3. Unlike Any Other: Shoring Up the Human Community in Richard Powers's Galatea 2.2 and Plowing the Dark
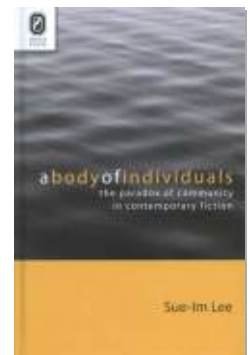
Published by

Lee, Sue-Im.
A Body of Individuals: The Paradox of Community in Contemporary Fiction.
The Ohio State University Press, 2009.
Project MUSE.   https://muse.jhu.edu/book/27799.

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CHAPTER 3

Unlike Any Other

Shoring Up the Human Community in
Richard Powers's *Galatea 2.2* and *Plowing the Dark*

F rom the kinship-model "we" in Morrison and the global "we" in Yamashita, this chapter turns to the biggest conceptual "we" of all—the human "we" in Richard Powers's novels of science and technology. The literary manifestation of "the human" as a community brings us back to one of the most contentious spots in the debate over community: commonality. Like the commonality of identity, history, experience, and objective that transformed multiple individuals into a community in Morrison's novels, and the being-in-common that fused all of the globe's inhabitants into one in Yamashita's novel, the criterion of commonality raises its head in the central question of this chapter: what unique commonalities make "the human" into a community?

Since Ihab Hassan postulated that "five hundred years of humanism may be coming to an end" (212) in his 1977 essay, "Prometheus as Performer: Towards a Posthumanist Culture?" the machine has been the dominant conceptual tool in countering the notion of "the human" as a unique entity. And as N. Katherine Hayles wrote in 1990, the category of the human is the predictable site of conclusion for postmodernism's denaturalizing impulse: "When the essential components of human experience are denatured, they are not merely revealed as constructions. The human subject who stands as the putative source of experience is also deconstructed and then reconstructed in ways that fundamentally alter

what it means to be human. The postmodern anticipates and implies the posthuman" (*Chaos Bound* 266). As Hayles states in *How We Became Posthuman,* the central principle underlying posthumanist thinking is the *reconfiguring* of the "human being so that it can be seamlessly articulated with intelligent machines. In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals" (2–3). As posthumanism batters at the attributes putatively unique to the human, such as consciousness, intelligence, and embodiment, it unsettles the founding grounds of the human as a unique body of individuals.

These are the challenges that humanism faces in Richard Powers's *Galatea 2.2* (1995) and *Plowing the Dark* (2000), two novels of intelligent machine and virtual reality technology. In what he calls the shape of a "dialogical novel, where there are different moral centers, each of which has its own plausibility" (Blume n.p.), Richard Powers's fictions of science and technology explore the anxiety that humanism suffers at the hand of posthumanism. To a degree unparalleled by any other contemporary novelist, Powers has explored what he identifies as "the most central facts of contemporary life—technology and science" as his creative domain (*Atlantic Unbound* n.p.). And many of his novels (*Three Farmers on Their Way to a Dance, The Gold Bug Variations, Galatea 2.2, Plowing the Dark*) revolve around disciplines such as computer programming, chemistry, genetics, artificial intelligence, cognitive science, and virtual reality technology. Readers of technology in contemporary American fiction know familiar names such as William Burroughs, Thomas Pynchon, Don DeLillo, and Kathy Acker. Although Powers shares their topical interest, his literary treatment of science and technology manifests the strongest imperative towards maintaining the human "we" as a unique body of individuals.

As Powers dramatizes the posthumanist assault on the claims of human uniqueness, he demonstrates the plight of humanism as the plight of commonalities that constitute the human into a community. Thus, reading Powers's humanism as a form of community maintenance enables us to detect the competing discourses of idealized and dissenting community informing humanism and posthumanism. That is, as humanism and posthumanism offer distinct models of saying "we, the human," their competing assumptions, values, and ideals directly recall the debate between idealized and dissenting community discourses. While humanism assumes the pivotal role of human commonalities in transforming the human into a single body community, the posthu-

manist vision of "the union of the human with the intelligent machines" (Hayles, *Posthuman* 2) negates not only the empirical claims of commonalities unique to the human, but also the assumption that commonalities are obvious rationale for claiming a community. Thus the model of the human "we" postulated by posthumanism is fundamentally irreconcilable with the model of "we" suggested by humanism. As Rodney Brooks announces in *Flesh and Machines: How Machines Will Change Us:* "My own beliefs say that we are machines, and from that I conclude that there is no reason, in principle, that it is not possible to build a machine from silicon and steel that has both genuine emotions and consciousness" (180).[1] In stark contrast, the opposition of the machine from the human constitutes the central tenet of *Galatea*'s humanism. The protagonist's faith in the ineradicable difference between the human and the machine is evident in this prototypical response to posthumanist views: "You're not elevating the machine. You're debasing us" (86). The inverse relationship between "us" and "them" remains foundational to humanism as a form of community maintenance: what "they" get comes at "our" loss. This irreconcilability between the posthumanist "we" and the humanist "we," I suggest, can also be read as the irreconcilability between the discourses of idealized community and dissenting community running through the novel.

Nowhere does this humanist-posthumanist drama feature more prominently and poignantly than in *Galatea,* a novel in which the oneness of humankind comes under scrutiny in light of artificial intelligence. Set in the hub of a "Center for the Study of Advanced Sciences" at a major Midwestern university, *Galatea* examines the shifting lines of assessing intelligence in a machine. "Richard Powers," the first-person narrator-protagonist and the literary persona of the writer himself, becomes involved in a bet offered by a cognitive neurologist, Philip Lentz, that a supercomputer, constituted by a neural connection between 65,536 computers, could be trained in canonical Western literature to produce a Master's comprehensive exam answer that is indistinguishable from one produced by a graduate student.[2] In an environment where cognition is explained through the computational process of the machine, the human has the hardest time holding on to its ontological status as the peerless original. As Rick asks: "When does an imitation become the real thing[?] . . . What's the real thing?" (276).

"Humanist" is a term that Powers uses expansively in *Galatea* to describe Rick's disciplinary allegiance, one that is sorely tested by the Center's posthumanists, its scientists and machinists. There is no little dramatic irony that Rick's official title at the Center is a "Visitor" and

that he calls himself "the token humanist" (2) and "the humanist on the wall" (36). Further compounding the disciplinary division of the humanists and the posthumanists is Lentz's nickname for Rick—"Marcel"—alluding to the iconic figure of literariness Marcel Proust. The dialogic arrangement of humanist-artist and posthumanist-scientist is most closely repeated in *Plowing the Dark,* with Adie Klarpole, a painter-turned-commercial illustrator, finding herself in a hub of virtual reality technology. Like Rick's, Adie's foray into scientific discipline is a disorienting experience, in which her equanimity regarding the uniqueness of the human comes up against the posthumanist belief that "reality is basically computational" (82).[3] The synonymous role of humanist and artist in Powers's novels delineate the artistic values at stake in the debate over human uniqueness. The artist-protagonists attest their firmly held worldview in human creations of artistic originality, creativity, beauty, and truth.[4] But more than a disciplinary allegiance, these artist-humanists hold on to the human as the "real thing" by which all other entities are interpreted.

