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# Metatheatre and Authentication through Metonymic Compression in John Mighton's *Possible Worlds*

Jenn Stephenson

A recent spate of plays, including David Auburn's *Proof* and *Copenhagen* by Michael Frayn along with *Arcadia* and *Hapgood* by Tom Stoppard and the perhaps lesser-known *An Experiment with an Air Pump* by Shelagh Stephenson, all take for their central motif scientific or mathematical principles. Dialogue ranges through prime number theory, quantum mechanics, chaos and fractals, and elemental chemistry as these concepts are discussed and debated by the characters in their professional capacities as scientists and mathematicians. But below the surface, these principles, rules, or models reappear as themes and are applied to structure social interactions among the characters. Organized as a parallel thematic path, the scientific models describing the behavior of atoms are extended as metaphors for human behavior.<sup>1</sup> Although this is a relatively recent phenomenon reaching back perhaps fifteen years, it should not be particularly surprising. William W. Demastes, in his book *Theatre of Chaos*, notes that "given that both artists and scientists strive to understand nature and given that points of curiosity and matrices of approach are culturally influenced, it only makes sense that they will at least occasionally hit upon parallel conclusions."<sup>2</sup>

Moving beyond this direct thematic connection between scientific models and the experiences of the characters portrayed, several scholars observe that plays like *Copenhagen* and *Arcadia* take the relationship between science and drama one step further to the level of metatheatre, establishing parallels between the two disciplines

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<sup>1</sup> See Christopher Innes, "Science on the Stage," *Anglistik & Englischunterricht* 64 (2002): 95–105; Paul Edwards, "Science in *Hapgood* and *Arcadia*," in *The Cambridge Companion to Tom Stoppard*, ed. Katherine E. Kelley (Cambridge: Cambridge University Press, 2001), 171–84; Daniel Jernigan, "Tom Stoppard and Postmodern Science: Normalizing Radical Epistemologies in *Hapgood* and *Arcadia*," *Comparative Drama* 37, no. 1 (2003): 3–35. Also, Ric Knowles in *The Theatre of Form and the Production of Meaning: Contemporary Canadian Dramaturgies* (Toronto: ECW, 1999) titles his epilogue "Towards a Quantum Dramaturgy." He profiles the works of Canadian dramatists John Mighton and John Krizanc to show how each has "experimented with dramaturgical structures that imitate some of the central features of quantum mechanics and chaos theory, in order to explore the potential for such dramaturgical models either to intervene in or to collude with late capitalist hegemonies" (215).

<sup>2</sup> William W. Demastes, *Theatre of Chaos: Beyond Absurdism into Orderly Disorder* (Cambridge: Cambridge University Press, 1998), xv.

not only by using science as a dramatic structuring device, but also by reaching through the boundary between the stage and the world to comment self-reflexively on the lived performative experience of audiences and playwrights engaged with creating theatre.<sup>3</sup> *Possible Worlds*, by Canadian playwright John Mighton, joins this small but august company of plays that apply scientific models as dramatic themes on a metatheatrical level to reflect on key creative interactions between the stage and the audience.<sup>4</sup> Drawing on Mighton's own mixed background in mathematics and philosophy,<sup>5</sup> *Possible Worlds* creates a complex layered structure within which certain theories of Descartes meet those of Wittgenstein, and where both become actualized. In this environment, characters as well as audience members become disoriented by the fragmented and often contradictory nature of lived experience. *Possible Worlds* shows how both groups, subject to this perceptual handicap, successfully employ experimental strategies: first, to understand the controlling scientific and dramatic models at work in the play; second, to authenticate fictional existence; and, ultimately, to answer questions about how worlds—both fictional and actual—are constructed in perception.

The play begins as a darkly comic murder investigation; two detectives, Berkley and Williams, contemplate a crime scene. George Barber, the victim, has been discovered with his skull cut open—his brain stolen. Interspersed with the scenes of the ongoing police investigation are those in which George, alive, meets and is attracted to a woman named Joyce. For the audience, the seemingly contrary sight of the living George resists simple reconciliation as a flashback when this initial meeting is repeated a number of times with slight variations: They meet in a university cafeteria and Joyce

<sup>3</sup> Victoria Stewart (in "A Theatre of Uncertainties: Science and History in Michael Frayn's *Copenhagen*," *New Theatre Quarterly* 15, no. 4 [November 1999]: 301–7) suggests that "Frayn is not simply attempting to signify the Uncertainty Principle by rendering it theatrically, but, in identifying its theatrical potential, in fact he complicates and questions in particular the role of the spectator within a specific theatrical framework" (306). She also notes possible metatheatrical implications: "Relaying on to others, whatever Heisenberg did say becomes fragmented, contradictory . . . Both writer and performer have similarly to send their words out, little knowing how they will be interpreted" (304). Reed Way Dasenbrock (in "*Copenhagen*: The Drama of History," *Contemporary Literature* 45, no. 2 [Summer 2004]: 218–38) takes a similar approach, concluding that a balance between isolation and collaboration of scientists, which is a major theme of the play, is also essential for the creation of wonderful theatre: "One needs individual artists working in their own equivalent of Heligoland, on their own in isolation. But if they stay in isolation, nothing happens: they need to get off the island, come to Copenhagen, or some other place, and work with others creatively. Whatever crazy ideas they have come up with in isolation need to be explained to Margrethe for a play to work, which is to say that they must be explicable to the audience" (236). See also David E. R. George, "Quantum Theatre—Potential Theatre: a New Paradigm?" *New Theatre Quarterly* 5 (1989): 171–79.

<sup>4</sup> John Mighton, *Possible Worlds*, rev. ed. (Toronto: Playwrights Canada Press, 1997). All further references to this text are made parenthetically. *Possible Worlds* was first produced in November of 1990 by the Canadian Stage Company under the direction of Peter Hinton. A later revised version was mounted in 1997 and directed by Daniel Brooks, who played Penfield in the original production. These are the primary productions in which the playwright was involved; both are listed in the published edition of the play. In addition to these two seminal productions, *Possible Worlds* has received numerous productions both in Canada and abroad, and in 2000 was made into a film directed by Robert Lepage with Tom McCamus and Tilda Swinton.

<sup>5</sup> Mighton holds an MA in philosophy and a PhD in mathematics. Currently, he is an adjunct professor at the University of Toronto and recently received the 2005 Elinore and Lou Siminovitch Prize in Theatre, Canada's largest theatre award.

is a neurologist. They meet in a bar and she is a stockbroker. They meet on a beach and again she is a neurologist. As these encounters accumulate, dialogue is recycled and alternate possibilities are explored. It quickly becomes apparent that *Possible Worlds* is a murder mystery with a metaphysical twist. Not only does the victim not seem to be dead; by being alive somehow, he is also leading an ambiguous and contradictory existence. By the time we return to the homicide detectives and their investigation in scene 5, the audience have themselves become detectives. The mystery to be solved is not simply who killed George, but George's true ontological status. Is he in fact alive? And if so, in what manner can he be said to be living, given that we saw his corpse in the first scene? Faced with opposing evidence, the audience strives for coherence and unity, to authenticate the fictional world through the confirmation of certain facts. Likewise, as the perplexing evidence accumulates, George too begins to ask these same questions and to seek the truth of his situation. In the search for truth, the foundation of knowledge itself comes under interrogation.

### The Ontological Quest: "Am I?"

In his *Meditations on First Philosophy*, René Descartes engages with precisely this question. At the outset of his argument to prove the existence of God, Descartes supposes that his entire sensory experience of the world is the inspiration of

some malicious demon of the utmost power and cunning [who] has employed all his energies in order to deceive me. I shall think that the sky, the air, the earth, colours and shapes, sounds and all external things are merely the delusions of dreams which he has devised to snare my judgement. I shall consider myself as not having hands or eyes, or flesh, or blood or senses, but as falsely believing that I have all these things.<sup>6</sup>

A modern reworking of Descartes's malicious controlling genius, common in contemporary philosophical discourse, is the image of the Cartesian subject as a brain in a vat receiving artificial sensory inputs generated by an extremely powerful computer.<sup>7</sup> Rather than being the victim of a supernatural evil genius, the disembodied, wired-up brain interprets given electrical pulses as sense data and accordingly constructs a complete and persuasive world-image, which this captured consciousness takes as real. The uncertain entrapment of this metaphysical problem has been realized by popular culture in dystopic movies like *The Matrix* (1999), *Total Recall* (1990), and *Vanilla Sky* (2001) (an English-language remake of the 1997 *Abre los ojos*). *Possible Worlds* is another of these contemporary realizations, since this is precisely what is happening to George in Mighton's play. The play is a dramatic thought-experiment of Descartes's brain-in-a-vat—literally.

