epresentation stems from the principle of the equivalence of the sign and of the real [...]. Simulation, on the contrary, stems from the Utopia of the principle of equivalence, *from the radical negation of the sign as value*, from the sign as the reversion and death sentence of every reference. Whereas representation attempts to absorb simulation by interpreting it as a false representation, simulation envelops the whole edifice of representation itself as a simulacrum. (6)

When the sign and "the real" no longer correspond, or if "the real" ceases to be part of the equation, "representation" gives way to "simulation." In the instance of van Gogh's *Bedroom in Arles*, the Cavern's creation becomes an absorbing simulacrum, a negation of the real simply because it exists. Whereas Hayles ardently defends the materiality of information, she nevertheless recognizes artworks that represent the information-dominant fantasy of complete immateriality. Thus, in Hayles's words, this is an instance of "the interplay between absence and pattern, [which] can be called, following Jean Baudrillard, hyperreality" (249). Baudrillard defines "hyperreality" as "the generation by models of a real without origin or reality" (1).[11] The simulation of "the room life lends you to sleep in" (*PtD* 170) supplants and negates the original painting. In this way, Adie's and Taimur's narratives seem to intersect in the realm of the hyperreal, or as Powers might have it, the "*template world*" (3).[12] That the reader's world intersects with these novel narratives further reveals the overwhelming ubiquity of the simulation, for the simulacrum is collective, illustrated by mass access to van Gogh's *Bedroom in Arles*. All the same, Powers plays with the differences between representation and simulation, suggesting, but never absolutely surrendering to, the omnitude of the simulacrum.

For Baudrillard, simulation is absolute. Yet Powers manipulates the articles of aesthetics underlying his novel, intimating that there may be a wedge between the dialectic of mimetic representation and absorbing simulation. Aesthetic discussions unfold in subtle mock-Platonic discourses among the Cavern workers. In response to

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11 I do not intend to equate Hayles's understanding of "[e]mbodied [v]irtuality" (1) with Baudrillard's notion of hyperreality. When she articulates her view of embodied virtuality by arguing that "[i]nformation, like humanity, cannot exist apart from the embodiment that brings it into being as a material entity in the world" (49), she definitively distances herself from Baudrillard's sign-dominated system with its emphasis on the hyperreal as immaterial in its allegiance to that "without origin or reality" (Baudrillard 1). At this moment, however, it is productive to use Hayles's own evocation of Baudrillard's notion of hyperreality to emphasize that even given her "dream [of] [...] a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality" (5), embodiment nevertheless can be problematized in various artistic articulations. See chapter 10, "The Semiotics of Virtuality," in *How We Became Posthuman* for a full analysis of the various "articulations of the posthuman" (250).

12 As discussed above, "*template*" does not imply originality but rather a structure for a pattern.

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Lim's assertion that "*pictures* [in the caves at Lascaux] *were the tool that enabled human liftoff, the Ur-tech that planted the idea of a separate symbolic existence in the mind*," Spiegel asks about having "*read somewhere that Lascaux has become a simulation of itself?*" (*PtD* 130). Spiegel read this, of course, in Baudrillard's *Simulacra and Simulation*, which refers to the Lascaux "duplication" for tourist purposes as sufficing "to render both artificial" (Baudrillard 9). Yet Lim counters: "*They were simulations to begin with. Consciousness holding itself up to its own light, for a look. An initiation ceremony for the new universe of symbolic thought*" (*PtD* 130). Despite having read Baudrillard, Spiegel posits a Platonic position wherein the representation, or the "sign," maps onto "the real" (Baudrillard 6). Spiegel believes, after all, in truth and essentials. He believes that computer programming would allow him to "*get inside of reality and extract its essence*" (*PtD* 215). Yet Lim has immersed himself so deeply in Baudrillard's cave of hyperreality that the notion of an 'original,' or an 'essence' of reality is utterly lost for him. Lim ultimately dismisses the question of the real altogether by reframing Baudrillard's arguments in terms of the mind. Lim believes, after all, that "*the mind is the first virtual reality*" (130). Given this belief in the mind, Lim may as well have said that the mind is the first reality, or that all reality is virtual reality.