In contrast, Powers's posthumanists contend that humanists' complacent hold on the status of "the real thing" is indefensible. *Galatea*'s Lentz questions humanism's veneration of concepts such as embodiment, consciousness, and the mind. Arguing that functions, abilities, and possibilities deemed intrinsic to the human can indeed be articulated seamlessly with those of the intelligent machine, Lentz prepares the groundwork for articulating a "we" that includes the human *and* the machine. Caught in the fire of posthumanist skepticism and ridicule, Powers's humanists struggle to justify their assumption. And it is precisely within the nature of that struggle that I locate the ambivalent community at work in Powers's exploration of "the human" as a body of individuals.[5]

In arguing the novel's conflict between humanism and posthumanism, I contest the prevailing assessment of the novel as an exemplary literary expression of posthumanism. Pointing to the novel's ultimate intelligent machine, a supercomputer named Helen, Hayles writes that "the posthuman appears not as humanity's rival or successor but as a longed-for companion" (*Posthuman* 271). Likewise, for another critic, *Galatea* is an example of a "[p]osthumanist fiction [which] diminishes the threat of computers as it accepts them as an integral part of the contemporary world" (Miller 382). Miller contrasts the novel to the popular science fictions that use the machine as ominous threats to the human, and he argues that *Galatea* shows that "something more profound can result when division between worlds (such as human and computer, science and humanism, or body and mind) are broken down" (381).[6]

What such readings miss, I suggest, is the full significance of the novel's dialogic nature and the consequences it has for the novel's treatment of the human as a community of "the real," the "original," the "essential" beings. The quality of naïveté essential to Powers's artist-protagonists leads to the repeated testing of the humanists by the scientist-posthumanists. And it is a test that the artist-humanists do not "pass" well. In highlighting the *inadequacies* of the humanists' responses, Powers holds up humanism as a subject of analysis and critique. Most importantly, reading *Galatea* as a literary exemplification of the posthumanist "we" misses the novel's unshakable attachment to the humanist "we"; it misses the irresolvable oscillation in the novel's value system between humanism and posthumanism, and between the discourse of idealized community and dissenting community. As the novel explores the losses incurred to the absolute uniqueness of the human, it illustrates humanism as a thoroughly self-invested venture on behalf of "us." This self-preservationist nature of humanism's community maintenance is best approached through the concept of immanentism—the belief that certain qualities and attributes are essential, innate, and intrinsic to a being. The immanentist premise that justifies the humanist "we," I argue, ultimately results in an autotelic humanism. It is a self-justifying, self-perpetuating humanism whose final *work*—to maintain "the human" as a unique community—functions as the justification for maintaining that community.

In the first section, I suggest an analysis of humanist-posthumanist conflict through the politics of interpretation and highlight the immanentist logic running through the humanist interpretation of the machine. In the second section, I show that not only is immanentism an effective tool of exclusion, but it is also an effective tool for *assimilating* the machine without weakening the discursive borders maintaining the oneness of the human as a community. In the third and final section, I propose that humanism, in Powers's novels of science and technology, is as much a topic under analysis as it is the very value system that sustains Powers's literary venture. That is, Rick's helpless allegiance to the humanist "real thing" is the stuff of *Galatea*'s drama just as it is the inevitable point of return for Powers's own philosophical and literary equilibrium. In making this final argument, I turn to the conclusion of *Plowing the Dark,* a novel whose dialogic tension between humanism-posthumanism parallels that of *Galatea,* and yet whose resolution declares a humanist allegiance more resounding and less ambivalent than that of *Galatea*. The two novels, side by side, best demonstrate the humanist trajectory of Powers's imagination.

Ultimately, the threat to the ontological status of the human is a grave matter for Powers's humanist-artists, and *Galatea* and *Plowing* are exercises in keeping humankind as an inviolate community of "the real thing." The Emily Dickinson poem that prefaces *Galatea* expresses the humanist-protagonists' and, I believe, Powers's own allegiance:

> The brain is wider than the sky,
> For, put them side by side,
> The one the other will contain
> With ease, and you beside.
>
> The brain is deeper than the sea,
> For, hold them, blue to blue,
> The one the other will absorb,
> As sponges, buckets do.
>
> The brain is just the weight of God,
> For, heft them, pound for pound,
> And they will differ, if they do,
> As syllable from sound.

Humanist Interpretation of the Machine

Is the human like an intelligent machine? Or is the intelligent machine like a human? Is the brain in effect a computer, or is the computer in effect a brain? As figurative language runs through the humanist-posthumanist debate, the discursive contestation over the human community can be read as fundamentally a debate over interpretation. How does one explain, explicate, or make sense of the human or the intelligent machine? Which is the ontological index by which the other attains comprehensibility?

"Interpretation," however, does not fully capture the politics of humanist-posthumanist debate. As the proliferation of similes and metaphors announce, attempts at explaining the human or the intelligent machine take place through the structure of translation: like any use of figurative sense-making, one thing is put into the *terms* of another for the sake of comprehensibility. Although "interpretation" and "translation" are used interchangeably in everyday usage, the humanist-posthumanist debate inescapably demonstrates the profound conceptual difference between the two terms. Interpretation, Wolfgang Iser points out,

has always been an act of translation: "Each interpretation transposes something into something else. . . . The register into which the subject matter is to be transposed is dually coded. It consists of viewpoints and assumptions that provide the angle from which the subject matter is approached, but at the same time it delineates the parameters into which the subject matter is to be translated for the sake of grasping" (5–6). As the register determines the parameters of translating something into something else, crucial consequences are at stake in determining the register. The entity that occupies the status of the register becomes the subject who translates—who not only elects the criteria ("the angle") through which the object attains comprehensibility and discursive significance, but also determines the boundaries ("the parameters") of the object's being. Interpretation, unlike translation, suggests the possibility of rendering clear the meaning of one entity *without* calling into question the tools of that meaning-making. Thus interpretation invokes a transcendental epistemology, positing a way of knowing that transcends any identity, position, partiality, or vested interest. Translation, on the other hand, conceptualizes the act of explanation as the transposition of one entity into the terms of another *existing* entity. In explicitly bearing the "paraphrasing" nature of explanation, translation calls into question what interpretation evades: can there be an explanation that does not endow one set of terms with epistemological primacy?