This revelation solves the mystery and permits the dilemma of multiple conflicting worlds to be resolved through a layered organization. At the heart of the play is the array of worlds in which George loves Joyce. Creations of the disembodied brain, these worlds comprise a second-order fiction-within. Superior to these vat-worlds is the realm of George's former life. In this first-order fictional world George is a corpse/

<sup>6</sup> René Descartes, "Meditations on First Philosophy," in *The Philosophical Writings of Descartes*, vol. 2, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1984), 15.

<sup>7</sup> Hilary Putnam, *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981), 5–21.

brain-in-a-vat and the detectives Berkley and Williams search for George's killer/kidnapper, who is, as they discover, the scientist Penfield.<sup>8</sup> Oscillating between these two world-levels, the play considers Descartes's philosophical problem of how we can have knowledge of our existential situation through the perception of external objects. It illustrates the subject's search for objective truth, for stability of perception, and thereby for the key question—confirmation of ontological status. George's is not the quintessential developmental journey of the bildungsroman, whose goal is to answer the question, "Who am I?" Instead, his objective is to solve the existential puzzle, "What am I?"—or perhaps more succinctly, "Am I?" Although initially ignorant of his true situation, George is nevertheless aware of the fluidity and multiplicity of his worlds-within-the-world. He tries to explain this multivalent experience to Joyce: "I'm talking about possible worlds. Each of us exists in an infinite number of possible worlds. In one world I'm talking to you right now but your arm is a little to the left, in another world you're interested in that man over there with the glasses, in another you stood me up two days ago—and that's how I know your name" (23). As his experience of these possible vat-worlds proliferates, George slowly moves towards self-knowledge and achieves a final epiphany.

As a work of art, the dual structure of the fictional worlds of the play is doubled as the basic first- and second-order fictions are subsequently nested inside the actual world—the world in which they exist as manifestations of a dramatic performance text. It is the particular performative nature of drama which alters the typical aesthetic relationship between actual and fictional worlds. Fictional worlds of visual art and literature are, in the actual world, composed of paint and print: on the stage, fictional bodies, chairs, and lights are composed of actual bodies, chairs, and lights. In this state of actual embodiment, fictional characters live and breathe and are virtually indistinguishable from denizens of the actual world. In this manner, the essential performance aspect of the drama featuring living actors and a living audience renders the ontological distinctions that we might make between people as fictional characters and people in the actual world less sharply defined. To give these multiple worlds names to make them easier to distinguish, we could say that the audience exists in world<sup>a</sup>, the actual world; the detectives and George-as-brain exist in world<sup>b</sup>; and the worlds brought into imaginative existence by George's brain constitute the world<sup>c</sup> series of <sup>c1</sup>, <sup>c2</sup>, <sup>c3</sup>, <sup>c...</sup>, since they are distinct but ontologically equivalent.<sup>9</sup> From the perspective of world<sup>a</sup>, world<sup>b</sup> is a fiction, but in relation to the nested virtual worlds generated by George's consciousness, world<sup>b</sup> is granted a provisional reality status.

<sup>8</sup> Penfield seems to derive his origins in part from the Canadian neurologist Wilder Penfield, who in the late 1940s "was examining the reactions of patients whose brains had been operated on, by inserting electrodes into various parts of their exposed brains, and then using small electrical impulses to stimulate the neurons . . . What Penfield found was that stimulation of certain neurons would reliably create specific images or sensations in the patient." Douglas R. Hofstadter, *Gödel, Escher, Bach: An Eternal Golden Braid* (Harmondsworth: Penguin, 1980), 343. In the film version of *Possible Worlds*, Penfield is renamed Dr. Kleber. Likely this is a tribute to Professor of Drama Pia Kleber at the University of Toronto, who has been an active supporter of Mighton's work.

<sup>9</sup> I prefer this terminology of world<sup>a</sup>, world<sup>b</sup>, and world<sup>c</sup> to the alternate configuration of actual world, first-, and second-order fictions because the former eases the perceptual blurring of ontological boundaries between the worlds by assigning equivalent terms to each level.

Conversely, just as world<sup>b</sup> is a fictional creation of world<sup>a</sup>, so too is world<sup>c</sup> a fiction of the creator George in world<sup>b</sup>.

The result of this layered organization is that the repetition of George's quest for truth at each level is magnified by the play's nested structure. Parallel to George's search for himself is that of the detectives who are quite literally searching for George. In tandem with their criminal investigation, Berkley and Williams also become caught up in the larger questions of access to truth and existence and so represent a second layer of ontological questers. Finally, at the outermost level, the audience also participates in George's quest as the reiterated worlds of the play align us with George directly, and indirectly through an association with the detectives. The perceptual problem of reconciling conflicting information leads to configurations of the audience-as-detective and of the audience-as-brain-in-a-vat. In the direct line, the audience is subject to the same ontological concern that George faces: Can anyone say with certainty that each one of us is not in reality just a brain in a vat? When expressed in a dramatic form augmented by the structural arrangement of nested boxes, this question becomes even more potent. Through an implied analogy, the nested boxes of the *theatrum mundi* reach beyond the stage and capture the audience. The dramatic equivalent of the brain-in-the-vat is the figure of man as an actor manipulated in the stage-world by a superior divine director.<sup>10</sup> By extension across the layered worlds, if those fictional characters are controlled by a director/playwright as they indeed are, then perhaps so are we.

After conducting a preliminary interview with the scientist Penfield, Detective Berkley returns to the precinct carrying an apparatus containing the brain of a rat named Louise. Williams examines the object, and makes the same analogous connection, voicing our shared concern: "What if we were in a tank like that? We'd never know it . . . Maybe someone's making us think whatever they want us to. Maybe that's why all those brains are being stolen! Maybe someone's already stolen ours" (33–34). Taking the indirect path, the audience connects again to George through the quest of the detectives. Here, the philosophical quest is crossed with the detective mystery genre. In her taxonomy of metafiction, Linda Hutcheon identifies detective fiction as "one of the most visible forms" of covert diegetic self-reflexivity.<sup>11</sup> This genre exhibits an inherent self-reflection since "the cerebral intellectual triumphs of a Sherlock Holmes or a Nero Wolfe, who logically interpret the clues and discover the solution to the enigmas, are in effect the reader's triumphs."<sup>12</sup> In these ways, the triple-layered structure of the worlds of *Possible Worlds* replicates the primary goal of ontological knowledge pursued by each participant—the audience, the detectives, and George—in the actual world and in the first- and second-order fictions. To achieve this goal, the characters and audience who search for the truth of George's existence apply two

<sup>10</sup> Another contemporary update, *The Truman Show*, directed by Peter Weir (Hollywood: Paramount, 1998) actualizes the Renaissance metaphor by showing us a man who has lived his whole life entirely ignorant of his situation as the lead character in a television show. A recent addition to this genre is the parodic reality television series *Joe Schmo*, in which "Joe" believes that he is a contestant on a *Survivor*-type reality show when in fact the other contestants are all actors.

<sup>11</sup> Linda Hutcheon, *Narcissistic Narrative: The Metafictional Paradox* (Waterloo: Wilfrid Laurier University Press, 1980), 71.

<sup>12</sup> *Ibid.*, 31–32.

distinct strategies: authentication through similarity and authentication through metonymy. Authentication refers to the determination of fictional existence and is a central feature of the possible worlds theory of narrative.

