



Ambrose of *Lost in the Funhouse*: A Confluence of Quantum Mechanics, Dasein, and Baroque

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Abstract

It has been quite a while since research in different disciplines has become widely cross-fertilized. The cultural matrix of our era has made it possible for ideas and metaphors to move across disciplines. John Barth has been one of the most-celebrated cross-disciplinary fiction writers, who has been perceptive of and receptive to breakthroughs in other disciplines to reinvigorate fiction. Despite the fact that Barth's literary career, particularly from *Lost in the Funhouse* (*Funhouse*), coincides with the coronation of Quantum Mechanics as the regime capable of addressing reality in a more precise way, the recognition of the influence of Quantum Mechanics on *Funhouse* has been conspicuously absent from the critical enterprise, and the bulk of research has viewed it in the light of Poststructuralism, whose application to contemporary fiction has been exhaustible by now. Establishing the framework of the Article based on some concepts for which the Copenhagen Interpretation and the Many-Worlds Interpretation of Quantum Mechanics are famous, the present study offers a new perspective to approach the idiosyncrasies of Ambrose in the series, thereby employing an unprecedented methodology to replenish a work which has been subjected to a barrage of metafictional readings.

Keywords: baroque, phenomenology, quantum mechanics, the uncertainty principle, wave-particle duality

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Introduction

The application of quantum mechanics (QM) concepts to literature has been quite fertile. Coale (2011), for instance, in “Quantum Flux and Narrative Flow: Don DeLillo's Entanglements with Quantum Theory” has disclosed DeLillo’s grappling with QM in his notebooks, which shows the novelist’s preoccupation with applying QM as a framework to his fiction. Thomas Pynchon’s academic background in physics, similarly, allowed him to take advantage of physics concepts in his fiction. Such conscious utilization of QM and explicit references to its terminology has facilitated the work of researchers, for the clues are conspicuous and the connections can be readily made. However, the recognition of the influence of QM on Barth’s earlier fiction, particularly *Lost in the Funhouse* (*Funhouse*), has been conspicuously absent from the critical enterprise. One reason is that in Barth’s earlier works, explicit references to modern physical terminologies have been few and far between. Even though Barth’s explicit references to modern physics terminology in both his more recent fiction and non-fiction could nudge researchers to sit up and notice, the studies on these works have been mostly limited to newspaper articles and short reviews. Barth’s literary career, particularly from *Funhouse* on, coincides with the recognition of QM as the regime capable of addressing reality in a more precise way; yet, the bulk of research has viewed his fiction in the light of Poststructuralist mimesis, the main reason of which can be the historical proximity of *Funhouse* publication to the late 1960s, the period associated with the emergence of Poststructuralism. Nas (1999) and Davis (1985), for instance, in “‘Scheherazade, c’est moi’: Narrativist Mimesis and the Principle of Metaphoric Means in John Barth,” and “The Case for a Post-Structuralist Mimesis: John Barth and Imitation,” respectively, overemphasize the role of “fiction imitating itself,” whose application to Postmodern fiction has become exhaustible by now.

That Barth had already been acquainted with modern physics prior to the publication of *Funhouse* is not merely pure conjecture, given his Friday retreats to Chesapeake Bay where he beseeches a muse of another kind. *The Friday Book* (1984) and *Further Fridays: Essays, Lectures, and Other Nonfiction* (1995) have been the products of these musings. In some essays in these collections, one can see Barth grapple with cutting edge developments in physics, particularly chaos theory and quantum mechanics: “I don’t pretend to be an expert about quantum mechanics, but I do enjoy reading about the subject in the same spirit that prompted Coleridge to attend Sir Humphrey Davy’s lectures on chemistry: To renew his stock of metaphors” (as cited in Reilly, 2000, p. 612). Explicit references to QM concepts in Barth’s more recent fiction, *On with the Story*, for instance, attest to the fact that Barth has consciously attempted to imbue his latter fiction with modern physics notions.

To Plotnitsky (2017), the central pillars of Postmodern thinking consist of *irreducible* multiplicity, *irreducibly unthinkable* in thought, and *irreducible* chance. The irreducible nature of these features, Plotnitsky observes, makes its way to the forefront particularly if we consider the fact that the multiple, the unthinkable, and the chance were not foreign to classical and modern thinking. While the multiple,

the unthinkable, and the chance in classical and modern thinking could be reduced to unity, accessibility to thought, and causality, respectively, it is the irreducibility of these characteristics which distinguishes Postmodern thinking (p. 65).

If we approach QM in the context in which Plotnitsky has defined the Postmodernist era, the commonalities between QM and Postmodernism become more conspicuous. Classically, randomness would stem from our lack of knowledge to perceive an underlying pattern behind an otherwise causal system while in QM, contingency and noncausality have nothing to do with our inability to make head or tail of any causal behavior of a quantum system; rather, contingency and noncausality have been threaded into the very fabric of the subatomic realm. Although the outcome to quantum events, in aggregate, produces a pattern that can be predicted based on probability, the individual processes which take place prior to the outcome are utterly unrepresentable (Plotnitsky, 2017, pp. 73-74). After all, nobody has ever caught an electron red-handed; only the trails it leaves in measuring instruments imply its spectral existence. Likewise, Dillard (1983) argues that in the contemporary milieu, science, along with art and philosophy, can no longer deal in certainties; nor can its data be verified under all circumstances:

What can we know for certain when our position in space is limited, our velocity may vary, our instruments contract as they accelerate, our observations of particles on the microlevel botch our own chance of precise data, and not only are our own senses severely limited, but many of the impulses they transmit are edited out before they ever reach the brain? (p. 55)

Furthermore, competing hypotheses on a single phenomenon, thought experiments such as Schrödinger's cat, and the metaphors of wormhole or electron cloud underline how fictitious and spurious science can be (Front, 2015, p. 20). Umberto Eco once observed, "In every century the way that artistic forms are structured reflects the way in which science or contemporary culture views reality" (as cited in Booker, 1990, p. 584). Under the aegis of this spirit and endorsing Barth's bona fide call for replenishing literature with innovative ideas, this present study ventures into establishing affinities between QM and Ambrose-centered stories in Barth's *Funhouse*, a niche whose Poststructuralist mimesis residues need to be replenished. Rather than adopting the frame and the method which Barth might have had in mind – i.e., metafiction – while penning his novel, it is the rupture which defines the point of departure of this study. After all, one should "[n]ever trust the artist. Trust the tale. The proper function of a critic is to save the tale from the artist who created it" (Lawrence, 1995, p. 12).

Quantum Mechanics

Baulch (2003) laments the fact that with the advent of New Historicism, literary studies have tended to approach literature in terms of the context in which a work has been produced and consumed. Despite the fact that hard sciences offer a rich reservoir to approach literature, literary criticism under the influence of New Historicism opposes any pure formalism and instead embraces the orthodox sense of time and space, hence falling into the same pitfall of linearity that modern physics has dismissed as spurious (p. 73). To avoid the monopoly set by New Historicism,

the methodology has included QM in its both pure and metaphoric forms and in later sections, the authors will discuss its relevance to *Funhouse*.

During the latter nineteenth century and the early twentieth, physics, as the arch-discipline, could not stick to her guns of mechanical causality any longer. Once taking pride in spelling out the objective reality out there, this section will pursue the trajectory of decisive events which led the physicists to settle for the *observation* of nature, rather than the study of Nature herself: “. . . even in science the object of research is no longer nature itself, but man’s investigation of nature. Here, again, man confronts himself alone” (Heisenberg, 1955, as cited in Merrell, 2006, p. 56). To begin with, there were some new experiments which toppled some of the long-perished pillars of the classical mechanics: in 1905, Einstein posited that in a light beam the energy comes in packets called quanta. This postulate implied that light was made of particles and replaced James Clerk Maxwell’s conjecture that light was a wave. That light could behave both as a particle and as a wave dealt a death blow to classical physics and although disturbing to Einstein, his ideas regarding particles of light (photons) helped construct QM.

QM hinges on the subatomic realm in which the uncertainty reigns supreme. Being the only interpretation of the embryonic QM, the Copenhagen Interpretation (CI) was not threatened by any competing theories for several years. The mention of the phrase “the Copenhagen interpretation” rose particularly when alternative approaches, Bohm’s hidden-variables and Everett’s Many-Worlds Interpretation (MWI), for instance, were proposed. Quintessential to the CI are the uncertainty principle, the statistical interpretation, the complementarity concept, and wavicle (wave-particle duality) nature of matter and light. Based on this probabilistic interpretation, “if a particular experiment involving an electron is repeated over and over again in an absolutely identical manner, the same answer for, say, the measured position of an electron will *not* be found over and over again” (Greene, 1999, p. 107). Rather, if the experiment is repeated several times, the result will be a probability wave with peaks and troughs. The peaks in such a wave should not be associated with a high distribution of electrons, but with the probability that the electrons are most likely to be found.

When the system does not undergo any observation, it is governed by the Schrödinger’s equation, which describes the form of the probability wave (wavefunction) governing the motion of particles. Prior to measurement, the system exists in a superposition, “quantum fuzziness, which is a spectrum of all its possible states simultaneously” (Front, 2015, p. 13). Upon measurement, however, the wavefunction collapses to only one of the possible states. Unlike the case with classical mechanics, in which observation does not affect the outcome, Bohr (1987) submitted that “any observation of atomic phenomena will involve an interaction with the agency of observation” (as cited in Katsumori, 2011, p. 12), which necessitates an inevitable interference with the state of phenomena: “We are both onlookers and actors in the great drama of existence” (as cited in Katsumori, p. 24) – Bohr’s oft-cited dictum shows the relationship the human / measuring equipment as the subject bears to the object of knowledge.

The act of observing the particle necessitates shining light on it. This action destroys the interference pattern, due to the fact that the photons, which exist in the beam of light, exude a minimum uncertainty in momentum, enough to mess up the pattern (Shankar, 2016, p. 411). To account for this change in the particle's momentum prior to and following the measurement, Brian Greene (2004) has reasoned thus: measuring the position of any object necessitates interacting with it in one way or another. However, the plain fact which most of us overlook is that interacting is a reciprocal process, affecting not only us but also the object under scrutiny:

As the light bounces off the electron, it changes the electron's speed, much as your own speed is affected by a strong, gusty wind that whips around a street corner. In fact, the more precisely you want to identify the electron's position, the more sharply defined and energetic the light beam must be, yielding an even larger effect on the electron's motion. (p. 97)