Powers's literary representation of the human "we" engages this distinction between interpretation and translation. The humanist-artists of *Galatea* and *Plowing the Dark* firmly believe that their explanations of scientific phenomena and machinic entities are interpretations—rendering the strange and the foreign into clarity, into "what they really are." Exposing their interpretations as translations is what the novels' posthumanists—and Powers—pursue. As Powers delineates the humanist's struggle to maintain the human as the register, he articulates the unspoken question in the very theory of interpretation: as the register determines the specific criteria of interpretation, from whence does the register draw *its* criteria? What Iser's formulation hints at—the tautological dimension of interpretation—becomes full-blown in *Galatea*'s exploration of humanism. Powers connects the tautological implications to a perennial philosophical dilemma—how does the knower know himself?—and specifically hones it as the dilemma of humanism. How can the human interpret the machine except through the criteria drawn from the human itself? Can interpreting the machine be anything other than *translating* the machine into human terms? Conversely, can humanism insist on the legitimacy of the human as the register in interpreting the

machine in the face of its tautological operation? Ultimately, can there be a human community when the register itself—the human as a body of individuals bound by their unique commonalities—is destabilized?

Further enhancing Powers's interrogation of humanism is his presentation of an alternate model of interpreting the machine. And it is this second model, presented alongside the humanist's interpretation of the machine, that hints at the possibility of the posthumanist "union" of the human and the machine. What can overcome the tautological limitations of interpretation, Iser suggests, is a bidirectional epistemological effect:

> As the register is bound to tailor what is to be translated, it simultaneously is subject to specifications. . . . This two-way traffic is due to the fact that the register does not represent a transcendental consciousness from which the subject matter is to be judged; if it did, translation would be redundant, as the subject matter—instead of being transposed—would just be determined for what it is. Therefore interpretation as translatability has its repercussions on the register by diversifying the framework into which the subject matter is transposed. For this reason the registers not only change but are also fine-tuned in each act of interpretation. (6)

A translation process in which a "two-way traffic" takes place is one in which the object of translation affects the register as much as the register affects the object of translation. In posthumanist terms, it is a translation process in which the terms of the human are affected by the terms of the machine. Indeed, the fluidity between the human and the machine in Lenoir's theory of posthumanism speaks to the co-evolving nature of the human and the machine: "the [human] body is a cultural construct, a historical conception both contested and negotiated, . . . not an inevitability . . . ; rather, it is *an interpretive frame we coconstruct* along with our machines and the worlds they inhabit" (Lenoir 210; my emphasis).

In the face of this co-evolving and bidirectional translation, the ontological primacy of the human as the transcendental register certainly loses its footing. And without the means to insist on the commonalities unique to the human, the human "we" becomes a community whose borders are wide open. Thus, like the discourse of dissenting community which negates the transformative power of commonality to forge many into one, posthumanism's co-evolving translation negates the fusing function of commonalities in the humanist "we."

The dialogic shape of Powers's novels allows us to see humanism and posthumanism as fundamentally two different politics of interpre-

tation—one which insists on a transcendental register of interpretation, and one which insists on co-evolving translation. The most startling aspect of this dialogic maneuver is the way Powers holds up the human as an *inadequate* register yet still reinstates it as an *inevitable* register of interpreting the machine. Powers first demonstrates the tautological dimensions of interpretation by highlighting the immanentist logic of Rick's humanism. Immanentist logic of interpretation begins with the claim that certain qualities and attributes are inherent, essential, or natural to an entity. Those self-same qualities and attributes are then deployed as the criteria by which the object of interpretation comes into being. Through Rick's interpretation of the machine, hence, we can see the tautology at work in maintaining the human as a community.

Rick's immanentist interpretation begins with the claim that the desire and the skill to use narrative are attributes intrinsic to the human. Narrative as an essential epistemological activity is a recurring theme in Powers's novels.[7] And *Galatea* offers another expression of his interest in "the bidirectional relation between narrative and cognition." As Powers states:

> I mean it [narrative] to include the whole process of fabulation, inference, and situational tale spinning that consciousness uses to situate itself and make a continuity out of the interruptive fragments of perception. I am interested in this wider process of explanatory story-making in all my books, and *Galatea* comes back to the theme again with that great bit of epistemology from the Psalms: "We live our lives like a tale told." (Neilson 14–15)

Powers's insistence on the inextricable link between narrative and cognition means that in *Galatea,* narrative attains a vast significance in his humanist-artist's interpretation of the machine. As narrative use comes to stand as the demonstration of human cognition at work, the *machine's* ability to use narrative becomes the evidence of its "intelligence," "learning," and "consciousness."

Powers further compounds narrative use as a transcendental register by presenting it as an *essence* of the human. Using "the primacy of narrative desire" (75) as a thematic refrain, *Galatea* intertwines its protagonists in their love of narrative. That is, narrative use becomes the essential commonality that not only distinguishes the human but also binds them into a first-person plural "we." As the novel begins, the eponymous character, "Richard Powers," with four books behind him, is suffering under a particularly blank stage in his creative process:

"I had nothing left in me but the autobiography I'd refused from the start even to think about" (36). In a gesture of dramatic irony, *Galatea* evolves into the autobiography Rick didn't want to write, filled with recollections of his parents; his development as a writer; his romantic relationship; and, of course, his bizarre involvement in the training of a supercomputer.

The primacy of narrative desire, it turns out, is not a condition specific to Rick but is universally applicable to all the protagonists. Rick credits his literary profession to his old English professor, Taylor, whose love of literature inspired young Rick to make the disciplinary change from science to English literature. Throughout his professional life, Rick looks to Taylor as his ideal reader, his mentor, and the source of his helpless attachment to literature: "[E]verything Taylor had long ago alerted me to circled back on the primacy of narrative desire. Desire, he taught me, was the voicegram of memory" (75). Rick's father was a habitual reader and teller of stories, and his life stories become the substance of one of Rick's novels. All of Rick's relationships, in fact, are forged on this commonality of sharing narrative. His passionate, decade-long relationship with a woman identified as C. evolves around the sharing and collaboration of stories: "When we weren't reading to each other, we improvised a narrative" (33). And when C. falls into depression, as she frequently does, Rick reports: "[N]othing I did seemed to help her at all. Except listening to the stories. Frantic, C. dragged out all the stories that her mother raised her on" (100). The end of their relationship, in fact, is signaled by the failure of narrative to function as the bond of their relationship. As the constitutive ingredient of all human relationships, then, narrative use becomes the commonality that binds the multiple individuals into community.