### Authentication and Possible Worlds

Possible worlds semantics presents a theory of fictionality inspired by the possible worlds model of logic and philosophy. Adapting Gottfried Leibniz's original concept of possible worlds, Saul Kripke proposed a modal system consisting of the actual world and an infinite series of nonactual possible worlds.<sup>13</sup> This conceptual arrangement, featuring a constellation of worlds, provided a method to test the truth-value of non-actual situations by creating alternate worlds through acts of imagination. Possible worlds theory accepts that fictional worlds are born in words and that the act of describing a world brings that world and its residents into imaginative existence. This provision for imaginative creation frees fictional referential terms, like Hamlet, from being bound to actual world objects. Hamlet and his fictional kin are thus liberated and granted a kind of existence in the move from a correspondence or mimetic theory of literary truth to a pragmatic one. The perspective opened by the possible worlds approach enables the examination of fictional assertions in relation to their distinctive contexts, in which it becomes possible to say that in a particular world, *x* is true.

In terms of the existence of fictional characters, possible worlds semantics, according to Lubomír Doležel, "rests on one basic ontological assumption: to exist actually is to exist independently of semiotic representation; to exist fictionally means to exist as a possible constructed by semiotic means."<sup>14</sup> In a fiction, words do not describe extant worlds; rather, fictional worlds are created by words and so the source of those words is the source of existence. Doležel terms this process "authentication." Fictional facts are determined by the illocutionary force of an authorized speech act. Successful authentication is the province of the narrator. Almost without exception, critical work done with possible worlds semantics has dealt with texts that live in print, that is, with nondramatic literature. Nevertheless, dramatic characters like Hamlet clearly do reside in possible worlds of fiction and also experience authentication. How does this process happen in drama, where there is no narrator? Typically, drama has little or no diegetic frame text apart from often sparse stage directions and character tags. Fortunately Doležel does provide for another avenue of authentication through the dialogue between characters, although this method does not carry the same weight as direct authentication through narrative. Whereas speech by the narrator is factual, speech by the characters is only virtual. Doležel outlines three conditions which, if met, will render virtual statements factual. First, the statement must be spoken by a reliable and trustworthy speaker. Second, there must be consensus among persons of the world. And, third, these statements must never be disauthenticated by narrative.<sup>15</sup> Taken together, these three conditions all turn on the same principles of coherence and

<sup>13</sup> Saul Kripke, "Semantical Considerations on Modal Logic," *Acta Philosophica Fennica* 16 (1963): 83–94.

<sup>14</sup> Lubomír Doležel, *Heterocosmica: Fiction and Possible Worlds* (Baltimore: Johns Hopkins University Press, 1998), 145.

<sup>15</sup> *Ibid.*, 150.

harmony. A reliable speaker is one whose utterances are consistent internally, with the utterances of other speakers, and with the world as already determined by the narrator. In the dramatic form, where dialogue is the dominant method of world creation, authentication is heavily dependent on such consistency. Lack of consistency, however, is the central challenge facing audiences of *Possible Worlds*.

Beset by logical contradictions, the audience struggles to find consistency so that fictional facts can be established and the status of George's fictional existence authenticated. These contradictions ought not to be viewed as a weakness of the play, since they operate in a purposeful fashion to raise awareness of this disorienting experience and foreground the conventional work, undertaken by an actual audience, of reconciling fictional fragments to create a unified possible world. Usually authentication is pursued by the audience on behalf of the characters, but, without stretching too far, the search undertaken by George to determine the truth of his own ontological situation can be reconfigured also as a quest for authentication of his fictional existence. The character of George in world<sup>b</sup>—the corpse/brain-in-a-vat George, if you will—is granted fictional existence by the grace of the audience and the playwright through the collation of logically consistent dialogue about him. And his existence is not in doubt. However, George<sup>c</sup>—the George who is searching—is arguably a fictional character in search of authentication. He has been created via the signals sent by Penfield or Penfield's computer, standing in for the author, and interpreted by the brain, standing in for an audience. From a phenomenological point of view, the act of world creation, through the interpretation of arbitrary electrical signs into sense memory as performed by George, is identical to the behavior of an audience in the interpretation of given virtual impressions (phenomenological noemata), making them into a comprehensible lived experience of the world. In support of this analogy, it is interesting to note that Penfield, his computer, and the brain all exist in world<sup>b</sup>, at a superior level to the play-within of world<sup>c</sup>, creating a parallel configuration to a playwright and audience living in world<sup>a</sup> and shaping the fiction of world<sup>b</sup>. Due to the contradictory and seemingly irreconcilable reports concerning the status of George<sup>c</sup>, particularly as he relates to Joyce, the authentication of his fictional existence cannot be easily confirmed. It is in suspension until George and the audience reach a conclusion. Like Truman in *The Truman Show*, who gets his first inkling that his life is perhaps unusual when a lighting fixture falls from the ersatz sky, authentication of existence for George evolves slowly through the reconciliation of anomalies.

### Similarity as an Authentication Strategy

As mentioned earlier, *Possible Worlds* attempts the reconciliation of fragmentary knowledge to gain successful authentication through the application of two strategies: metonymy and similarity. According to Roman Jakobson, metonymy and similarity are two aspects of language and correspondingly two types of aphasic disturbance.<sup>16</sup> Inspired by Ferdinand de Saussure, Jakobson sees language in general as comprising two complementary paired modes of arrangement: combination and contiguity (metonymy), and selection and substitution (similarity). Strategies of selection and

<sup>16</sup> Roman Jakobson, "Two Aspects of Language and Two Types of Aphasic Disturbances," in *On Language*, ed. Linda R. Waugh and Monique Monville-Burston (Cambridge: Harvard University Press, 1990), 115–33.

substitution are marked by a choice between alternatives related in absentia.<sup>17</sup> By specifying the characteristic of absence, this act of selection involves the connection of similar items in imagination. It is necessary to hold the absent object in one's mind and compare the present object to it.

To increase his intelligence, Detective Williams signs up for a course called the "Consciousness Revolution." In scene 8, the audience is addressed by a woman, Jocelyn, as if we are participants in the course along with Williams. The session begins in a blackout with a visualization exercise. We are instructed to "Picture the eyes of someone you love." "Feel their hand caressing your face." "Imagine a cold wind when it is raining" (37). In scene 10, we again hear Jocelyn's voice in the dark, but this time it is a taped recording on Williams's desk: "Imagine a candle. Those of you who scored less than ten on the visualization exercise should use a real candle" (46). A match then flares and Williams lights a candle. The joke is at the detective's expense, but makes clear the distinction between the actual object and the virtual object held in imagination. The two are related and may be phenomenologically identical but nevertheless are separated because they exist in different planes of being.

Exercise of imagination, and the potential power of imagination to influence actual-world events, is a central theme in *Possible Worlds*. Imagination is, of course, the means whereby possible worlds are created.<sup>18</sup> Penfield uses the kidnapped brains to investigate imaginative power: "The question is why do we have imaginations? A rat can only imagine so much. It's limited by the structure of its brain. Creatures like us, that can anticipate possible futures and make contingency plans have an evolutionary advantage" (26–27). The inability of Williams to imagine a candle is a cognitive limitation that implicitly associates him with the rat cortex named Louise. Likewise, as the irreconcilable evidence accumulates and his faith in his ability to solve the case dissolves, Detective Berkley associates himself explicitly with Louise:

- BERKLEY: Suppose a rat had an enemy . . . (*looking at the brain of the rat*) There's no way the rat could foresee what its enemy was going to do, because it couldn't even imagine it . . .
- WILLIAMS: Unless it was a very smart rat.
- BERKLEY: No, Williams, it's limited by the structure of its brain. It can't even form the right kind of thoughts.
- WILLIAMS: Oh.
- BERKLEY: And we're up against the same kind of enemy.

[60]

Like Louise and the detectives, George also is engaged in an imaginative conflict with a superior enemy existing on a higher ontological plane. But unlike Williams, at least, George is able to make concerted imaginative comparisons to absent objects, marking the first step in the process of authentication through similarity.

<sup>17</sup> *Ibid.*, 119.

<sup>18</sup> Mighton's master's thesis speaks directly to this issue of imagination and the reconciliation of alternate concepts. Titled "Imagination as Method in the *Philosophical Investigations*" (McMaster University, 1982), the thesis examines section 7, part 2 of this Ludwig Wittgenstein work. Wittgenstein writes, "if anyone believes that certain concepts are absolutely the correct ones, and that having different ones would mean not realizing something that we realize—then let him imagine certain very general facts of nature to be different from what we are used to, and the formation of concepts different from the usual ones will become intelligible to him." *Ludwig Wittgenstein Philosophical Investigations*, 2nd ed., trans. G. E. M. Anscombe (Oxford: Blackwell Publishers, 1958), 230.