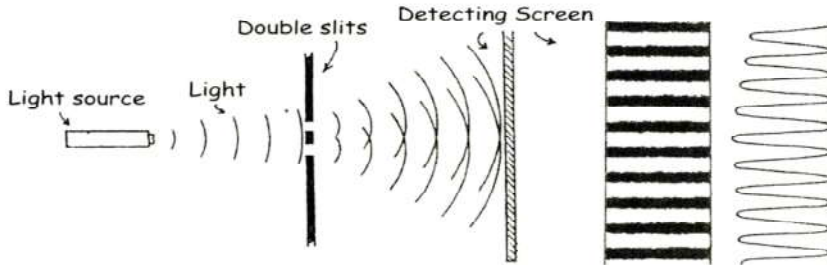
From the late 1930s on, however, Bohr qualified his statement on the act of observation and a possible “disturbance” in the state of affairs in a quantum system: “Speaking, as is often done, of disturbing a phenomenon by observation, or even of creating physical attributes to objects by measuring processes, is, in fact, liable to be confusing” (as cited in Katsumori, 2011, p. 27). Having de-emphasized the influencing role of observation, Bohr came to hold the belief that the phenomenon is only “conditioned by the experimental arrangement” (p. 28). In this, he was joined by other physicists: Greene (2004), for instance, observes that it is misleading to reason that the data get contaminated due to the involvement of a human subject meddling with the microscopic realm: “Uncertainty is built into the wave structure of quantum mechanics and exists whether or not we carry out some clumsy measurement” (pp. 97-98).

The double-slit experiment has been identified by Richard Feynman to exhibit the heart of QM (Shankar, 2016, p. 387). Together with Schrödinger's Cat, they are among the most important Gedankenexperimente (German: “thought experiment;” the term was coined by Einstein to describe his approach of employing conceptual rather than actual experiments in constructing the theory of relativity). The double-slit experiment is pivotal in the sense that it belies Newtonian mechanics notion of light as a particle (also known as the corpuscular theory of light) and Maxwell's wave theory of light. The experiment, which proves light has features of both a particle and a wave, was initially performed by Thomas Young in 1803 and was later extended by other physicists to define the behavior of electrons, atoms and molecules. Louis de Broglie (1924), the French physicist, in his Ph.D. thesis, *Recherches sur la théorie des Quanta (Research on the Theory of the Quanta)*, argued that if light, previously thought of as a wave, is actually made up of particles, then things we always viewed as particles, like electrons, must behave like a wave. In other words, all entities exhibit wave-particle duality at the microscopic level (matter-wave hypothesis). In the double-slit experiment, a particle / photon is sent into a barrier with two apertures. A distant photographic plate (made up of tiny pixels which would change color when light hits them) is used for detecting the particle. All physics can tell us is that if we repeat the experience enough number of

times a pattern develops. However, which aperture the particle takes or whether the particle interferes with itself cannot be fully explained. It appears that the particle, initially localized, in the process smears as a wave, passes through both holes, and due to the interference pattern, creates light (high concentration formed by little dots) and dark (zero concentration) fringes on the detecting plate (see figure).

Figure 1

The Double-Slit Experiment from K. W. Ford (2004). The Quantum World: Quantum Physics for Everyone. Harvard UP.



Heisenberg’s Uncertainty Principle, postulated in 1927, dealt a death blow to the causal connections. To know the state of a particle, it is necessary to calculate its position and velocity. Based on the Uncertainty Principle, however, determining both the exact position and velocity (the speed and direction of an object’s motion) of a particle with precision at a time is not feasible. Any observation of the state of affairs in the subatomic realm alters the system irrevocably. Determining the position of an electron with a short wavelength beam of light inevitably transfers energy and consequently forecloses the possibility to measure its momentum at the time of observation. In a similar vein, while using a weak long wavelength beam of light allows us to measure an electron’s momentum, the increased distance renders it impossible to accurately measure the electron’s position. As a corollary to this principle, past, present, and future are forever shrouded in mystery, for we can never study the cause-and-effect relationship between initial and subsequent states. It can be argued that the uncertainty principle precipitated dissension among physicists. The proponents of the ontological interpretation of this principle believed that “it reflects a deep truth about how the universe actually works” (Kinch, 2011, p. 14). Initially championed by Niels Bohr, this interpretation argues that “it is the nature of reality not to submit to a singular description; rather, the system must be measured by complementary arrangements” (Kinch, 2011). By contrast, Einstein and Schrödinger advanced the epistemological interpretation, believing that advances in technology would allow us someday to “talk about the properties of a system without observing it” (Kinch, 2011, p. 15) – an argument which has been proven to be spurious.

The detractors to the CI, however, rule out the role of measurement in collapsing the wavefunction. A polemical interpretation of QM in the physics academia, the Many-Worlds Interpretation (MWI) was proposed by Hugh Everett in

1957. Based on this competing interpretation of QM, instead of a collapse in the wavefunction, “all potentialities embodied by a probability wave are realized in separate universes” (Greene, 2004, p. 539). The MWI gained support by such eminent physicists as John A. Wheeler, Bryce DeWitt, and Stephen Hawking (Bell, 1992, p. 1212). The MWI postulates that there are some erratic processes deep down the quantum realm which bifurcate the universe into multiple copies, hence actualizing every possible outcome (Ryan, 2006, p. 639).