This kind of logic can quickly lead to a spiral of infinite regress. As we shall see, the sense of infinitude that results from the idea of reflexivity and virtuality leads the characters in *Plowing the Dark* to contemplate and even experience the divine on multiple levels. Baudrillard imagines the simulation of God, noting how "the whole system becomes weightless, [...] a simulacrum [...] never exchanged for the real, but exchanged for itself, in an uninterrupted circuit without reference or circumference" (5-6). As in the example of the hyperreal, Baudrillard's simulation of divinity exists within a fully closed system "without reference." Whereas Hayles would argue that information—be it divine or earthly—cannot exist "without reference," that is, without some kind of material substantiation, Baudrillard's description of the simulacrum of God as an "uninterrupted circuit" evokes a sense of infinitude that is not wholly incompatible with second-order cybernetics' autopoietic turn, wherein "no information crosses the boundary separating the system from its environment. We do not see a world 'out there' that exists apart from us. Rather, we see only what our systemic organization allows us to see" (Hayles 10-11). In this instance, the environment essentially becomes the system, and all information exists within this system. The boundary between the system and its environment thereby ceases to exist. This is the system of the posthuman. Thus, from Lim's virtual reality into Taimur's imagination, the novel's reflexive loops and autopoietic gestures not only cross but

effectively eliminate boundaries, unexpectedly tearing the 'veil of maya,'[13] and look into the face—or perhaps the simulacrum—of God.

"Into the Artifice of Eternity"

Before Adie stumbles upon the idea to build Yeats's Byzantium for the Cavern's high-profile release demonstration, she has decided that her team should create something not based on a painting but "*something that will break out of the frame*" (*PtD* 277). Adie seeks an immersive experience that ruptures aesthetic and experiential boundaries. Because the Cavern's previous projects were based on paintings—a composite of Henri Rousseau's jungle paintings and van Gogh's *Bedroom in Arles*—they were bounded by the "frame" the artist imposed on the works. Adie's aesthetic endeavor is an articulation of the posthuman model, in which

> human functionality expands because the parameters of the cognitive system it inhabits expand. [...] [I]t is not a question of leaving the body behind but rather of extending embodied awareness in highly specific, local, and material ways that would be impossible without electronic prosthesis. (Hayles 290-91)

Thus, enabled by the "electronic prosthesis" of the VR technology, Adie can both create an imitation of the Hagia Sophia as well as partake in that creation by becoming "[o]nce out of nature" (*PtD* 199) and stepping "into the artifice of eternity" (Yeats 24).[14] The Cavern's construction becomes the realization of Spiegel's "[e]*mbodied art; a life-sized poem that we can live inside*" (*PtD* 159). Yet the Cavern's virtual simulation of the Hagia Sophia represents more than the rupture of the boundary between art and life and the 'frame' of Western painterly exploits. The great edifice in Istanbul is the gate between East and West, "the Earth's navel" (343). The Cavern's room of holy wisdom is the gate between Taimur's and Adie's worlds.

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13 That is, one's experience of art can enable one to literally tear down a material boundary and enter into a new state of being. The 'veil of maya' is a concept discussed in Nietzsche's *The Birth of Tragedy* taken from Schopenhauer, who borrowed the concept from the Vedic idea, as is explained in an editor's note, that "the world we experience is nothing but the 'veil of maya'" (Nietzsche 17). For Nietzsche, the veil of maya serves as an evocative metaphor for the barrier between rational, Apollonian existence and the Dionysiac experience of primordial unity and creative release: "Now, hearing this gospel of universal harmony, each person feels himself to be not simply united, reconciled or merged with his neighbor, but quite literally one with him, as if the veil of maya had been torn apart, so that mere shreds of it flutter before the mysterious primordial unity (*das Ur-Eine*)" (18).