JOYCE: What are you doing? You've been staring at that bowl for five minutes.  
 GEORGE: Comparing it.  
 JOYCE: To what?  
 GEORGE: Itself. (*Pause.*)  
 JOYCE: Don't you need something else? [. . .] most people . . . when they compare something, they compare it to a second thing. It's a quaint custom we have.  
 [56]

As he journeys among the possible worlds generated by his brain, George uses this technique of imaginative comparison to relate objects from one world to another. The main object of George's sustained comparison is the character of Joyce, who appears in almost all the vat-worlds that we witness. As George meets new and different Joyces, the accumulation of facts about her and about his relationship with her gradually corroborate each other to produce a series of fictional facts. In the comparison of Joyces across worlds, in the attempt to find the real one, what emerges is not one Joyce but probably two and then a third. By matching the details revealed by dialogue, we uncover one Joyce—Joyce<sup>c1</sup>—who is a neurologist, works at the university, and like George was born in a small town called Novar. George tells her that he has had only five lovers. This Joyce appears in scenes 2 and 6, the second half of scene 9, scene 11, and possibly scene 18. The other Joyce—Joyce<sup>c2</sup>—appears in scene 4, the first half of scene 9, and scene 13. We meet her second and she is defined primarily by virtue of her differences from Joyce<sup>c1</sup>. She is a stockbroker, works for Kaufmann Brothers, and was not born in Novar. George tells her that he has had billions of lovers. When George is awakened by Joyce in scene 9, he, like the audience, is initially unsure which Joyce she is:

JOYCE: I think Kaufmann Brothers can survive the morning without me.  
 GEORGE: You work for Kaufmann Brothers?  
 [. . .]  
 GEORGE: What do you sell exactly?  
 JOYCE: Stocks.  
 GEORGE: Where were you born?  
 JOYCE: Right here.  
 GEORGE: I thought you said Novar . . .  
 JOYCE: I think you've got me mixed up with someone else.  
 [38–39]

Applying the strategy of similarity, George asks specific diagnostic questions about her profession and her birthplace to determine which Joyce she is; by extension, these inquiries tell him which world he is in. The third Joyce appears in scene 15. George meets Joyce<sup>c3</sup> for the first time on the beach. But instead of quizzing her gently as one might do with a new acquaintance and as he has done upon meeting Joyce<sup>c1</sup> and Joyce<sup>c2</sup>, George alarms her by knowing her name and that she is a neurologist studying ways to increase intelligence. He insists that they were once married. When he grabs her to check the mole on her shoulder, she calls for help and he runs off. The failed encounter with this last Joyce, marked by anxiety and violence, indicates George's unconscious but frustrated awareness that his authentication strategy of seeking similarity is not working. The comparison of one Joyce to another is unsuccessful: George does not find his ideal Joyce—his wife who loves him—and he is unable to authenticate his fictional existence as that happily married man. Based on the collated correspondence of details, composite personae emerge of Joyce<sup>c1</sup> and Joyce<sup>c2</sup>, but it is not possible to bring them together and reconcile the whole. We conclude therefore

that George is living in multiple irreconcilable worlds. But he knows that already: “There’s a moment when my consciousness shifts . . . I feel my properties melting, everything I’ve ever known or felt . . . nothing holds . . . it’s terrible . . . but after a few moments I become adjusted . . . I take on that new life” (40). The separate vat-worlds—world<sup>c1</sup>, world<sup>c2</sup>, and world<sup>c3</sup>—can be individually authenticated, but when taken together irreconcilable contradictions among the fragments of the multipartite world<sup>c</sup> series render that collection of worlds persistently inauthentic.

A realm like *Possible Worlds’s* world<sup>c</sup>, in which facts remain undecided, is not a possible world but an impossible fictional world. To be a possible world, statements made about the world and its contents must conform to Leibniz’s law of noncontradiction. With its myriad contradictions and conundrums, *Possible Worlds* itself seems, at least initially, to be one of these logically unsound impossible worlds. This condition of impossibility acts as an obstacle to the authentication of fictional existence, which is dependent on reliability and consistency. The introduction of logical contradiction and paradox serves to deny authentication to those individuals and worlds affected by this anomaly. Doležel terms these worlds that are radically inconsistent “self-voiding narratives.”<sup>19</sup> He cites two principal examples of self-voiding narrative modes—*skaz* and metafiction. In Russian *skaz*-narratives inconsistency in the texture of the fictional world is the result of an ironic attitude adopted by the narrator. This narrator varies his tone “freely and arbitrarily from the *Er*-form to the *Ich*-form, from a lofty, bookish style to colloquial language, from the omniscient to the limited knowledge posture . . . [Skaz] is a pleasurable game of pure storytelling that leaves a fictional world whose existence is, literally, a question.”<sup>20</sup> Looking only at the contradictions of the world<sup>c</sup> series, it appears that *Possible Worlds* suffers from this kind of self-voiding through textual inconsistency. However, once we (and George) learn that these worlds are virtual realms contained within the brain located in world<sup>b</sup>, we may view them as exclusive but not contradictory: they are possible alternative worlds of imagination. This series of opposing worlds cannot coexist in one world. But taken instead as distinct worlds contained within world<sup>b</sup>, each can be considered authentic without impinging on the others, just as the actual world encompasses a plurality of fictional subworlds in the scores of books resting side by side on a shelf. Nevertheless, the strategy of similarity through comparison between elements of the world<sup>c</sup> series is futile, because these are not in fact one world bound by the law of noncontradiction, but multiple synchronous possible worlds. So the strategy of authentication through similarity is of no use here, because it is not able to reach upward into the next level. Horizontal strategies of comparison across only a single ontological level cannot provide the answer to George’s quest for authentication. Like the rat brain, George is limited by his imagination to conceptually break out of the virtual vat-worlds and conceive of existence on a higher ontological plane. It is only through access to world<sup>b</sup> that George and the audience can discover the truth.

Having passed the test of noncontradiction by reference to the higher-order world, the play encounters a new obstacle. It is precisely this reference to the higher-order world which frees the play from the accusation of contradiction that gives rise to a new

<sup>19</sup> Doležel, *Heterocosmica*, 163.

<sup>20</sup> *Ibid.*, 161–62.

conflict, rendering it self-voiding in another way. So although *Possible Worlds* leaps out of the categorical frying pan of inconsistent skaz-narratives, it lands in the fire of Doležel's second category of metafiction. By drawing attention to the situation of the virtual worlds<sup>c</sup> as generated by George's brain in world<sup>b</sup>, the play thematizes the act of imagination central to world creation. The reiteration of world creation inside the fiction reminds the audience by analogy that world<sup>b</sup> is also a construction of a world<sup>a</sup> author. Through this layered nested-world structure, the play both creates a fictional world and exhibits the circumstances of that creation. As a work of metafiction, *Possible Worlds* negates its claims to fictional authenticity. Doležel argues that such self-reflexive fictions constitute a second mode of self-voiding narratives: "On the one hand, possibles seem to be brought into fictional existence, since a standard narrative text is written; on the other hand, fictional existence is not achieved, because the text's authentication force is nullified."<sup>21</sup> The reason for this nullification of the authenticating force relates to an underlying insincerity in the world-creating speech-act.<sup>22</sup> Doležel identifies this defeating lack of seriousness in the exposure of the fiction-making apparatus. When literature is seen to be "flaunting its hidden conventional foundations," it does not exhibit sufficient sincerity and therefore surrenders its chance for authentication.<sup>23</sup> This appears to be a serious objection to the authentication of existence for fictional characters in nested literary worlds. Yet surprisingly, it is just this overt awareness of the conventions of world making that finally permits George and the audience to reconcile the contradictions of the virtual vat-worlds and to arrive at an understanding of George's true ontological status. Since, as has been shown, the horizontal approach of similarity doesn't work in this case to authenticate fictional existence, another approach is needed. Whereas the comparison of similar objects is a horizontal strategy linking objects of the same plane, the forging of metonymic connections is a vertical strategy that permits the alignment of objects of differing value. It is this strategy of metonymy that breaks through the previously impermeable barriers between worlds allowing access to higher-order intelligence.