The Collapse of Ambrose’s Wave-Like Trajectory

Ambrose makes his explicit appearance in three stories in *Funhouse*: “Ambrose His Mark,” “Water-Message,” and “Lost in the Funhouse.” The title story pivots around the thirteen-year-old Ambrose who goes on a trip to the beach with his family and the fourteen-year-old neighbor’s girl, Magda. His inexperience with the opposite sex, his teenage angst, and the insecurity he feels as a result of the pubescent changes to his body undergoes cause him to shy away from the outside world, in general, and the opposite sex, in particular, and make him a meticulous observer rather than an active agent (Martin, 1997, p. 152). The trip’s taking place on the Independence Day, the fourth of July, has been regarded by critics as a turning point in Ambrose’s life as the introspective teenage boy endeavors to gain his independence not only from his family but also from his crippling self-consciousness. Their swimming plan, however, is thwarted as they learn that “the surf was spoiled with crude oil from tankers recently torpedoed offshore” (Barth, 1981, p. 76) and decide to go through the funhouse, instead. This and other clues in the text have led the critics to identify Ocean City, Maryland during the World War II as the setting of the story.

While the funhouse is fun for lovers, “it is a *place of fear and confusion*” for Ambrose (Barth, 1981, p. 69). Ambrose laments the fact that while every teenager enters through the same portal into the funhouse, not everyone, including him, is able to find his way out of the various turns and twists of the funhouse: “Yet everyone begins in the same place; how is it that most go along without difficulty but a few lose their way?” (p. 75). The twists and turns and the funhouse itself, however, have symbolic significance in that they prepare the teenagers for the sexual roles they are to assume:

In the tumbling-barrel, too, just inside the Devil’s-mouth entrance to the funhouse, the girls were upended and their boyfriends and others could see up their dresses if they cared to. Which was the whole point, Ambrose realized. Of the entire funhouse! (p. 85)

Ambrose’s ineptitude and being treated as a social misfit, however, is not without precedent: in “Water-Message,” Ambrose is ostracized by other teenagers and is not allowed to attend their secret meetings in the Den. Although their gang’s name, the Occult Order of the Sphinx, was proposed by Ambrose, the members of the Order decided that little kids like him and the seven-year-old Perse were not old enough to attend their secret meetings and were prone to reveal their secrets. All Ambrose was allowed to was to accompany his older brother, Peter, and the others along the beach and into the woods. Upon assembling into the Den, however, Peter would order,

““You and Perse skeedaddle now”” (p. 44). Ambrose’s failure to engage with the funhouse sexual play is not unprecedented, either: once Ambrose was playing Niggers and Master with Peter and Magda and in the absence of Peter, it was his turn to be Master. Although being afraid to punish her alone, Magda leads him to the toolshed where she kneels before him and pleads for mercy. His self-consciousness, however, gets the better of his desire and does not let him enjoy the encounter with Magda:

But though he had breathed heavily, groaned as if ecstatic, what he’d really felt throughout was an odd detachment, as though someone else were Master. Strive as he might to be transported, he heard his mind take notes upon the scene: *This is what they call passion. I am experiencing it.* (p. 81)

The quotation above illustrates the crippling effect of introspection and too much self-consciousness on Ambrose. In the thick of his encounter with Magda, his desire to love is overshadowed by his desire to perceive as he stares at a picture on a cigar box:

He even recalled how, standing beside himself with awed impersonality in the reeky heat, he’d stared the while at an empty cigar box in which Uncle Karl kept stone-cutting chisels: beneath the words *El Producto*, a laureled, loose-toga’d lady regarded the sea from a marble bench; beside her, forgotten or not yet turned to, was a five-stringed lyre. Her chin reposed on the back of her right hand; her left depended negligently from the bench-arm. The lower half of scene and lady was peeled away; the words EXAMINED BY _____ were inked there into the wood. (pp. 74-75)

In accounting for the collapse of the wave-function, physicists have proposed various hypotheses: observing the state of a particle necessitates interacting with it through measuring devices. The interaction of these measuring devices, which are located in the macroscopic world, to study the particle, which is located in the microscopic realm, inevitably disturbs the state of the particle and, therefore, the results obtained concerning different aspects of a particle, like its position and momentum, are inconclusive. On the other hand, some physicists, Eugene Wigner, for instance, have contended that the collapse of a particle into a defined state takes place in the consciousness. By extending the laws of QM to the macroscopic realm, these physicists claim that both measuring devices and human brain are made up of atoms and particles and, therefore, follow the rules of QM. Being matter, the measuring device and the brain cannot collapse the state of a particle into a single outcome. The primary culprit, according to this hypothesis, is the non-matter realm of consciousness. The reason that we humans perceive only one outcome out of a wave of possibilities is that the collapse occurs within the limits of our consciousness. Whereas Peter and other teenagers in the story are not stagnated in their wave-like progress (velocity suggests going with the flow) and are quite normal in the course of their growing-up and involvement with desire, Ambrose collapses and gets stuck, specifically because of his overactive self-consciousness, his crippling introspection, and his keen ability to observe subtleties which others tend to ignore.

Based on the ontological interpretation of the uncertainty principle, it is not possible to arrive at a complete description of the subatomic reality through one experiment. The trajectory an electron takes in the double-slit experiment is unintelligible and does not follow a definite path. While it is true that the distribution of a group of particles and the pattern they collectively form on the photographic plate can be determined based on probability by wave mechanics, gaining any knowledge about the properties of a single particle, its position and momentum, for instance, is not feasible unless we observe the particle; nonetheless, the observation / measurement itself, due to the disturbance effect, is not satisfying, as it does not provide us with any exact knowledge about the properties of a single particle.