14 Powers does not quote Yeats's poem in its entirety in the novel. The line "into the artifice of eternity" does not appear in the book. For the full text of the poem, see Yeats.

Taimur eventually exhausts his mental and physical strength and attempts suicide by smashing his head into a wall. At this moment, he experiences a "slide into chaos" and a "[drop] into the abyss" (*PtD* 390). Daniel Grausam refers to this as "Taimur's breakdown," which is "completed by his pseudo-death in [the] pseudo-ending" (321). Grausam may as well have substituted 'virtual' for "pseudo" in the sense that Taimur seems to encounter something like the Cavern's virtual reality at this moment. He experiences a bodiless "hallucination," wherein he "soft-landed in a measureless room [...]. A temple on the mind's Green Line" (*PtD* 413). Taimur finds himself "dead center, under the stone crown" (414), sharing the space with the "*omphalos*, the Earth's navel" (343) beneath the dome in the Hagia Sophia. Here, Taimur

> saw the thing that would save you. A hundred feet above, in the awful dome, an angel dropped out of the air. An angel whose face filled not with good news but with all the horror of her coming impact. [...] That angel terror lay beyond decoding. It left you no choice but to live long enough to learn what it needed from you. (414)

This is an experience "beyond decoding," a seemingly random and undecipherable encounter that verges on the miraculous. This divine vision not only prevents Taimur's suicide by leaving him "no choice but to live;" it performs something of a narrative miracle as well.

By the time Taimur's revelation appears in the novel, the reader already suspects the crossing of narrative boundaries. When Adie, disgusted by the fact that the VR experience she helped design was being developed for the American military, enters the "illusion" of the Hagia Sophia one final time before destroying the code, she "pointed one finger straight up, hating herself even as she gave in to the soar. She let herself rise into the hemisphere apse, then farther up, all the way into the uppermost dome" (*PtD* 399). Adie manipulates the virtual position of her body by manipulating the commands of the system. Once in the dome, she looks down into the cathedral from

> the God's-eye view: in the simulation, but not of it. And deep beneath her, where there should have been stillness, something moved. She dropped her finger, shocked. The winch of code unthreaded. She fell like a startled fledgling, back into the world's snare. The mad thing swam into focus: a man, staring up at her fall, his face an awed bitmap no artist could have animated. (399)

"[I]n," but not "of" the simulation, Adie is a foreign body occupying a territory to which she does not belong. Her bodily movements have both linguistic and physical repercussions, for when she "dropped her finger" that had been pointed toward heaven, the "code unthreaded" and she fell "back into the world's snare." Perfectly articulated with the intelligent machine of the Cavern, Adie's body is in a feedback

loop with the "simulation." Yet the loop is not closed, for it is at this moment that the novel's structure of representations collapses, and the boundaries between what seems possible and impossible—along with the boundaries between the narratives—fall apart. When Adie looks into the "awed bitmap" face of the man, she recognizes him as something equally "in," but not "of" the "simulation," for, like her, he is not the product of the artist's labors. She looks into the face of a fellow human in the illusion of her artifice. Adie sees a man, and Taimur sees an angel. In the last moments of the novel, Taimur gazes into the infinitude of his paradoxical experience and realizes that "[t]here is a truth only solitude reveals. [...] You turn in the entranceway of illusion, gaping down the airplane aisle, and you make it out. For God's sake, call it God" (414). But what *really* happened?

The encounter that Adie and Taimur share in the Hagia Sophia presents a miraculous impossibility, rendered possible through the contrivance of Powers's narrative art. For Baudrillard, this would be evidence of the ubiquity of the simulacrum, for in the contemporary "era of simulacra and of simulation, [...] there is no longer a God to recognize his own, no longer a Last Judgment to separate the false from the true, the real from its artificial resurrection, as everything is already dead and resurrected in advance" (6). Powers places a divine figure, or at least Taimur's belief in the same, at the center of Baudrillard's godless simulacrum. This move emphasizes the ambivalent equivalence of the real and the artificial.