### Metonymy as an Authentication Strategy

Embedded at the heart of the play is a sequence unlike any of the others. George recounts what he says was not a dream, but a memory: "Standing in the shadows I saw a man I thought I knew. He took my arm and led me out to a field where two men were building with a pile of small rocks" (41).<sup>24</sup> As the men shuttle back and forth

<sup>21</sup> *Ibid.*, 163.

<sup>22</sup> J. L. Austin asserts that performative language lacks illocutionary force if it is not uttered seriously: "a performative utterance will, for example, be in a peculiar way hollow or void if said by an actor on the stage, or if introduced in a poem, or spoken in a soliloquy. This applies in a similar manner to any and every utterance—a sea change in special circumstances. Language in such circumstances is in special ways—intelligibly—used not seriously, but in ways parasitic upon its normal use—ways which fall under the doctrine of the etiologies of language. All this we are excluding from consideration." *How to Do Things with Words*, 2nd ed., ed. J. O. Urmson and Marina Sbisa (1962; Cambridge: Harvard University Press, 1975), 22. Although it seems that Austin is summarily excluding all fictional statements from possessing any illocutionary force, the essence of his stricture is that statements made in world<sup>b</sup> cannot affect world<sup>a</sup>.

<sup>23</sup> Doležel, *Heterocosmica*, 162.

<sup>24</sup> In the film version, the two men create their rock pile on a beach near the water. This is the same beach to which George and Joyce return to in scenes 15 and 18.

fetching rocks, the two occasionally shout “Slab” and “Block.”<sup>25</sup> George’s guide informs him that there are only three words in their language—“Slab,” “Block,” and “Hilarious”—and offers various explanations as to why their language is so barren, couched in the phrase “Some say . . .” George asks, “What d’you say?” To which the guide replies, “Someone tampered with their brains” (42). By association with the stage directions which describe the two builders as having the “appearance [of] victims of a failed experiment” (41) and the specified casting of the guide with the same actor who plays Penfield, it seems clear that these two men are, like George, kidnapped brains. Their damaged state points perhaps to earlier stages of Penfield’s experiment or less successful transitions to the virtual vat environment. As was mentioned earlier, Jakobson’s insight into the affinities of literary genres for either similarity or metonymy sprang from an examination of the linguistic markers of the two varieties of aphasia: contiguity disorder, in which metonymy is blocked, and similarity disorder, in which substitution is blocked. Applying Jakobson’s pathology, the slab-and-block men may be diagnosed as suffering from the first type. This impairment erodes context and “tends to give rise to infantile one-sentence utterances and one-word sentences.”<sup>26</sup> Nouns are the most durable, while the connecting words fall away; among the nouns, the “kernel subject word” is the least destructible. Without the connectedness of contextual and grammatical association, the principal communicative strategy of those affected with this type of aphasia is through similarity: “The patient confined to the substitution set (once contexture is deficient) deals with similarities, and his approximate identifications are of a metaphoric nature, contrary to the metonymic ones familiar to the opposite type of aphasics.”<sup>27</sup>

It is clear from George’s speech capability in his interactions with Joyce that he does not suffer the same degree of linguistic deficit as the slab-and-block men. Nevertheless, he has endured the same kind of injury in the transfer of his brain from his body into the vat. I will argue that he does experience a type of aphasia, showing a decided aptitude for metonymies over similarities. Again following the pathology provided by Jakobson, George might be diagnosed with the type of aphasia opposite from the builders’—a similarity disorder. Aphasics who experience the similarity disorder have difficulty with the substitution of synonyms, and instead describe objects in terms of their use and surroundings. While specific words fall away, context remains; the more securely attached a word is to its context, the more likely an aphasic of this type will be successful in recalling it. Jakobson gives the example of a patient who could not produce the word “knife” in its “free form, capable of occurring alone,” but instead

<sup>25</sup> These eerily familiar two slab-and-block builders originate in Wittgenstein’s *Philosophical Investigations*, in which he conducts a thought experiment about the nature of language use. Wittgenstein begins this section with that most fecund word, “Imagine” (section 2): “Let us imagine a language . . . The language is meant to serve for communication between a builder A and an assistant B . . . They use a language consisting of the words ‘block’, ‘pillar’, ‘slab’, and ‘beam’. A calls them out; B brings the stone which he has learnt to bring at such-and-such a call.—Conceive this as a complete primitive language” (3). The slab-and-block exercise is expanded in Tom Stoppard’s play *Dogg’s Hamlet*, in which three boys—Abel, Baker, and Charlie—speak a language called Dogg. In this language “Slab” means “Okay,” “Block” means “Next,” “Plank” means “Ready,” and “Cube” means “Thank you.” This trio then unloads slabs, blocks, planks, and cubes off a truck to construct a stage for a very condensed performance of *Hamlet*.

<sup>26</sup> Jakobson, “Two Aspects of Language,” 126.

<sup>27</sup> *Ibid.*

referred to it in “a bound form” like “pencil-sharpener,” “apple-parer,” “bread-knife,” “knife-and-fork.”<sup>28</sup> George does this, forging connections between objects which are superficially dissimilar but which relate to each other on a contextual level. Most significantly for George’s search for authentication, these contextual relations transcend the embedded virtual worlds of the vat and create bridges between the two halves of George’s life. In so doing, George is able to generate a series of metonymies linking lower-order objects in the virtual world (world<sup>a</sup>) with higher-order objects in his actual world (world<sup>b</sup>). Metonymy focuses on alignment, whereas similarity deals with alternation. In George’s situation, it is the alignment of worlds that needs to be discovered. Through the application of this layered figure of speech, George is able to match the layered structure of the play and his life, and ultimately understand his ontological situation and authenticate his existence.

In the first of these metonymies, the image of the beach surfaces gradually. In scene 10 Jocelyn directs her students, “Now get ready for a journey to the beach” (46) and, “Imagine the waves breaking on the hot sand” (49). In the next scene, George and Joyce<sup>c1</sup> examine a photograph of the beach. Finally, in scene 13, George stares at Joyce’s bowl. First he tells her that he is comparing it to itself. When Joyce<sup>c2</sup> points out that you need two things to make a comparison, George asks, “How do you know it’s only one thing?”

JOYCE: Because my ex gave it to me.  
 GEORGE: I don’t follow.  
 JOYCE: He would never give me two things without pointing both of them out very clearly and going on about how much they both cost. Therefore, it’s one thing.  
 GEORGE: But it could have been a lot of things.  
 JOYCE: Sure, it could have been a beach and we could be sitting on it.  
 GEORGE: That’s what I am comparing it to.

[56]

The comparison of the bowl, which at first appears to be a simple alternation in similarity of one bowl for another—actually a tautology since it is itself—is complicated as the bowl is transmuted to a beach. The bowl-beach pairing also becomes entwined with the actual-world object of the brain vat through the connecting image of a gift. The first time the bowl appears in scene 13, Joyce<sup>c2</sup> informs George that it was a gift from her ex-husband. In the outer world, Joyce<sup>b</sup> also receives a gift. Berkley’s background check reveals that George and Joyce had quarreled “over a present some guy had given her” just prior to his murder. Berkley then places the apparatus containing the rat’s brain on the desk and Williams asks, “What’s that?” Berkley replies, “(ironically) A present for my wife” (32). The repeated word “present” just four lines later connects the bowl to the rat’s vat, and also by further extension to George’s vat. In terms of the metonymic contextual association of the bowl with the beach and the vat, all three are containers of fluid. For all three items, attention is directed to the relationship of the edge of the water to the rim of the container. These objects are associated metonymically through their shared function and spatial form. It is worth noting that the bowl, the beach, and the present appear in both inside and outside worlds, whereas the vat remains outside. The vat, of course, is the answer to George’s ontological mystery. He is not there yet, but the bowl-beach pairing moves him in that direction.

<sup>28</sup> *Ibid.*, 122.

The second major metonymy to develop comes out of George's story of the lost arm:

I heard of someone once who lost his arm in an accident. About three years later he began to feel as if his arm was still there. (*Reaching for her*.) Sometimes he would reach for things and realize that he couldn't pick them up. And the arm was always in pain, a kind of buzzing, stinging pain, like bubbles exploding in his hand.