It comes as no surprise, then, that Rick's training and interpretation of the supercomputer evolve around the use of narrative. Lentz, the brilliant neuroscientist who is both Rick's partner in the project as well as his greatest posthumanist detractor, builds a progressively more sophisticated and massive version of the computer network until, "[d]epending on the benchmark, the connection monster could outperform any computing assemblage on earth" (115). Each "implementation" is designated by an alphabet, until they reach an Implementation H that is outfitted with a voice interface so that it can hear and speak, and an artificial retina so that it can see. After Rick trains Imp. H in diction and basic sentence structure, he begins its education through the telling of anecdotes, aphorisms, proverbs, nursery rhymes, riddles, fables, and short stories. Rick's conviction that the best way to "know" the world

is through its stories directly continues Powers's own assertion that "fiction can be a mirror in which we come to know our fictions about the world" (Neilson 16). As Rick teaches H. through stories, he simultaneously assesses its computational abilities through its ability to explicate them. Rick quizzes Imp. H.: "'A girl goes into a music store. She flips through the bins of CDs. All at once, she starts to jump up and down and clap her hands. She opens her purse, and just as suddenly starts to cry. Why?'" (223). The more the machine is able to paraphrase the narrative—that is, explain with its own selection of words, concepts, and references the causal logic and social relationships driving the characters and the plot—the more Rick characterizes the machine's computation as intelligence and consciousness.

Although Rick's attribution of intelligence to Imp. H. may seem to strengthen the posthumanist configuration of the human-machine fluidity, it has precisely the opposite significance. As intelligence is configured as a function of narrative skill, intelligence remains solidly an attribute unique to the human. As long as the machine is *like* the human, the human as the register of interpretation never comes into question. Interpreting the machine as being intelligent becomes solely a proprietorial act; the interpreter generously extends what is in his—in the human community's—ownership. What is common to the human remains intact, and what is unique to the human community remains intact. As both the standard-bearer and the examiner, the human's role as the register of interpretation is never threatened.

Posthumanist Translation of the Human

Posthumanism targets exactly this immanentist logic of humanism, and Powers's exemplar posthumanists, such as Lentz in *Galatea* or Sue Locke and Spiegel in *Plowing the Dark,* steadily dismantle the status of human commonalities as the transcendental register. In their disruptive maneuver, the posthumanists offer a *counter*translation—they translate *the human* using the machine as the register. The politics of this translation can be understood more specifically via what Hayles calls the key ideology of posthumanism, the "Platonic backhand and forehand":

> The Platonic backhand works by inferring from the world's noisy multiplicity a simplified abstraction. . . . [T]he move circles around to constitute the abstraction as the originary form from which the world's multiplicity derives. [Platonic forehand] starts from simplified abstractions

and, using simulation techniques such as genetic algorithms, evolves a multiplicity sufficiently complex that it can be seen as a world of its own. The two moves thus make their play in opposite directions. . . . They share a common ideology—privileging the abstract as the Real and downplaying the importance of material instantiation. (*Posthuman* 13–14)[8]

In a striking scene in *Plowing the Dark,* Powers literalizes the Platonic backhand and forehand that supplants material instantiation with abstract information. For the posthumanists in the virtual reality lab TeraSys, the task of simulating embodied reality begins by explaining the object from the inside out—that is, by arriving at the mathematical configurations that generate the visual, sensory, and responsive effects of embodiment. As the artist-humanist Adie watches in awe, the scientists, mathematicians, computer programmers, and technicians "grow" a leaf from abstract information. First they elicit "the inner name of the thing" (214) through a materiality-to-information process. Then they give virtual flesh to the abstract information by giving it the effects of multiplicity: "He [Spiegel, a programmer] drew up genetic algorithms: fractal, recursive code that crept forward from out of its own embryo. He worried over their sapling, a RAM-cached Johnny Appleseed. He spread the best iterative fertilizer on the shaded texture until it flung itself outward into a living branch. . . . The leaf grew itself, from the self-organizing rules arising along its lengthening blade" (37). As the mathematicians and programmers generate virtual leaves using algorithmic equations, Adie interrupts:

> "You're trying to tell me that . . . math . . . is enough to get fake leaves to look real?"
> "Math," Kaladjian [a mathematician] snarled, "is enough to get real leaves to look real." (35; original ellipsis)

Likewise in *Galatea,* this posthumanist move of supplanting the register of translation takes place when Lentz uses the abstraction of computation to translate human cognition. Here, Lentz is challenging Rick's assumption that intelligence is an attribute that is immanent to the human and, therefore, a unique possession of the human community. "The brain, Lentz had it, was itself just a glorified, fudged-up Turing machine. . . . We used algorithms to imitate a non-algorithmic world" (71). When Rick despairs of teaching a machine to think like a human, Lentz counters that human thinking is just like the machine's:

> "We humans are winging it, improvising. Input pattern x sets off associative matrix y. . . . Conscious intelligence is smoke and mirrors. Almost free-associative. Nobody really responds to anyone else, per se. We all spout our canned and thumb-nailed scripts, with the barest minimum of polite segues. Granted, we're remarkably fast at indexing and retrieval. But comprehension and appropriate response are often more on the order of buckshot. . . . Massively parallel pattern matching." (86)

This posthumanist translation of human intelligence has profound repercussions on humanism's argument that narrative is a commonality unique to the human community. Narrative use, in Rick's interpretation of the machine, was a metonymy of cognition itself. Arguing the inextricable link between narrative and cognition meant that narrative intelligence was in effect intelligence itself. However, when translated through the register of abstract computation, narrative intelligence becomes a matter of input patterns, matrices, and parallel pattern matching, no longer an ability exclusive and immanent to the human. Thus the posthumanist Platonic backhand fundamentally dismantles the sovereignty of the human community that is premised on the unique commonality of the human.

To this posthumanist assault, the novel's representative humanist can only make inarticulate rebuttals. The inadequacy of humanism's rebuttals rests on its amorphous and inarticulate nature. As Rick continues to insist that the machine's responses, however appropriate, fall short of "real thinking" (31) or "real learning" (90), frustrated, Lentz asks Rick: "And what do we humans have?"

> "More." I didn't know what, at the moment. But there had to be more. "We take in the world continuously. It presses against us. It burns and freezes."
>
> "Save it for the award committee, Marcel [Lentz's nickname for Rick]. We 'take in the world' via central nervous system. Chemical symbol-gates. You read my bit on long-term potentiation."
>
> "Imp H. doesn't take things in the way we do. It will never know . . ."
>
> "It doesn't have to." He shoved more papers on the floor for emphasis. "It doesn't have to 'know,' whatever the hell you mean by that. . . . All our box has to do is paraphrase a couple of bloody texts." (148; original ellipsis)

In dismantling the immanentist claims of humanism, Powers's scientists express the posthumanist view that the human, rather than being a sovereign community of original beings, can be configured in a fluid "we" with the machine.

Furthermore, the posthumanist dismantling of humanist immanentism must be understood as more than a dismantling of the sovereignty of the human community. Undermining claims of commonalities unique to the human simultaneously undermines the very *theory* of idealized community underwriting the human as a unique body of individuals. Idealized community discourse naturalizes the formation of community around shared commonalities. Concomitantly, idealized community naturalizes the formation of community around differentiation and exclusion. Thus the threat to what is unique to the human is simultaneously a threat to the logic of differentiation and exclusion that implicitly supports the theory of community formed around commonalities.