Though Powers gestures toward Baudrillard throughout the novel, he balances the totality of the simulacra by injecting discussions about the possibility of Platonic forms. Adie's view of Taimur's face in her temple occurs at the end of the novel's forty-second chapter. After this vision, the narrative mode shifts, Adie and Taimur disappear from the narrative, and a new chapter literally begins on the novel's following page. At this moment, the reader is abruptly thrust into "the room of the Cave" (*PtD* 400). The name of this space is fittingly evocative of Plato's "cavelike dwelling" (186; bk. VII, 514a).[15] As is the case in Plato's cave, those within "the room of the Cave" cannot recognize the boundary between artifice and reality, for here, "images go real. [...] The mere mention of love brings on the fact. The word 'food' is enough to feed you" (*PtD* 400). The room of the Cave "closes the gap between sign and thing" (400). This is representation—and not simulation—described in the Baudrillardian sense, wherein representation "stems from the principle of the equivalence of the sign and

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15 Plato's allegory of the cave describes the space as "an underground, cavelike dwelling, with an entrance a long way up, which is both open to the light and as wide as the cave itself" (186-87; bk. VII, 514a). As mentioned above, it is in this "cavelike dwelling" where Plato's unenlightened prisoners believe that the representations, or shadows, they see are "the truth" (187; bk. VII, 515c).

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of the real" (Baudrillard 6). Unlike Baudrillard's postmodern simulacra, the real can be distinguished from the artificial here, for the room itself is "something more than allegory. But the room of the cave is something less than real" (*PtD* 400). Representation does not precede and determine what is 'real' (as it would for Baudrillard); rather, the room exists distinct from, or as "something less than," the real. Yet the Platonic model is fragile. Or at least Powers's representation of the model seems fragile. It is, after all, a "faulty allegory," destroyed when "the machine seizes up, [...] the debugger spits out a continuous scroll of words. [...] You step through the broken symbols, into something brighter" (401). Like the enlightened philosopher who, freed from Plato's cave, is "suddenly compelled to stand up, turn his head, walk, and look up toward the light" (187; bk. VII, 515d), the "you" of this chapter, the "you" within the "room of the Cave" (*PtD* 400), walks into the light. Following this chapter, the novel describes that Adie and Taimur both emerge from the shared simulation of the Hagia Sophia. At the end, Taimur does in fact step "into something brighter" to discover "a truth only solitude reveals" (414), in the essential, Platonic sense. By passing through Baudrillard's simulacrum, through Plato's Cave, and then "through the broken symbols" (400), Taimur finds meaning, and ultimately survives.

This is the novel's culminating posthuman moment, which exists within a structure that alternates between Plato's system of representation and Baudrillard's system of simulation. In the posthuman discourse, Hayles imagines such a system that is a pattern neither of simulation nor of representation but rather a technological-informational structure in and of itself. "Information technologies do more than change modes of text production, storage, and dissemination," she argues, "they fundamentally alter the relation of signified to signifier. [...] [I]nformation technologies create what I will call *flickering signifiers*, characterized by their tendency toward unexpected metamorphoses, attenuations, and dispersions" (30). This is what happens in the case of the "faulty allegory" (*PtD* 401) of the cave above as well as within the Hagia Sophia. The semiotics of the respective realities of Adie and Taimur suddenly shift and metamorphose as they become posthuman subjects. What seemed impossible —the actual intersection of Adie and Taimur within their respective narratives— suddenly has become a narrative reality.