[57]

To conclude the story he says to Joyce<sup>c2</sup>, "You can't imagine how I feel. For me it's not just an arm . . . I can't tell you . . ." (58). The missing arm acts as a metonym for Joyce—Joyce<sup>b</sup>, the actual Joyce who is George's wife—who had been lost in the wrenching transition across worlds when George's brain was transferred from his body to the vat. Through a contextual association of the pain of loss, another metonymic relation is established between the imagined experience of amputation and the inability to reach Joyce. As with the first metonymy of the bowl-beach-vat cluster, a repeated linking word adds another dimension to the relationship of lost arm to Joyce. The word "accident" connects the lost limb of the story with George's wife and also to his own loss of physical extension. Details of the loss of Joyce<sup>b</sup> emerge in fragments. He tells Joyce<sup>c1</sup> that his wife "died several years ago . . . an accident [. . .] It was after she died that I started to travel" (30). George tells Joyce<sup>c2</sup> something similar: "My wife died three years ago. [. . .] She was swimming in the ocean and must have gone out too far . . ." He then says that he has been moving between worlds for three years (40). Significantly, this is the only detail to be corroborated in both of the primary vat-worlds. The result is that it achieves authentication by similarity, but it is nevertheless false vis-à-vis world<sup>b</sup>. The true thing about George is that he has lost Joyce in every world. Somehow, the experience of death by drowning, connected tangentially to the beach-vat, has been projected from George himself onto Joyce, from an experience in world<sup>b</sup> to one in world<sup>c</sup>.

After George's epiphany that he is a brain in a vat in scene 16 and the confirmation of this fact by Berkley in scene 17, scene 18 comprises a coda. George and Joyce are at the beach, happy and loving. This Joyce might be Joyce<sup>c1</sup> or she might be a true memory of Joyce<sup>b</sup>. As they enter she says to George, "You're soaking. That was quite a fall. You could have broken your arm." He assures her that he is fine (72). A little later she asks, "How's your arm?" (74). Again he tells her that he is fine. In this closing scene of reconciliation and peace, the wholeness of George's arm may be taken as a sign of a reunion with the real Joyce and the peace that self-knowledge brings. Since there is nothing in their conversation that does not match the qualities of Joyce<sup>b</sup> from scene 17, I am inclined to think of this Joyce as closely akin to the Joyce of world<sup>b</sup>. After George breaks through to an awareness of his situation, he is able to have the virtual Joyce correspond to the real Joyce. Similarity is restored as the metonymic structure of the play and of George's life collapse into unity. But this is also a move to George's second death; as Berkley tells Joyce when she comes to the precinct, Penfield does not expect the brain to live more than a few weeks (69).

The third and final metonymic figure is also marked by collapse and compression. Like the bowl and the beach, virtual images of water in the embedded world relate to the fluid in George's vat. Like the first metonymic cluster, this one comes on gradually. Again, it begins with Jocelyn, who suggests that we "imagine the waves breaking on the hot sand . . ." (49). Standing over the corpse of the eleventh kidnapped brain,

Williams remarks casually, "Looks like rain" (54). After this introduction, many of the later scenes commence with heavy rain or the sound of waves. In the film version of *Possible Worlds*, it rains so heavily in many scenes that the water coursing down the windows obscures any view of the outside world. In the play, immediately before George realizes that he is "in a case," he recounts his dream of the vat:

Sometimes when I'm falling asleep, I think I'm floating in the sea . . . two inches below the surface . . . rocking in the warm salt water like someone who's drowned. Above me the sky is full of clouds, but they're hard-edged like glass. The whole sky glitters like glass. I close my eyes and hear voices, and when I open them again I'm surrounded by a net of branches that grow right into my skin. (*Water starts to run down the walls of the room.*)

[67]

This is clearly a vision of the vat.<sup>29</sup> Between sleep and wakefulness, George's consciousness slips and opens itself to this vision of the higher-order actual world. This dream image is the final piece of the puzzle that prompts George to declare, "I know where I am now. There's only one world. I've been dreaming. (*Pause.*) I'm in a case" (67). Joyce also has an underwater floating dream that connects to the world above and the possibility of crossing between worlds:

This morning when I woke up I couldn't remember where I was. I thought I was someplace new . . . in another time . . . not the past or the future—a place different from any present place. I haven't felt that kind of exhilaration since I was a child. I'd float down at the bottom of the lake watching the sunlight on the rocks, trying to imagine what it would be like to have gills. I knew one breath would let a whole other world in.

[52]

Notably, Joyce does not say that she enters into this whole other world, but rather that it enters into her.<sup>30</sup> The magical stage direction of water running down the walls of the room works the same way, coming as it does on the heels of George's ontological epiphany. As the boundaries between worlds start to crack, the outside world—the fluid of the vat—quite literally leaks into George's world.

Each of these three metonymies (bowl-beach-vat, lost arm–lost Joyce, and floating in water–floating in vat) associates objects and experiences of the inner vat-worlds with objects and experiences from the higher-order outer world. So, whereas the strategy of seeking similarity to achieve authentication fell short, this strategy of authentication through metonymy is more successful. The underlying reason for this success is that the vertically oriented metonymic strategy matches the overall structure of the play and of George's life within it. The alignment of objects of disparate ontological orders reflects the nested play structure of plays-within-plays and worlds-within-worlds, as well as the nested layers of George's existence as a fictional character (George<sup>b</sup>) in a

<sup>29</sup> At his moment of epiphany and freedom, the character of Truman (*The Truman Show*) sails out across the fake ocean and bumps into the painted sky at the edge of his vat-world. It is here that he is addressed by his God/director. And informed of his true ontological status, he exits the vat/TV studio. As with George, the actual physical encounter with the liquid edge of his world generates Truman's newfound awareness of the dual ontological structure and also triggers its terminal collapse into a single state.

<sup>30</sup> The text is ambiguous as to which Joyce this is. At first it seems that she is Joyce<sup>c1</sup> (the neurologist). However immediately after she recounts this dream, there is a slip in George's world and Joyce<sup>c2</sup> (the stockbroker) breaks in for a moment before Joyce<sup>c1</sup> is restored.

play by John Mighton and as a character (George<sup>c</sup>) in his own play-within inside the brain-generated vat-worlds. With this structural correlation in place, the figure of metonymy, by virtue of being able to cross ontological levels, activates metalepsis which collapses the layers. The water that runs down the walls of George's vat and the possible appearance of Joyce<sup>b</sup> in scene 18 are two of many metaleptic intrusions of actual higher-order objects into George's imagined lower-order worlds that speak to the fragility of the nested play structure and to the nature of metalepsis as a two-edged sword. It is both a means of granting authentication of fictional existence and of simultaneously destroying that existence.

### Metaleptic Intrusions and the Power of the Imagination

Despite his assertion that self-disclosing worlds lack authentication, Doležel is not ready to close the door on metafictional narratives: "Surely the project of metafiction is to create impossible worlds, to bring about the impossible coexistence of ontologically heterogeneous persons—the actual participants of fictional communication and the fictional artifacts constructed and reconstructed in this communication. In other words, metafiction is a case of metalepsis."<sup>31</sup> At its most general, metalepsis is "the rhetorical figure consisting in the metonymical substitution of one word for another which is itself a metonym."<sup>32</sup> Simple nesting of worlds, however, does not render them inherently impossible. Gerard Genette takes the basic definition of metalepsis as a series of layered metonymies and modifies it to describe "any intrusion by the extradiegetic narrator or narratee into the diegetic universe (or by diegetic characters into a metadiegetic universe etc.) or the inverse (as in Cortázar), produces an effect of strangeness that is either comical or fantastic."<sup>33</sup> These ontologically paradoxical crossovers between worlds, flagged by Doležel, Genette terms "narrative metalepsis." The effect of strangeness generated by metalepsis provides an avenue for the authentication of metafictional worlds.