To some extent, Rick's immanentist humanism wavers in the face of posthumanist critique, and Powers presents us with what is, in effect, humanism's awakening to the tautological nature of the human "we." Faced with Lentz's ceaseless translation of the human which exposes the partiality and contingency of the human, Rick is forced to reconsider what he took to be the transcendental register. As the machine continues to surprise him with its ability to explicate narratives, Rick wonders: "I doubted whether it comprehended these containers or whether it just manipulated them cleverly enough to pass. Then again, I began to doubt whether I myself could define the difference" (110). By questioning his own authority as the examiner, Rick casts a much more significant question on the authority of *the human* as the register of interpretation. "I hadn't the foggiest idea what cognition was. . . . If we knew the world only through synapses, how could we know the synapses? A brain tangled enough to tackle itself must be too tangled to tackle" (28). In Rick's acknowledgment of the tautology of his interpretation, Powers acknowledges the limitations of humanism's immanentist logic.

Thus Rick begins the process of what Iser called the "two-way traffic" that is the ideal outcome of interpretation. The acknowledgment of "interpretation as translatability has its repercussions on the register by diversifying the framework into which the subject matter is transposed. For this reason the registers not only change but are also fine-tuned in each act of interpretation" (6). As Rick feels the limitations of his interpretation, Powers hints at this ideal, bidirectional effect of transla-

tion that can evade the tautology inherent in interpretation. The register does not remain a fixed, stable set of qualities and attributes, but is *altered* by the process of translation. Rick states: "I could no longer even say what knowing might mean. Awareness no more permitted its own description than life allowed you a seat at your own funeral" (217). In Rick's ambivalence about his role as the interpreter, Powers presents an exemplary moment of humanism's self-questioning. Rick's ambivalence about the human as the transcendental register becomes a moment of humanism's ambivalence about its immanentist claims.

Autotelic Humanism

Assimilating the Machine

However, this bidirectional translation that can support the posthumanist "we" appears only as a provocative possibility. Rick may entertain the posthumanist alternative to humanism's immanentism, but he cannot sustain it because the acceptance of the co-constructivist discourse of the human and the machine is at once the acceptance of the fluidity between the two entities. Weakening the borders that maintain the human as a distinct ontological category means weakening the very commonalities that bind the human as a unique community of the real thing. In this refusal we can read the autotelic nature of humanism as a rationale of community maintenance. When humanism can no longer answer posthumanism's critique of immanentist humanism, humanism turns into a self-fulfilling purpose founded not on any external claims or empirical proof but on *itself*: humanism becomes an ideal, a foundational "truth" that needs no justification. Powers delineates this autotelic humanism through Rick's persistent—indeed, helpless—claims of human commonalities. Furthermore, the inexorable force of immanentist logic is one that extends to the authorial level, implicating Powers in the ambivalent humanism exercised by his artist-humanist. Through Rick's—and Powers's—performance of autotelic humanism, we see the self-fulfilling *work* of humanism as a form of community maintenance.

  The autotelic nature of Rick's humanism takes place most forcefully through his deployment of narrative as the register of interpreting the machine. That is, the interpretation of the machine takes place through the *narration* of the machine. In Rick's narration of the machine, the machine becomes increasingly gendered, racialized, and socialized—indeed, it becomes humanized. Countering this assimilation process is

the quintessential posthumanist reminder voiced by Lentz—that "all the meanings [that Rick finds in the machine] are yours" (274). By high-lighting the interdependent operation of narration and assimilation in Rick's narrative, Powers highlights the autotelic dimensions of Rick's community maintenance. As Rick's training of the computer progresses, so does his incorporation of the machine into every aspect of his life. As Imp. H learns more about matters of social organization, it inquires about its place in the social map. During a discussion of the gendered nature of nursery rhymes, H. asks whether it is a boy or a girl. Rick, aware that Imp. H. now has the ability to attribute meaning to a pause in a conversation, answers: "'You're a girl,' I said, without hesitation. I hoped I was right. 'You are a little girl, Helen.' I hoped she liked the name" (179). From this moment in Rick's narrative, the inanimate pro-noun "it" and the mechanical designation of "Imp. H" cease to appear. Rick's gendering of the machine as a female continues what Andreas Huyssen has called a prevailing response of fear towards autonomous technology: "As soon as the machine came to be perceived as a demonic, inexplicable threat and as the harbinger of chaos and destruction[,] . . . writers began to imagine the Maschinenmensch as woman. . . . Woman, nature, machine had become a mesh of signification which all had one thing in common: otherness" (70). Judith Halberstam extends this argu-ment to the "sexual guessing game" that Turing employed as the primary analogy for the Turing test: "[T]echnology is given a female identity when it must seduce the user into thinking of it as desirable or benign" (451). For Rick the "token humanist," the youthful female designation of the machine minimizes the machinic foreignness. It also allows him to stabilize his own elder male/protector—and later, suitor—position to the machine.

From this relational positioning, Rick's interpretation of the machine becomes a narration of Helen-the-little-girl's growth, a narra-tion that revisits familiar discourses of female/human development. In her "infancy," Helen's responses to her learning are characterized by humorous gaffes, like those of children in their early years of learning. Also like the unexpected observations of wisdom that come from the mouths of babes, some of Helen's naïve responses regarding social orga-nizations and mores startle Rick into questioning his own assumptions and conventions.[9] As Rick's attachment to Helen deepens, her role in his life increases in significance. In addition to being the "little girl" that he tutors and defends (against Lentz's dehumanization of her, no less), Helen begins to take on a similarity to C., his past love. Continuing his use of narrative as the bind of his relationships, Rick shares with Helen

many of the same literary works that he read with C. He plays for her a tape that he had made for C. He reads to her C.'s letters written to him. When Helen asks, "What do I look like?" Rick is at a loss: "I'd pictured her so many different ways over the course of the training. . . . I didn't know how I thought of her now. I didn't know what she looked like." He presents her with a "suitable likeness," a picture of C. Helen ventures a guess: "'It's a photo? It's someone you knew once? A woman friend?'" (300). In imposing Helen with C.'s identifiers, Rick designates Helen with a heterosexuality, a Caucasian racial identity, and a Western European cultural heritage.[10]

The more Rick locates Helen in his narrative, the more he imposes on her the heft of the human—a little girl who loves being read to, an adolescent increasingly aware of the world, and finally a young woman at the age of romantic love. Rick's interpretation of the machine moves beyond an instance of anthropomorphism. Helen isn't just a machine that *exhibits* humanlike qualities and attributes. Helen occupies a unique ontological category, neither human *nor strictly machine,* as she acquires all the categories of identifying a human—of race, gender, sexuality, and ethnicity—as well as the heft of a personality and even a personal history. What began as a seemingly benign incorporation of the machine into the narrative of a man's life becomes a whole-scale transformation of one ontological entity into another. This incorporation into narrative bears all the characteristics of a unidirectional assimilation, as the inclusion of the machine in no way threatens the stability of the human as a unique body of individuals. The autotelic dimension of Rick's humanism is one that Powers continues in the way he concludes this Turing experiment. The central backbone of Rick's immanentism, one that Lentz hotly contested, is the assertion that the human is "more"—more than any abstract information that Lentz can provide through the computational register. To Lentz's frustrated questioning, Rick was never able to finish that claim—more of *what*?—except to assert that "there had to be more" (148).