Unlike the classical literature in which there is a sense of progress and the events unravel toward resolution of the conflict, “the plot doesn’t rise by meaningful steps but winds upon itself, digresses, retreats, hesitates, sighs, collapses, expires” (Barth, 1981, p. 92). Ambrose gets stuck in the funhouse and, ultimately, dissipated from the story altogether. As the reader reads the fictional text, they reconstruct the fictional world which has already been constructed by the author. When it comes to the “zero texture” and the lacunae in fictional worlds, Ambrose’s fate, for instance, Iser (1974) has famously posited the interactive model and views these gaps to be filled by the reader’s imagination: “One text is potentially capable of several different realizations, and no reading can ever exhaust the full potential, for each individual reader will fill in the gaps in his own way, thereby excluding the various other possibilities” (as cited in Edwards, 1985, p. 274). Unlike Iser who views gaps informational in essence, desperately in need of the reading process to be filled in, Doležel regards incompleteness as the immutable feature of fictional texts and ontological in nature. In other words, Doležel reasons, the fact that the worlds of fiction are human constructs makes incompleteness an ineluctable consequence of fictional world: “It would take a text of infinite length to construct a complete fictional world. Finite texts, the only texts that humans are capable of producing, are bound to create incomplete worlds” (Doležel, 1998, p. 169). Similarly, the incompleteness with which fictional worlds are replete has been an indispensable part of quantum reality as it is impossible to gain knowledge about different properties of a particle (position / velocity, for instance) simultaneously. This fact of quantum mechanics might explain why in the mirror-room, as hard as he tries, Ambrose cannot get a glimpse of any meaning and identity as he is looking at the mirror:

In the funhouse mirror-room you can’t see yourself go on forever, because no matter how you stand, your head gets in the way. Even if you had a glass periscope, the image of your eye would cover up the thing you really wanted to see. (Barth, 1981, pp. 81-82)

As he loses himself in the reflection, the narrator notes, “the necessity for an observer makes perfect observation impossible” (p. 90). Any interception in the trajectory of a particle, be it the consciousness, the measuring device, or the act of observation, brings about a collapse of the wavefunction associated with that particle and deprives us of recovering any precise information about its various aspects.

Likewise, Ambrose's outstanding powers of observation not only fail to quench his thirst for meaning but also lead to his alienation from his peers and hinder his wave-like trajectory into adulthood.

Quantum Mechanics, Dasein, and Ambrose

Pivotal to phenomenology is the concept of reduction explored by Husserl. Phenomenological reduction insists that we suspend approaching the everyday life through the lenses of classical physics and desist from looking for causal interactions between subject and object. Eidetic reduction calls for moving from the consciousness of individuals (observations made through sense perception) to the realm of pure essences (the sphere of imagination) and digging out the invariable and essential structure out of apparent contingencies. If unleashed, the flight of imagination will allow us to acknowledge that what lies underneath the concrete and factual content is uncertainty, ambiguity, and irreducibility. Ultimately, it is necessary that the transcendental ego make the world the object of his or her thought and unearth an invariable structure which defines the objects. Heidegger, on the other hand, views the subject-object dichotomy with which the whole western tradition has been fraught misleading and asserts that we should resist being distracted by trivialities of quotidian life in order to retrieve our severed connection with the authentic Being:

The rational paradigm which since Descartes has separated and since Kant has increasingly alienated the human as subject from a world of things in themselves neglects or denies and suppresses: human being, always already ontically/ontologically in-the-world, the world always already engaged as it is drawn into history by and in that relationship. (Slaughter, 1989, p. 95)

Should we discard social norms and amenities of the modern world, we might be able to enjoy the pre-Socratic proximity of human beings to nature. Our finitude and lack of power should be no barrier to trying to exhaust different possibilities which we are capable of attaining. Both QM and phenomenology are part of the human attempt to discover the nature of reality – what it means to *be*.

On the way to Ocean City, Ambrose is, once again, stung in the privy: “It was the honeysuckle on the lattice of the former privy that drew the bees” (Barth, 1981, p. 77). As a result, he walks with a limp. The apian visitation both in his infancy and adolescence is significant in two ways: first, the bees landing on his eyes confer on him the gift of vision:

People don't know what to make of him, he doesn't know what to make of himself, he's only thirteen, *athletically and socially inept*, not astonishingly bright, but there are antennae; he has . . . some sort of receivers in his head; things speak to him, he understands more than he should, the world winks at him through its objects, grabs grinning at his coat. (pp. 84-85)

While other teenagers are distracted by common teenage trivialities, it is Ambrose who spots the sea-borne bottle on the beach and ponders on the effaced paper. Furthermore, the apian visitation bestows upon him wild flights of fancy: “Peter [his brother] didn't have one-tenth the imagination *he* had, not one-tenth” (p. 80). While

Peter was amused to do naming-their-children thing as he daydreamed about his conjugal life with Magda, Ambrose exactly knew how it would feel like to be married and start a family: how to

be a loving husband and father, and go comfortably to work in the mornings and to bed with your wife at night, and wake up with her there. With a breeze coming through the sash and birds and mockingbirds singing in the Chinese-cigar trees. His eyes watered, there aren't enough ways to say that. (p. 80)

Second, his more recent visitation by bees, being stung on the leg, symbolically, accounts for his failure to catch up with his peers in regard to developing relationships with girls: "Some people, perhaps, don't 'hit their stride' until their twenties, when the growing-up business is over and women appreciate other things besides wisecracks and teasing and strutting" (p. 80). By placing it in the context of visitations as such – bees have symbolically been associated with eloquence and vision depending on their landing site – we may infer that this last visitation brings about stagnation, rather than development, in the process of sexual maturity to Ambrose. Contrary to the stance adopted by most researchers – they have interpreted the bee incident ironic in that instead of sharpening the character's vision, the visitation results in Ambrose's inability to find his way out of the funhouse – this last epiphany allows Ambrose to step into an uncharted territory of the funhouse:

Ambrose is off the track, in some new or old part of the place that's not supposed to be used; he strayed into it by some one-in-a-million chance, like the time the roller-coaster car left the tracks in the nineteen-teens against all the laws of physics and sailed over the boardwalk in the dark. And they can't locate him because they don't know where to look. Even the designer and operator have forgotten this other part, that winds around on itself like a whelk shell. That winds around the right part like the snakes on Mercury's caduceus. (p. 80)

The passage quoted above challenges the adequacy of both classical physics and literature to account for the contemporary reality in which uncertainty and chance reign supreme. The self-conscious spermatozoan of "Night-Sea Journey," the first story in the series, which has been thrown, inadvertently, into the world bears striking similarities with the notion of Dasein employed by Heidegger. Heidegger views human beings to have been thrown into the world inadvertently, who are to adapt themselves to the social norms and tradition. Yet in order to recuperate our lost unity with nature and other entities, it behooves us to forfeit the inauthentic beings (social norms and amenities of modern life, among many other things) which distract us from the authentic Being and to reclaim the pristine pre-Socratic proximity of human beings to nature. Projecting ourselves into the past provokes pangs of conscience in us while projecting ourselves into the future brings about angst because of the realization of an impending mortality. It is in present which we can find some solace: we understand that in spite of the limited time span before us, there is an infinite number of possibilities some of which we can attain. Ultimately, it is our perception of reality, not the external reality per se, which defines our Being.

While it is true that Ambrose, conceived out of the combination of the self-conscious spermatozoan of the “Night-Sea Journey” with an ovum, lacks the sexual knowledge most of his peers possess, his visionary and auditory gifts bestowed upon him as a result of his visitation by bees, allow him to hear and see a reality of a different kind. Hattie, their maid, whose husband bet on horses, insisted that the radio be on during the races. The race commentary itself did not amuse Ambrose the least; however, Ambrose had a penchant for the musical selections played between the races. On one occasion, while listening to between-races-classical music, he pictures himself having been killed by his archenemy, Wimpy, and he visualizes his family coming to visit him at his graveside during which his vengeful brother, Peter, vows to be revenged on his brother’s killer and his father blames himself for not being as munificent as he should have been. The shift in music tune inspires another vision in which a benevolent Ambrose saves Wimpy’s life against attacking hounds. In yet another picture evoked by the music, what he dreamed of is realized as Peggy expresses her love to him. His proximity to nature, as he spends most of the time on the beach, the smell of the woods where he pays frequent visits, and the between-races-classical music he listens to evoke his imaginative powers as he ponders over what possibilities lie before him. As his imagination exhausts one possibility after another, Ambrose comes to acknowledge the fact that the beast which lurks underneath these various life stories, the essence of reality, is indeterminacy.

The Many-Worlds Interpretation of Quantum Mechanic and the Baroque: The Funhouse as an Exhaustive Trove of Possibilities

Jacob Horner, the protagonist of Barth’s *The End of the Road*, cannot choose how to act when confronted with a series of possibilities and is paralyzed. The Doctor in the novel prescribes “Mythotherapy” for his condition, based on which a person should be free to take different personalities at will. The fact that Ambrose in the funhouse strays “in some new or old part of the place that’s not supposed to be used ... by some one-in-a-million chance” (Barth, 1981, p. 80), Martin (1997) notes, does not stem from his inability to find the exit; “rather, confronted with the labyrinth of possibilities, he finds himself paralyzed, unable to make the first step in an attempt to find his way out” (p. 155). That many of Barth’s characters are unable to practice some sort of order to their lives has been referred to as “cosmopsis” by Barth. Realizing how insignificant and futile his life is in the presence of the vast macrocosm, coupled with his recognition of the arbitrary nature of his choices, Martin argues, Ambrose finds himself overwhelmed, unable to come up with any deliberation. To negotiate this hindrance and his mental paralysis, Ambrose realizes that there are many roles he can assume and begins to rearrange his past and consider different possibilities which lie before him. Through mentally readjusting himself and rearranging the past events and considering various possibilities ahead of him, this “therapeutic endeavor” helps Ambrose create himself anew, recovering from the pangs of cosmopsis (p. 155). It is within this context that the Austrian novelist Robert Musil calls John Barth a “possibilitarian.”

Anyone possessing it [a sense of possibility] does not say, for instance, here this or that has happened, will happen, must happen. He uses his imagination and say: Here such and such might, should or ought to happen. And if he is

told that something *is* the way it is, then he thinks: Well, it could probably be just as easily some other way. So the sense of possibility might be defined outright as the capacity to think how every thing could ‘just as easily’ be, and to attach no more importance to what is than to what is not. (as cited in Morrell, 1976, p. 102)

The narrator of “Title” laments that “Everything’s been said already, over and over; I’m as sick of this as you are; there’s nothing to say” (Barth, 1981, p. 102). The only hope which remains for the Postmodern writer is to “fill the blank” and turn the ultimacy against itself through a style which exhausts its own possibilities: “The final possibility is to turn ultimacy, exhaustion, paralyzing self-consciousness and the adjective weight of accumulated history. ... Go on. Go on. To turn ultimacy against itself to make something new and valid” (p. 106). The way that Borges has deployed the concepts of labyrinth and baroque to his own end has informed Barth’s writing as well. “According to Barth’s conception of the Baroque,” Hinden (1973) notes, “a work eventually must serve as model to *itself*, defining and exhausting its own possibilities of invention and procedure as if to caricature its own emerging form” (p. 110). It is in this context that we should approach the effaced message Ambrose finds on the shore. The parallel stories he conceives as he enters the funhouse are but exhaustive ways before a Postmodern writer, which allow them to replenish the blank.