Adie's virtual reality overlaps with Taimur's hallucinatory internal experience in a process that evolves to create its own structure of meaning, operating out of Hayles's posthuman dialectic of pattern/randomness. Here,

> complexity evolves from highly recursive processes being applied to simple rules. [...] Meaning is not guaranteed by a coherent origin; rather, it is made possible (but not inevitable) by the blind force of evolution finding workable solutions within given parameters. (Hayles 285)

The relatively "simple" code that creates the rules governing the virtual temple undergoes a kind of narrative mutation, or metamorphosis, that gives rise to Taimur's experience of truth, meaning, and divinity. Art is not an imitation of Plato's reality, nor does it simply bring Johnson's reality to mind. Here, the code constructing the artifice undergoes a narrative mutation, resulting in the evolution of meaning, that is, the "truth only solitude reveals" (_PtD_ 414). With its promotion of the ideas of both "truth" and simulation, _Plowing the Dark_ plays with the tensions between Plato's ancient worldview and Baudrillard's contemporary philosophy, ultimately landing in a neutral, but critical, posthuman space in which the patterns of the narrative create both the simulation as well as the frame that defines the boundaries of the simulation, both within and beyond the novel.

CONCLUSION: PATTERNS, LOOPS, AND NOVEL REALITY

In _Plowing the Dark_, whatever is real is also permeable. Adie and Taimur both recognize that their experiences in the simulation of the Hagia Sophia are exceptional; they are experiences outside the frame of what they would expect from the real world. The world of Powers's novel is, after all, a world of simultaneously expanded and obliterated boundaries and changeable structures. While the various forms of breathtaking VR technology initiate these challenges to existing structures of reality, it is really the technology of writing that gives form to the miracle of narrative, which ultimately serves as the force that creates, measures, and bends the representations of reality in the novel. The novel itself becomes a reflexive loop, which is brought full circle the moment Adie and Taimur look each other in the face. Balanced between the dual narratives, the novel also balances the dual philosophies of Baudrillard's simulacra and Plato's forms. The posthuman discourse provides a mediating lens to examine these competing worldviews as presented in the novel as well as a tool to explore the structure of the novel as it relates to the reader and the boundaries of her informational universe.

Plowing the Dark refuses to directly answer questions like 'why?' and 'how?' and 'what is God?' by simply ending. Yet the text does extend beyond its frame not only because it predicts technologies at the end of the twentieth century that would take root in the years to come. The novel also has a particular connective function with the reader on a virtual level. In his essay "Being and Seeming: The Technology of Representation," Richard Powers clarifies his vision of this novelistic function:

> The beauty of a book lies in its ability to unmake us, to interrupt our imaginary continuities and put us head to head with a maker who is not

> us. Story is a denuding, laying the reader bare, and the force of that denuding lies not in our entering into a perfect representation, but in our coming back out. It lies in that moment, palpable even before we head into the final pages, when we come to remember how finely narrated is the life outside this constructed frame, a story needing only some other minds [sic] pale analogies to resensitize us to everything in it that weve [sic] grown habituated to.

Like the Cavern, the novel is itself a technology of representation that transforms the user in its reflexivity. The book is powerful because it introduces "a maker who is not us," and it allows the reader not only to enter its constructed reality but to exit as well. The book reminds the reader that she, too, exists within a narrated frame. Hayles would see this process as an essential operation of the posthuman world, where "culture circulates through science no less than science circulates through culture. The heart that keeps this circulatory system flowing is narrative—narratives about culture, narratives within culture, narratives about science, narratives within science" (22-23). In this way, Powers engages in the reflexive loop that at once shapes and is shaped not only by the current scientific discourses but also by historical philosophical discourses about the very question of what it means to be human. Powers thus probes the nature of reality, as well as the limits of the human, by manipulating imitations, representations, and simulations of virtuality within the novel. What results is a complicated narrative genuflection to various patterns of reality that certainly extend beyond—or perhaps even transcend—the human. Perhaps this is the realm of the purely imaginary. Perhaps it is the realm of the generative narrative. Perhaps it is the realm of the infinite divine. Whatever is real in *Plowing the Dark*, the novel certainly has reflexive, if not transformative, power, as it blurs the line between what is represented and what simply *is*, leaving its readers altered, and wondering at the magnificent artifact of the novel.

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