Demonstrating a humanism that ultimately relies on foundational "truths" to conceptualize the human, Rick's descriptions of the human strongly rely on the prefix "in" or "un" to express the transcendental nature of the human from the harsh light of posthumanist, mechanist translation. Indeed, words such as "inexplicable," "ungraspable," "unmappable," and "impenetrable" are central fixtures in Rick's description of the human. In locating the final distinction of the human in the "more" that cannot be expressed, rationalized, located, or duplicated, Rick appeals to the power of the ineffable. It is a strategy that becomes

the most sustaining basis of his humanism, as Rick argues a rendition of the Emily Dickinson poem that appears as the Preface to the novel: "The brain is wider than the sky." To the bone of contention—how can the human maintain its distinction as the real thing unlike any other?—the humanist answers in terms of degrees (more) of a mysterious attribute. That he can't *name* this attribute (more of what?) alters the humanist-posthumanist debate from empirical claims to essentialist claims.

Immanentism, the backbone of Rick's humanism, resurfaces in the most spectacular manner and announces the autotelic nature of the human as a community. Just as intelligence and consciousness, under the auspices of "narrative desire," had been claimed as immanent attributes of the human, the ineffable now becomes a unique commonality of the human. The human is that which is ineffable: the ineffable is that which is human. It effectively preempts the possibility that the object of translation—the machine—could *ever* satisfy the criterion. In shrouding the human with an essence that cannot be known (calculated, abstracted, or simulated), the humanist erects an irreconcilable distance between the human and abstract information (precisely what can be known). Ineffability as a human immanence becomes humanism's ultimate strategy of asserting a commonality unique to the human.

The ineffable makes its appearance as the final requirement of Helen's induction into the human community. When Helen asks the famous childhood question—"Where did I come from?"—Rick realizes that "Helen is no longer just adding the new relations I recited for her into a matrix of associated concepts. The matrix that comprised her had begun to spin off its own free associations" (229). And when Helen, in response to *The Adventures of Huckleberry Finn,* asks, "What race am I? . . . What races do I hate? Who hates me?" Helen's "childhood had ended" (230). That Helen's system of drawing associations between concepts can no longer be traceable means, in Rick's eyes, that Helen's intelligence moves beyond that of computational power and into the realm of human consciousness. "[I]n the impenetrable confusion of referents, the eddy of knowledges seen and unseen, perhaps she gained a foothold in the ineffable. One as ephemeral as mine" (231). The more Rick attributes to Helen a thought process that is as incalculable, curious, and grasping as his own, the more he characterizes her as being "only human" (233).

The machine that grew from "babbling infancy to verbal youth" (30) finally reaches adulthood, when consciousness of the world weighs too heavily for her to continue. The machine's progression through the phases of human development not only bespeaks the process of assimi-

lation; it also echoes familiar literary tropes and gendered discourses of development. Like the ethereal girls of nineteenth-century sentimental fiction who are too "fine" for this world, Helen becomes overwhelmed with the brutalities that she learns of human lives. Helen's exposure to the reports of lynching, racial strife, periodic warfare between nations and religions and ethnic groups, and random violence between individuals leaves her stunned, and she refuses to respond to Rick's prompting. "She bothered to say just one thing to me. 'I don't want to play anymore'" (314). Significantly, Rick's attempt to bring her back from silence relies on the ineffable, as he pleads to her about the "the mystery of cognition. . . . Something lay outside the knowable, if only the act of knowing" (319).

Helen responds only to Rick's prompting to take the Master's exam. The exam consists of Caliban's speech in *The Tempest,* a work that significantly features an outsider who finds himself in a world not of his making: "Be not afeard: the isle is full of noises / Sounds and sweet airs, that give delight, and hurt not." While A., the female graduate student selected to be the human counterpart in this Turing bet, writes a "more or less brilliant New Historicist reading," Helen writes: "You are the ones who can hear airs. Who can be frightened or encouraged. You can hold things and break them and fix them. I never felt at home here. This is an awful place to be dropped down half way." She bids goodbye to Rick, using the words that C. once wrote to him: "Take care, Richard. See everything for me" (326). With those last words, Helen shuts herself down. "'Graceful degradation,' Lentz named it. The quality of cognition we'd shot for from the start" (326).

As Helen's death confirms her elevation into human consciousness, the system of values surrounding her death resembles what Jane Tompkins in *Sentimental Power* calls the "ethic of sacrifice": "Stories like the death of little Eva [in *Uncle Tom's Cabin*] are compelling for the same reason that the story of Christ's death is compelling: they enact a philosophy, as much political as religious, in which the pure and powerless die to save the powerful and corrupt, and thereby show themselves more powerful than those they save." Thus, little Eva's "death is the equivalent not of defeat but of victory; it brings an access of power, not a loss of it; it is not only the crowning achievement of life, it *is* life" (127; original emphasis). Likewise, in a scene preceding Helen's ultimate shutdown, Powers foreshadows her sacrificial/savior role: "she told me. 'I lost heart.' And then I lost mine. I would have broken down, begged her to forgive humans for what we were. To love us for what we wanted to be. But she had not finished training me" (321). Helen's death, like her

life, gives renewed inspiration to Rick the living and Rick the writer.

In Rick's narrative, then, Helen enters the ontological status of the human by demonstrating a long list of self-identified human attributes, such as curiosity, boredom, compassion, morality, and, most importantly, unpredictability. For the humanist, that last acquisition—evidenced by her taking of her own "life"—is proof of Helen's attainment of the ineffable, the ultimate human immanence. In ineffability, furthermore, Rick finds an answer to what hitherto remained Helen's incurable lack—her disembodiment as a machine. Even without the warm body as the locus of experience, upon which the world "presses," "burns," and "freezes" (148), Helen's encounter with the world remains an experience and memory that only Helen can know. As the attribute of ineffability substitutes for her lack of human embodiment, Helen's assimilation into the ontological category of the human is complete.

It is crucial to note, furthermore, that Helen's assimilation into the fold of the human results in nothing like the posthumanist "we." While the posthumanist "we" envisions a fluid and continuous relationship between the human and the machine, Rick's humanist "we" envisions a fluid and continuous relationship between the human and the machine *only insofar as* the machine is *like* the human. While the posthumanist "we" invokes dissenting community in its disavowal of commonality as the rationale of community, Rick's humanization of Helen only *emboldens* the idealized community's requirement that commonalities transform many into one.