Order, balance, decorum, and lofty language were among the characteristics of the sixteenth-century art; the lack of these prerequisites in the works of the seventeenth-century metaphysical poets (for instance, the poems of Richard Crashaw which are steeped in strange conceits) might explain why the adversaries to the metaphysical poets employed the term “baroque,” an oddly-shaped *pearl* in Spanish, to stigmatize the art which lacked the *gem* of classical ideals. In the history of art, baroque has been recognized as the stage of European art which follows the Renaissance. Woelfflin (1929), who reinterpreted and revalued baroque and was the first to transfer it to literature, defines baroque by opposing its qualities against those of the Renaissance. Most of the characteristics he has enumerated bear witness to the fact that baroque exudes a freer conception of art as opposed to the Renaissance (as cited in Hauser, 1962, p. 161): linear and painterly¹; plane and recession; closed and open form; clearness and unclearness; multiplicity and unity. In sum, “inexhaustibility, incomprehensibility and infinity of representation” are the dominant features of baroque (p. 163). Borges, however, is unwilling to countenance that baroque is a historical movement which defines mainly the art of the seventeenth century and, instead, views baroque as recurring and eternal: “I would say the baroque is that style which deliberately exhausts (or wants to exhaust) its possibilities and which borders on its own caricature” (as cited in Johnson, 2020, p. 384).

While Borges praises classic writing: “Classic is that book which a nation or group of nations or the test of time has decided to read as if everything in its pages was deliberate, inevitable [*fatal*], profound like the cosmos and capable of endless interpretation” (as cited in Johnson, 2020, p. 380), his stance toward baroque, the style which exhausts all the possibilities, seems to inform much of his thinking and writing as well. Concerning “The Garden of Forking Paths,” Gilles Deleuze writes,

“Borges, one of Leibniz’s disciples, invoked the Chinese philosopher-architect Ts’ui Pên, the inventor of the ‘garden with bifurcating paths,’ a baroque labyrinth whose infinite series converge or diverge, forming a webbing of time embracing all possibilities” (as cited in Johnson, 2020, p. 398). Leibniz’s belief in the conceptual existence of different possibilities (within the mind of God) and his notion of the individuals as monads capable of perceiving infinite relations seem to have attracted Borges.

As mentioned earlier, according to the Many-World Interpretation of QM, instead of a collapse in the wavefunction, whenever a particle generates a wavefunction, parallel universes sprout in the cosmos. In a similar vein, Ryan notes, fictional worlds come into being as a character ponders on their options. The parallel universes of QM give way to decision trees with different branches in fiction, with the same ontological status. That all fictional worlds enjoy the same ontological existence has also been expressed by David Lewis under the rubric “indexical” theory of reality: if by actual we mean the world in which I am located, then all possible worlds are actual from the perspective of their inhabitants. This multiverse cosmology in fiction, which amounts to parallel universes in QM, provides us with some interesting insight on Ambrose’s idiosyncrasies.

The Devil’s-mouth entrance to the funhouse has been viewed by Fletcher as the portal through which Ambrose visits the underworld. The operator of the funhouse is described as somewhat sad and exhausted, “a small old man, *in appearance not unlike* the photographs at home of Ambrose’s late grandfather” (Barth, 1981, p. 84) and has been argued to stand for Barth’s literary forefathers, ancient and more recent, Tiresias and, particularly, Joyce, “now reduced to a symbol of ‘used-upness” (Fletcher, 2019, p. 62). Unlike Tiresias who imparts some homecoming knowledge to Odysseus, the old operator of the funhouse is bereft of any pragmatic wisdom to account for the acausal quantum reality. As he loses himself in the labyrinthine turns and twists of the funhouse, Ambrose creates different mutually exclusive parallel realities before him: he pictures himself successful, married and having children of his own, adolescent angst far behind him. Unlike his reserved father who despite appearing as an “intelligent man (as indicated by his role as grade school principal), neither encouraged nor discouraged his sons at all in any way—as if he either didn’t care about them or cared all right but didn’t know how to act” (Barth, 1981, p. 90), Ambrose establishes a close rapport with his children. Tender as he was all through his unhappy childhood, he wishes his father had solaced him and stood by him. Determined not to let his son undergo such angst, “when the lad [Ambrose’s child] reached thirteen or so,” Ambrose “would put a strong arm around his shoulder and tell him calmly: ‘It is perfectly normal. We have all been through it. It will not last forever”” (p. 81). Having become famous in his line of work, he reminds Magda, his wife, at an elegant dinner party of his youthful passion, their teenage trip to Ocean City, and the erotic fantasies he used to have about her:

Would she have imagined that the world-famous whatever remembered how many strings were on the lyre on the bench beside the girl on the label of the cigar box he’d stared at in the toolshed at age ten while she, age eleven. Even

then he had felt *wise beyond his years*; he'd stroked her hair and said in his deepest voice and correctest English as to a dear child: "I shall never forget this moment". (pp. 80-81)