Veronika Ambros has written one of the very few treatments of a dramatic work through the lens of possible worlds theory. And while Ambros does not mention metalepsis explicitly, she does build her argument for authentication of the fictional world of Havel's absurdist play *The Garden Party* on an example of ontological boundary crossing which produces an effect of strangeness. The same move to self-reference which renders the world self-voiding and therefore inauthentic in Doležel's view is also that which brings about the final authentication of the fictional world. Metalepsis causes ontological boundaries to collapse so that the worlds are no longer opposed; this new consistency brings with it the final authentication of the dramatic world. Ambros cites the example of a character who addresses the audience, attempting to cross from world<sup>b</sup> into world<sup>a</sup>. This *Verfremdungseffekt* "erases the opposition between the fictional world and the actual world. This breaking of the fictional into the actual is the final authentication of the fictional world."<sup>34</sup> In this manner, metalepsis is

<sup>31</sup> Doležel, *Heterocosmica*, 166.

<sup>32</sup> *Oxford English Dictionary*, 2nd ed., s.v. "Metalepsis."

<sup>33</sup> Gerard Genette, *Narrative Discourse: An Essay in Method*, trans. Jane E. Levin (1980; reprint, Ithaca: Cornell University Press, 1972), 234–35. Genette refers to the Julio Cortázar story "Continuidad de los parques" [Continuity of parks], in which a man is assassinated by a character in the book he is reading.

<sup>34</sup> Veronika Ambros, "Fictional World and Dramatic Text: Václav Havel's Descent and Ascent," *Style* 25 (Summer 1991): 317.

a creative force, bringing authentication as contradiction disappears. Yet authentication through metalepsis is also destructive, effectively annihilating the inner fiction in the same moment that it grants that world fictional existence, as the boundaries between the two worlds dissolve. When Havel's character from world<sup>b</sup> addresses the audience, telling us to go home, the play acknowledges its actual-world origins and pays tribute to its author: by doing so, it is granted authentication. But at the same time, the play also nullifies the illusion of independent existence, and the character becomes an actor—that is, merely an inhabitant of the actual world. World<sup>b</sup> is spontaneously erased and there remains only the one world of world<sup>a</sup>. This is precisely the instant freedom of rebirth in death that George experiences.

Opposing patterns of self-actualization into existence and the expiration of death are married together in the final scenes of *Possible Worlds*. George achieves the life-giving knowledge through authentication as a result of his metonymic strategy promoting the increasing permeability of the two worlds. But this same situation seems to herald George's death. It is only in the penultimate scene that we meet the real Joyce when she comes to the police station and is told that the brain is not expected to live much longer. With this expectation of George's death, and with it the end of world<sup>c</sup>, the coda on the beach attenuates the collapsing action, rendering the boundary between the two worlds transparent. Now, it is not only George who perceives the world above, but Joyce as well. Sitting on the beach, Joyce sees a light "out there . . . blinking on and off" (74). George assures her that it is only a buoy to warn passing ships. With his deliberate fictionalizing justification, George tries to keep the intrusions of the outside world at bay. He correctly reads Joyce's perception of the light as evidence of the imminent final merging of the worlds, but is nevertheless determined to carve out a moment's peace before the end. It is in these last moments that George both gains authentication of his fictional existence and simultaneously loses it in his death. World<sup>c</sup> is authenticated in the brief shining instant before it is engulfed in world<sup>b</sup>. This engulfing action of metonymic compression of the two worlds both authenticates and destroys. At the moment it becomes clear to George and to the audience that world<sup>c</sup> is an authored creation of world<sup>b</sup>, the inner world is successfully authenticated by this superior authorizing force, according to the guidelines established by Doležel. But in that same moment world<sup>c</sup> is simultaneously obliterated as it is overtaken by world<sup>b</sup>.

The birth of self-awareness through metalepsis is echoed in Douglas Hofstadter's *Gödel, Escher, Bach: An Eternal Golden Braid*. Hofstadter meditates on the structure of the human mind and brain and the future of artificial intelligence. He asks, "What is a self, and how can a self come out of stuff that is as selfless as a stone or a puddle?"<sup>35</sup> How does the "I" emerge from the inanimate biology of the brain? In answer, he suggests,

the explanations of "emergent" phenomena in our brains—for instance, ideas, hopes, images, analogies, and finally consciousness and free will—are based on a kind of Strange Loop, an interaction between levels in which the top level reaches back down towards the bottom level and influences it, while at the same time being itself determined by the bottom

<sup>35</sup> Douglas Hofstadter, *Gödel, Escher, Bach* (New York: Basic Books, 1999), P-2. In an earlier version of *Possible Worlds* (1988), Penfield also is interested in the leap from the mechanical processes to rational intelligence: "The processes of nature are too smooth to be accounted for by purely accidental and mechanical causes" (14). This unpublished script is housed in the Canadian Stage Theatre Archives.

level. In other words, a self-reinforcing “resonance” between different levels [. . .] The self comes into being at the moment it has the power to reflect itself.<sup>36</sup>

Hofstadter’s strange loops, or tangled hierarchies, are metaleptic recursions, feedback loops that cross ontological levels. In a tangled hierarchy, an event at level<sup>a</sup> might be said to cause a reaction at level<sup>b</sup>, not through direct causation but rather because one is simply a translation of the other. Causality in models of this kind will operate both upwards and downwards across the system.<sup>37</sup> It is as a result of this kind of metonymic patterning and crossing that George is able to achieve existence through self-reflection.

As mentioned earlier, the reflections between worlds in *Possible Worlds* are not limited to the relationship between world<sup>b</sup> and world<sup>c</sup>. Because the play itself is a dramatic creation of a fictional world, similar structures apply between world<sup>a</sup> and world<sup>b</sup>. By invoking the *theatrum mundi* metaphor, *Possible Worlds* exploits the dramatic medium to question the fixity of this boundary, sowing anxiety and instability by introducing the possibility of higher-order metaleptic intrusions. Paralleling George’s ability to create fictional worlds through the manipulation of mental phenomena, scene 5 hints that Penfield may also possess this ability:

SCIENTIST [Penfield]: Some biologists believe that natural processes create a field of information. Everything you think, Inspector, even the most trivial fantasy, leaves a trace, a disturbance in that field. I’m trying to learn how to control those disturbances.

BERKLEY: Are you talking about telepathy?

SCIENTIST: Something like that.

[26]

It is also in this scene that Berkley is shown Penfield’s sensory deprivation chamber. When inside this tank, Penfield is a disembodied consciousness like George. Independent of his body, Penfield is able somehow to travel into world<sup>c</sup>. His appearance in these worlds is colored by the performance convention of doubling. As Mighton writes at the end of the list of *dramatis personae*: “The doctor, business people, and other small roles can be doubled. The doubling need not be heavily disguised” (9). In his doubled roles, Penfield appears specifically as the guide in scene 9—the slab-and-block inset—and as the doctor in scene 16. It is also possible that Penfield could appear as the interviewer in scene 3.<sup>38</sup> Given this casting, Penfield is the only other person George encounters besides Joyce. Beyond his ability to enter into the fictional worlds of George’s consciousness, it is hinted that Penfield may also be capable of effecting fictional changes to the provisionally real world of world<sup>b</sup>. Detectives Berkley and Williams are stymied in their investigation of the stolen brains by two facts: first, the skulls of the victims have been cut with a tool that they cannot identify; second, at least three of the apartments where the murders took place were locked from the inside:

<sup>36</sup> *Ibid.*, 709.

<sup>37</sup> *Ibid.*

<sup>38</sup> In the premiere production in 1990, Penfield (Daniel Brooks) doubled in all of these roles. In the revised 1997 production directed by Brooks, he did not want the audience to pay attention to the virtuosity of the acting of a single actor in these multiple roles (e-mail message to the author, 24 September 2004), so the janitor, interviewer, and doctor were heavily masked. The janitor appeared only as the peak of a hat with his hand and foot jutting from behind a door. The interviewer had his back to the audience, and the doctor was in deep shadow.

“There’s a murderer running around this city who seems to be able to walk through walls” (47).

The evidence statement given by the caretaker of George’s building, and his subsequent death, also cause consternation for the detectives. In scene 10, the man tells Berkley that on the night of George’s murder he saw a light:

MAN: In the sky. As it came closer I saw it was five lights in a row—each about ten feet across. (*Pause.*)

BERKLEY: Are you saying you saw flying saucers?

MAN: Yes. [. . .] There’s a world-wide battle for the control of our brains!