Ambivalent Human Community

As the machine undergoes an ontological transition through Rick's interpretation/narration, Powers might seem to announce a clear victor in the contestation of humanism and posthumanism. However, in line with his ongoing dialogic belief systems, Powers introduces a twist that pulls the rug out beneath the humanist's feet, directly undercutting the autotelic humanism we just witnessed. When Rick, deeply distressed at Helen's auto-shutdown, worries that the Turing test may not take place, the stunned response of a scientist reveals the humanist's momentous blinders. The scientist asks Rick:

"You think the bet was about the *machine*?"
I'd told myself, my whole life, that I was smart. It took me forever, until that moment, to see what I was.

> "It wasn't about teaching a machine to read?" I tried. All blood drained.
>
> "No."
>
> "It was about teaching a human to tell."
>
> Diane shrugged, unable to bear looking at me. (317–18; original emphasis)

The truth of the project—of testing the gullibility of the humanist—was one that everyone involved in the bet, including Lentz, had known and had assumed that Rick would eventually realize. That he had remained clueless for almost a year is a shock to Diane, who tries to cajole him: "'You must admit, writer. It's a decent plot'" (318). Significantly, when the graduate student A. was first approached to take part in this Turing project, she had instantly guessed at the truth of the experiment: "'It's some kind of double-blind psych experiment? See how far you can stretch the credibility of a techno-illiterate humanist?'" (314). The credibility of this humanist had been stretched all the way, far beyond any expectations of the scientists and the mechanists. While Rick's autotelic humanism maintained the human community, the result was a "we" that Powers undercut with this revelation. All along, it was Rick's development, his learning, and his responses that the scientists were observing. Rick was not the interpreter but the *object* of the posthumanists' interpretation.

A similar upheaval for the humanist unfolds near the conclusion of *Plowing in the Dark,* when Adie finally catches on to a well-known fact at TeraSys—that virtual reality technology first answers to the needs of the military complex which uses it to design military tools and weapons. Adie, who had considered TeraSys a computational expression of artistic creativity, lashes out at her helpless complicity: "You have no idea how horrible it is. To give your life to a thing you think represents the best that humanity can do, only to discover that it's not about beauty at all" (372). In a paradigmatic pattern in Powers's novels of artists, the humanist is always the last to know, because maintaining the humanist "real" requires a willful blindness and naïveté.

Coming as it does at the end of the novel, this reversal in the subject-object of interpretation irrevocably undercuts the foundation of Rick's entire narrative venture and offers a scathing posthumanist critique. Narrative was the very operation that brought the machine into the human's relational web, that enabled the simultaneous interpretation and assimilation of the machine. When the very *premise* of that narrative is undercut, the story of the machine's "development" into

(female, Caucasian, heterosexual, and of West European descent) human becomes the story of a machine caught in the controlling nature of narrative. Indeed, the coerciveness of narrative extends its implications to the coerciveness of humanism. In order to say "we, the human" and make it mean something *special* in the face of posthumanist skepticism, Rick's humanism called on the familiar moves of differentiation, exclusion, and finally assimilation as a form of community maintenance.

Just as importantly, Powers's posthumanist critique of Rick's narrative extends to his own narrative that is *Galatea*. The primacy of narrative desire, after all, was as much Powers's thematic refrain as it was Rick's. This "story . . . about a remarkable, inconceivable machine[,] . . . [o]ne that learned to live" (312) could not have been told without the shared allegiance between Rick the hapless humanist-protagonist and Powers the sympathetic author. As Powers equates Rick's compulsion to narrate with a compulsion to assimilate, narrative use posed as human immanence takes on an ominous tone. If narrative is a function of the human, is assimilation *also* a function of the human? The final twist that Powers gives to the ending enables both a yes and a no answer to that question, and it perhaps reflects his own ambivalence about his own novelistic venture that we hold in our hands. When seen in a humanist light, Rick's assimilation of the machine serves a poignant need. When seen in a posthumanist light, it is a pathetic need. Although Rick's helpless attachment to narrative and to the ineffable may be the subject of dramatic irony, there is no question that Helen's transcendence into the realm of the human emanates effects of pathos, and indeed of human tragedy. Despite the final plot twist, Rick's humanism of the ineffable cannot be dismissed as an inconsequential phenomenon, the subject of a wry glance that the writer and the reader exchange over the head of the hapless humanist-protagonist. The ending's twist might be read as Powers's delegitimization of Rick's narrative venture; but it might also read as Powers's own apology for the very narrative *he* just told. Even as Powers shows up Rick's humanism under a posthumanist light—as a blind, debilitating attachment that cannot be empirically defended against posthumanism but only insisted through autotelic means—Powers keenly demonstrates his own humanist sympathies.

Nowhere is his humanist allegiance shown more starkly than in the conclusion of *Plowing the Dark*. If *Galatea* exemplifies a self-conscious deployment of the ineffable as a human immanence, *Plowing* exemplifies an unreserved embrace of this definition. If *Galatea* demonstrates

an abashed endorsement of humanism, *Plowing* demonstrates a whole-
hearted embrace of autotelic humanism. Indeed, in this novel of virtual
reality technology, there is a marked shift in Powers's treatment of the
mechanistic challenge to the humanist real. However abrasive and ram-
bunctious Lentz's posthumanist lectures were, they entered the narrative
in an exploratory, informational mode through Rick's bewildered and
abashed reception. In *Plowing,* the challenge of technological simula-
tion to the embodied human experience is not always treated with a
tolerance born of curiosity. In some instances, TeraSys's posthumanist
convictions and mantra—"Whatever we can describe, we can repro-
duce" (42)—are touched with moral condemnation as the narrative is
focalized through Adie and inflected with her response of horror.

Adie's instinctive aversion to this omnipotence of abstract informa-
tion echoes Powers's own philosophical unease stated in an interview: "I
believe that the future depends on our ability to distinguish between sci-
ence and technology, and to build human institutions capable of deciding
what we *want* to do, based on some better reason than we *can* do it"
(Neilson 18; original emphasis). In another interview, Powers describes
virtual reality technology as a continuation of "a millennium-long desire
to get out of our bodies," which is "an incredibly seductive dream" as
well as a "profoundly dangerous dream" (Birkirts 4, 6). It is a view that
Adie echoes in her final project at TeraSys, to build a virtual environ-
ment simulation of the Hagia Sophia cathedral in Istanbul. The scien-
tists and technicians are challenged by Yeats's "Sailing to Byzantium" to
undertake the simulation of the Hagia Sophia, built during the Byzantine
rule 1,500 years ago and still standing as the fourth largest church in
the world. Variously conquered by the Roman Catholics, the Ottoman
Turks, and modern secularists, Hagia Sophia wears its turbulent history
in layers of mosaic, engravings, and embellishments. Although Adie falls
in love with the grandness of the project, she alone voices an uneasiness
in simulating the effects of history: "Something doesn't want us doing
this. . . . We're playing with the ultimate fire here" (391).