In yet another version, while lost in the funhouse, Ambrose comes across another lost person in the dark with whom they manage to find their way out of the labyrinthine funhouse. By the time they find the right exit, they would become intimate friends, even lovers should she be a girl;

they'd know each other's inmost souls, be bound together *by the cement of shared adventure*; then they'd emerge into the light and it would turn out that his friend was a Negro. A blind girl. President Roosevelt's son. Ambrose's former archenemy. (p. 83)

In another parallel reality, Ambrose is, in the end, out of the funhouse. The fact that the companion with whom Ambrose sought their way out of the funhouse happened to be a blind negro girl gives Uncle Karl an excuse to tease Ambrose on their way back home. In another parallel reality, Ambrose "died of starvation telling himself stories in the dark²" (p. 92) and in a couple of years when that uncharted area of the funhouse becomes visible, his skeleton is mistaken for a part of the machinery. However, little did he know that an assistant operator of the funhouse, the operator's daughter, squatting behind the plywood partition, overheard his stories and recorded them word for word:

Though she had never laid eyes on him, she recognized that here was one of Western Culture's truly great imaginations, the eloquence of whose suffering would be an inspiration to unnumbered. And her heart was torn between her love for the unfortunate young man (yes, she loved him, though she had never laid though she knew him only – but how well! – through his words, and the deep, calm voice in which he spoke them) between her love et cetera and her womanly intuition that only in suffering and isolation could he give voice et cetera. (p. 92)

Or it might be that the family decided to ride on a merry-go-round instead of going through the funhouse in the first place (p. 84). These possibilities exist along each other and the reader can never be certain about the fate of Ambrose. From his paternal origin – was it due to Andrea's, his mother, betrayal or a fit of madness that Hector, his father, stormed into the delivery ward? – to his ambiguous birthmark, Ambrose's life has been tinged with indeterminacy. His acquisitive mind cannot be appeased as his metaphoric quest in the funhouse for a meaning beyond sexuality and reality brings about possibilities, not certainties: "Uncertainty announces the very condition of the postmodernist hero who must question everything, persist in confusion and negotiate what possibilities are available" (Edwards, 1985, p. 272). Rather than fostering a sense of authorial wholeness, Ambrose's underworld visit metamorphoses into a "frenzied, out-of-control, illogical sequence of possible endings, a 'garden of forking paths'" (Fletcher, 2019, p. 62). And while Odysseus, following his underworld visit, ascends as a transformed storyteller, Ambrose vanishes into thin air in the turns and twists of the funhouse, never mentioned again in the rest of the stories which follow in the series.

Conclusion

The 1960s, during which *Lost in the Funhouse* was written, features a world on the cusp of falling apart: Deconstruction brought about incredulity in privileged hierarchies of the Western thought; and the ferment set in following the Vietnam War and political assassinations imbued the climate of the decade with skepticism. The mental climate defining philosophy and literature in the 1960s had already affected physics in the first half of the century, during which quantum physics shattered the way reality had been perceived for a long time. Formerly proud of Newtonian absolutism, modern physics suddenly found it impossible to deal in certainties: competing hypotheses (the CI; the MWI of QM), thought experiments (the double-slit experiment; Schrödinger's Cat), and metaphors employed by physicists to express the inexpressible, all in all, bear witness to the fact that indeterminism and uncertainty have not been confined to the domain of fiction; rather they define the gestalt of the epoch.

Literature has always been responsive to paradigm shifts in physics. From chains of causality in plot to the mélange of private times one can see the imprint of classical physics and Theory of Relativity in fiction. The more recent breakthrough in modern physics is quantum mechanics, which has been regarded as the contemporary paradigm shift, challenging our ontological understanding and nature of reality. Despite the fact that in his more recent fiction, Barth has made explicit references to contemporary physics and has consciously deployed QM concepts, *Funhouse* has been devoid of such a direct influence. Nevertheless, exploring some stories in the series reveals some surprising affinities and parallels with some of the concepts for which quantum mechanics is famous. In fact, alongside such approaches as Deconstruction and Poststructuralism, there were also the developments in modern physics, namely quantum mechanics, whose implications one can sniff in Barth's *Funhouse*.

John Barth has been a cross-disciplinary avid reader. To do justice to such an author, who has been perceptive of and receptive to breakthroughs in other disciplines to reinvigorate fiction, perhaps researchers in the field of literary studies, provided competent in a second discipline, should aspire to deploy contemporary theories in other fields as the framework to their discussion. Even if one is skeptical whether QM offers the most accurate description of reality, it pays big dividends as a framework to approach literary works: the uncertainty, indeterminism, wave-particle duality and parallel universes on which it pivots imbue narrative with turns uncharted otherwise.

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Notes

¹Hauser (1962) defines “painterly” as “the dissolution of firm, plastic and linear form into something moving, hovering and incapable of being grasped” (p. 161).

²This possible outcome to Ambrose’s life story reminds Coulthard of Kafka’s famous faster in “A Hunger Artist.” Just as Ambrose cannot find solace within society, Kafka’s protagonist cannot help fasting, because he cannot find the food which can nourish him. Ambrose dies reciting stories to himself; the hunger artist, in a similar vein, is the sole spectator to his art, “fasts ‘on and on . . . but no one counted the days’” (as cited in Coulthard, 1994, p.180). Both stories underline the fact that the true artist is doomed to live a life of alienation, with art being the only resort for them to take refuge (p. 180).

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