[48]

Recall that the other sighting of lights in the sky is made by Joyce in the final scene. In the film, the visual arrangements of the two sets of lights match each other, and also match the lights on George’s and Louise’s vats. And so it becomes apparent, at least in retrospect from the last scenes, that the caretaker has somehow seen the lights of the vat. Seeing these lights loom large inside world<sup>b</sup> hints quite strongly that this world is also a vat located in world<sup>a</sup>. The ability of the caretaker to cross ontological levels and perceive worlds beyond presents another example of metonymic compression. Whereas metalepsis does not seem to lead to self-awareness and existential resolution for the caretaker as it does for George, it does share one characteristic with George’s collapsing worlds in that it leads to his death. Berkley reports that the man was found in the freezer of the plant where he worked: “He had all the symptoms of having frozen to death . . . but the freezer wasn’t turned on” (53). The death of the caretaker in the unplugged freezer is a prime example of the kind of associative causality that Hofstadter describes as being active in tangled hierarchies. The man freezes not as a result of actual cold but because of a metonymic association of the object (the freezer) with its properties (being very cold). And so he suffers the expected outcome.<sup>39</sup> These instances of implied metaleptic intrusions and crossovers by Penfield and the caretaker create instability in world<sup>b</sup>, calling into question its authenticity. Just as metaleptic intrusions cause the collapse of George’s vat-worlds, world<sup>b</sup>—the world of Berkley and Williams—also starts to crack under the strain of increasing possibility.

Supplementing the metaleptic abilities of Penfield and the caretaker are mentions of other otherworldly possibilities stalking the fringes of the play. George reads an article about missing brains in the *National Enquirer*. Williams relates a newspaper story (the *Enquirer* again?) which claims that “black holes were invented to confuse Russian scientists” (32). Penfield encourages Berkley to investigate every possibility, “Even aliens” (27). Inside this fictional world of world<sup>b</sup>, these things are not necessarily impossible. The world of Mighton’s creation may, like many works of science fiction, operate under alternate physical laws. Yet, Berkley and Williams as citizens of that world seem to find them impossible; their reactions create contingent possibility and reduce authentication. It is the confused and frightened reactions of Berkley and Williams that prevent a simple reconciliation of these strange occurrences and promote the strong suggestion that the rules of their world are being bent from the

<sup>39</sup> It is not at all clear in the play whether the caretaker is murdered by Penfield’s interworld intrusions or whether he is the victim of his own metonymic imagination. Either way, the man is killed in world<sup>b</sup> by an imaginative act in world<sup>a</sup>, since the character of the caretaker is killed by John Mighton.

outside. Berkley expresses his helplessness under this manipulation in his metaphor of the rat and her enemies (60). The implication of these intruding possibilities is that Penfield has somehow transcended his body in world<sup>b</sup>, as George does in world<sup>c</sup>, and uses his brain in world<sup>a</sup> (!) to act on world<sup>b</sup>. By so doing, Penfield assumes the god-like power of the author. It is this displacement of the world-ordering, world-creating authority that throws Berkley into existential crisis: the author is transmuted to enemy. In his role as the guide, Penfield directly threatens George, saying, "I'm going to kill you. In every world" (43). This is the natural power of the author over his creations, and although they are not Penfield's targets, Berkley and Williams feel this menace indirectly. By tracing the occurrences of metaleptic intrusion in both George's worlds and Berkley and Williams's world, we can see not only that metonymic compression has caused the collapse of world<sup>c</sup> but that world<sup>b</sup> also is under siege. Metalepsis at the level of world<sup>b</sup> parallels the slow disintegration of George's worlds, leading the characters-within—Berkley and Williams in particular—to the edge of self-knowledge and also to destruction. As a result of these intrusions of what seem to them to be supernatural phenomena, the detectives become aware of the tenuous solidity of their world. The particular experience of metalepsis in *Possible Worlds* points to the more general experience of all audiences engaged with metatheatre. The metaleptic collapse experienced by the characters is replicated on a higher level where the audience is likewise made acutely aware of the fragility of the world and where we also experience the simultaneous creation and destruction of a fictional world, but from a slightly different perspective. The audience is momentarily disoriented but also, like George, gains important insight.

### Metatheatre and Metalepsis

As I have shown, relationships of people and objects in George's vat-worlds to those in his actual world above are marked by metonymy. This same arrangement applies to the objects of the fictional world of the play and the actual world inhabited by the audience. The relation of theatrical worlds to the actual world is in general metonymic; the real world is complete and fully phenomenologically determined in a way in which a fictional world cannot be.<sup>40</sup> The chorus in *Henry V* draws our attention to this quality of metonymic representation innate to theatre when he apologizes that "four or five most vile and ragged foils / Right ill dispos'd, in brawl ridiculous" (4.0.50–51) must stand in for the whole army at the battle of Agincourt.<sup>41</sup> The sympathetic extrapolation of a provisional reality following this associative relationship as performed by the audience is precisely the act that brings fictional worlds of drama into being. This is the basic situation of audiencing. However, as Ambros points out in her example of the actor who exits the fictional world to address the audience directly, metatheatrical events lay bare this innate metonymic relationship through metalepsis. By exposing the perceptual work that underpins fictional worlds, the character is authenticated and so becomes fictionally real and creates a true fictional world: at the same time, however, the audience is reminded that he is an actor, and in that moment

<sup>40</sup> Roman Ingarden, *An Investigation on the Borderlines of Ontology, Logic and Theory of Literature*, trans. George G. Grabowicz (Evanston: Northwestern University Press, 1973), 223–24. Ingarden is writing particularly about the relationship of represented space to actual space, where represented space is "pocked with gaps," but extrapolates this to a characteristic trait of represented objects in general.

<sup>41</sup> William Shakespeare, *Henry V*, ed. G. Blakemore Evans (Boston: Houghton Mifflin, 1997).

he becomes actually real, destroying that same world. By referring to their origin as theatrical constructions, metatheatrical events reveal the innate duality of staged objects, highlighting the actual noema of the actor inside the fictional noema of the character. This act of exposure functions as metalepsis. Metatheatre reveals the actual actor of world<sup>a</sup> behind the character of world<sup>b</sup>. In so doing, metatheatre simultaneously authenticates the illusion of the fictional world by showing it to be subject to an act of theatrical creation, at the same time destroying that illusion through exposure. This dual action of authentication and destruction is not limited to the case of the fictional existence/nonexistence of characters. Every instance of metatheatre works this way, instigating the terminal collapse of ontological levels which destroys the lower-order fiction and brings the audience to a single awareness of the actual noema. But it is precisely this self-reflexive move to destroy a fictional world that brings wisdom.

The vertical thinking posited by Mighton leads George to an understanding of his situation as a brain-in-a-vat living in imagined worlds, that is, to an understanding of the relationship between the actual and fictional worlds that he occupies. *Possible Worlds* directs the audience to a similar understanding. Awareness of the actual, for the audience, is akin to George's awareness of his situation as a brain in a vat. Through the use of metonymic strategies reaching vertically through the world layers, both George and the audience gain insight into an ontological truth. They learn that their inner worlds are fictional self-creations, and gain understanding into the processes whereby those inner worlds come to be. And this is the silver lining to the destructive cloud of metalepsis. To an audience engaged with a metatheatrical event, the exposure of the actual that dooms the illusion is the work of a moment. The dominant illusion is quickly restored, and the audience is able to return to the nested fictional world in possession of a balanced belief stance; we are cognizant that the presentation is a fiction, yet we are prepared to accept it as a provisional reality. This knowledge concerning how fictions are created and authenticated facilitates each subsequent fictional encounter. This is also George's attitude as he returns to his nested worlds in full possession of the truth. After the double epiphany of his self-revelation in scene 16 and the external confirmation of his situation in scene 17, George and Joyce return to the beach in scene 18. When Joyce sees the blinking light of the vat, George works to restore the fictional veneer of this actual intrusion. He knows that the beach is a fictional creation of his consciousness which he must work hard to preserve. On the other hand, George is able to enjoy the beach and the quiet moments with Joyce that it offers. The wisdom of the balanced belief stance granted to George and the audience through metalepsis permits access to this dramatic world and every other dramatic world beyond it. Through the experience of metalepsis and the exposure of the perceptual work done to create a fictional world, we are prepared as an audience for future excursions into other worlds. In the closing lines of the play, Joyce asks George, "Where will we go?" He replies, "Everywhere" (76).