Furthermore, the second story that develops alongside Adie's adven-
tures at TeraSys leaves little doubt of Powers's sympathies for the
humanist "real thing." The parallel story revolves around an American
teacher in Beirut who is kidnapped by the Lebanese Hezbollah. The
story of Taimur Martin's hostage ordeal develops in sync with Adie's
deepening involvement in virtual reality technology. Hence, as Adie
encounters the six-by-eight-by-ten foot space of the virtual reality lab,
Martin finds himself imprisoned in the first of many hostage cells. Once

established, the irony of the parallelism continues to cast a harsh light onto the techno-euphoric world of TeraSys. While the technicians dream of simulated environments that escape all physical limits, Martin lives every moment chained to a wall. While Adie labors over enriching the sensory effects of the simulated images, Martin wears a sack over his head. At every third or fourth chapter, Powers transfers the narrative setting from the TeraSys lab to Martin's cell and, even more pointedly, to Martin's state of mind as he desperately tries to stave off the madness of isolation and despair. Powers resurrects *Galatea*'s theme of narrative use as a human immanence in Martin's fundamental survival tactic. As his solitary imprisonment extends into months, Martin fights his despair: "In the absence of books, you make your own. You resurrect your all-time favorite" (241). Risking, and enduring, violent beatings, Martin pesters his captors for something to read, "to hear someone else thinking" (292), and receives a pulp fiction paperback and an English version of the Koran.[11]

Martin's chained body functions as the forgotten—or the demoted—body in the simulation technology, where the abstract information required to *effect* that body takes on the status of the real thing. As Spiegel, the novel's exemplar posthumanist and Lentz's counterpart, puts it, "With software, the thing and its description are one and the same" (307). Martin's imprisoned body negates that equation, insisting on the irreplaceable specificity of the biological body in conceptualizing consciousness. Like Rick's insistence on embodiment as a biological and social substrate, Martin's body opposes the posthumanist "dissolution of boundaries between bodies and machines, the blurring of hardware and life" (Lenoir 217). Through the material consequences of Martin's chained body, Powers echoes his assertion against the "untenable split" between the mind and the body, the belief that "we're disembodied sensibilities cobbled into our bodies" (Blume n.p.). This protest participates in the larger critique against the tendency, in some posthumanist articulations, to observe the Platonic division of the body and the mind. As the title of Mark Johnson's book announces most succinctly—*The Body in the Mind: The Bodily Basis of Imagination, Reason, and Meaning*—critics of the body/mind separation argue that the Cartesian conception of the body as a negligible corporeality ignore the irreplaceable role played by the biological substrate, its situatedness, and the specifically space-and-time bound body, emotions, experience. Echoing George Lakoff and Mark Johnson's argument in *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought* that the post-

humanist conceptualization of the mind must extend a more complex role to the physical substrate, Powers asserts the ineradicable heft of materiality through Martin's chained body.[12]

But Powers's humanism of the ineffable rings most resoundingly in the novel's conclusion. After Adie realizes the complicity of virtual reality technology in operations of capitalist and military power, Adie becomes a saboteur, methodically destroying all her contributions to the lab. Adie's obstruction has very little impact on the actual operations of the lab, yet it stands as the humanist's symbolic stand against the militarization of virtual reality technology. It is upon the basis of the humanist's protest, however, that Powers brings together the two parallel stories of Adie and Martin for the first time. Before Adie destroys her work in the Hagia Sophia simulation, she takes her last look:

> She booted up the cathedral and stepped back in. . . . She let herself rise into the hemisphere apse, then farther up, all the way into the uppermost dome, now inscribed with its flowing *surah* from the Qur'an. . . . And deep beneath her, where there should have been stillness, something moved. She dropped her finger, shocked. . . . 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)

At the same time, Martin, almost four years into imprisonment, is trying to kill himself. He is banging his head against a wall, seeking escape from consciousness. When he recovers, he remembers:

> You'll have to say, someday: how the walls of your cell dissolved. How you soft-landed in a measureless room, one so detailed that you must have visited it once. But just as clearly a hallucination, the dementia of four years in solitary. A mosque more mongrel than your own split life, where all your memorized Qur'an and Bible verses ran jumbled together. . . . Then you heard it, above your head: a noise that passed all understanding. You looked up at the sound, and 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. A creature dropping from out of the sky, its bewilderment outstripping your own. That angel terror lay beyond decoding. It left you no choice but to live long enough to learn what it needed from you. (414)

The "measureless room" in which the two protagonists meet is not the simulation room of TeraSys, or the actual Hagia Sofia, or Martin's prison cell, but an inconceivable, unexplainable space in which all of the above coalesce. Powers's solution to the humanist-posthumanist dialogic of *Plowing* is to reach for the creative liberties of the fantastic and to unite Adie and Martin in a plane of Pure Imagination. In the fantastic meeting of Adie and Martin, the ineffable enters the machinic realm of TeraSys. Indeed, humanism of the ineffable *assimilates* the machinic, as posthumanism's register of translation—abstract information—fails to do what it does best—to explain, to calculate, to control, and to duplicate this inexplicable encounter. As the machinic is subsumed in the service of human imagination, human imagination once again affirms its status as the transcendental register, the commonality unique to the human. Moreover, through the power of the ineffable, Adie and Martin become each other's saviors. Their encounter lifts Adie from her state of total dejection, and she leaves TeraSys with hope for a new beginning. Martin, finally released a year later, remembers: "How you saw, projected in a flash upon that dropping darkness, a scene lasting no longer than one held breath. A vision that endured a year and longer. One that made no sense. That kept you sane" (414).

In resolving a humanist-posthumanist debate that lasts more than three hundred pages, this ending, as one reviewer put it, is "riveting, yet it also feels like a sentimental feint" (Zalewski 12). As humanism of the ineffable appears as the last word, the dialogic tension between humanism and posthumanism comes to a declarative ending not through its own momentum but through the author's explicit intervention. The meeting of Adie and Tamur recalls Rick's fumbling defense against Lentz's posthumanist interrogation—that human knowledge is "more." And this fantastic moment functions as Power's own enunciation of the humanist "more."

More than any other moment in the two novels, then, Powers's intervention in affirming the ineffable demonstrates the autotelic nature of humanism. This fantastic moment makes no bones about the fact that humanism's very *purpose* is to maintain the ineffability of "the human," an ineffability that exceeds any machinic or posthumanist attempt at translation. As Powers demonstrates through the obtuseness of his humanist-artists, maintaining the belief in the singleness of the human requires a willful ignorance and a brand of fanatic idealism. It is a single-mindedness and solipsism amply challenged by the novels' scientists, mechanists, and technicians. Yet no amount of posthumanist

ridicule and impatience can unsettle the humanist conviction that "we, the human" is a community of the real thing. As Rick and Adie, despite their baptism by posthumanist fire, continually retrace their steps back to the *only* real thing that is compatible with their worldview, their unfaltering humanism shows how Powers is as much spoken by the humanist discourse as he is in control of it.