

Embodied Cognition in Edgar Allan Poe: *Eureka's* Cosmology, Dupin's Intuition

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EDGAR Allan Poe's "The Power of Words" (1845) takes place in an immortal realm, wherein Agathos, a wizened spirit, teaches a new arrival, Oinos, about the connections between spiritual and physical dimensions. Agathos focuses on what he labels "the *physical power of words*." "Is not every word an impulse on the air?," asks Agathos, beginning his revelation that spoken words enact physical changes upon the environment—that inspirations become exhalations that move all matter. Indeed, Agathos contends that centuries ago he spoke a star into existence "with a few passionate sentences."¹ Connecting the noumenal and the phenomenal, Agathos's words have the power to birth worlds precisely because their vibrations embody the unity of the mental and the physical, the conjunction of mind and environment, that Poe elsewhere posits as the foundation of his

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¹ Edgar Allan Poe, "The Power of Words," in his *Poetry and Tales*, ed. Patrick F. Quinn (New York: Library of America, 1984), p. 825.

cosmology. Though Agathos's example emphasizes the primacy of the mental over the physical and of the individual over the environment, "The Power of Words" demonstrates that the influence goes both ways in an inconclusive equilibrium. After all, even as spiritual beings, both Agathos and Oinos are shaped by their environment (as evidenced by Oinos's need to learn the rules of the spiritual dimension), and they continue to be sensitive to—and impacted by—the physical power of words and their consequent physical manifestations surrounding them; indeed, it is only through these physical manifestations that their spiritual power can be expressed. The cosmos circumscribes and exceeds both characters, simultaneously outlining their individuality and highlighting their limitations as individuals. In other words, Poe illustrates the mutual reciprocity—even the mutual affect-ing—of individual and environment by tethering the mental or spiritual and the physical in a universal conjunction. In this short dialogic tale, Poe introduces his idea of how bodies, minds, universes, and stories alike are composed and entangled. Here the individual is both effect and partial cause of its environment, as Agathos and Oinos are both inscribed by their environment and minor authors of it.

With this cosmology Poe indirectly anticipates theories of embodied cognition prevalent in cognitive science today. Twenty-first-century cognitive science views the mind as inseparable from the body. It pushes against the long-prevailing notion that the mind is a computer essentially detached from—and superior to—the bodily inputs it transforms into a rational, coherent picture.² Current cognitive science scholars argue instead that, along with the individual body, the environment in which the body is situated must likewise be accounted for when understanding the composition of the mind. This version of mind-body discourse, called embodied cognition, "explores the role of the environment" in "supporting and scaffolding cognitive activity."³ So, for example, external objects like a pen and paper are necessary and

² See George Lakoff, "Explaining Embodied Cognition Results," *Topics in Cognitive Science*, 4 (2012), 773–85.

³ Katharina Engler-Coldren, Lore Knapp, and Charlotte Lee, "Embodied Cognition around 1800: Introduction," *German Life and Letters*, 70 (2017), 416. The second

inextricable components in the production of thought while writing: “the loop into the external medium [e.g., the pen and paper] is integral to the intellectual activity, to the *working*, itself. It is not just the contingent environmental outflow of the working, but actually forms part of it.”⁴ In other words, the self is a network that extends beyond the body. As one composes thoughts with external objects, the environment becomes an inextricable part of one’s being, every motion of a pen bringing shape and structure to swirling ideations. The pen is here not just a point of connection; it is a coauthor in a convergence between mind, object, and world. The self alters the pen from a thing into a part of a being—but so, too, does the pen’s being alter the self’s. Such a perspective makes it impossible to distinguish fully between mind, body, and environment.⁵ There is no extricable mind, no discrete self; there is only the gestalt.

Most cognitive science paradoxically leverages this holism to explore its potential therapeutic benefits for the individual self—i.e., how can one manipulate one’s entanglement with the external world toward positive, self-improving ends? For instance, changing one’s facial expression to match that of another produces empathy or the ability to imagine the life of others.⁶ Poe, however, though interested in a similar model of the self’s openness to its environment (and, indeed, in the specific power of facial expressions), emphasizes the ultimate destruction—rather than consolidation—of the bounded self. Against the backdrop of the cosmos, both selves and their seeming powers are revealed to be only ephemeral emanations of a radically impersonal process. Poe illustrates the darker implications of these connections (mind, body, environment) in

quotation is from Marco Fenici, “Embodied Social Cognition and Embedded Theory of Mind,” *Biolinguistics*, 6 (2012), 279.

⁴ Andy Clark, “Embodied, Embedded, and Extended Cognition,” in *The Cambridge Handbook of Cognitive Science*, ed. Keith Frankish and William M. Ramsey (Cambridge: Cambridge Univ. Press, 2012), p. 277. See Engler-Coldren, Knapp, and Lee, “Embodied Cognition around 1800: Introduction.”

⁵ See Mark Rowlands, *The New Science of the Mind: From Extended Mind to Embodied Phenomenology* (Cambridge, Mass.: MIT Press, 2010), pp. 51–84.

⁶ See Alvin I. Goldman, *Joint Ventures: Mindreading, Mirroring, and Embodied Cognition* (New York: Oxford Univ. Press, 2013); and Engler-Coldren, Knapp, and Lee, “Embodied Cognition around 1800: Introduction.”

Eureka (1848) and surprisingly plays them out with C. Auguste Dupin, the genius detective who uses intuition to partially access extrapersonal cosmic knowledge to solve cases, though at the cost of his discrete individuality and personality. In this article, I argue for a consistent cosmology throughout Poe's oeuvre, and I conclude by briefly exploring the implications of Poe's vision for contemporary cognitive science. Reading Poe's works through the lens of his cosmology mapped in *Eureka* reveals the insubstantiality of the self in its fluxional entanglement with the environment. With this entanglement, however, comes a means by which the self can gain limited, temporary access to cosmic knowledge. Dupin, I contend, capitalizes on exactly this capacity—without going as far as Poe's mesmerists, whose complete opening to the universe's extrapersonal forces leads to their annihilation as individual beings. Along with the exciting possibilities inherent in the interconnectedness of the individual and the environment, Poe elucidates the ontological dangers that come with this entanglement, and I argue that such dangers necessarily shadow cognitive science's therapeutic agenda.



Though comparing Poe's works to cognitive science may at first appear anachronistic, Poe's contemporaries endlessly explored the relationship between the self (individual) with the world (environment). In the early to mid nineteenth century, scientific objectivity posited a disconnect between the self and the world. Responding to a growing distrust of subjective human perception, discourses of objectivity contended that the only way to access truth is to expunge the unreliable perceptions of individuals using mediating technologies, such as microscopes. A technology could (and should) physically separate individuals from their environment, filtering out the subjective analyst from the now purified object of study.⁷ At the same time that scientific objectivists called for a detached and objective self, however, discourses on fusing

⁷ See Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).

the subjective and the objective developed. Diverging from scientific objectivity's impetus for insulating the self from the world, Ralph Waldo Emerson and Poe focus on the possibilities of the porous barriers between the self and the world. For its part, Emerson's transcendentalism prioritizes the individual over the environment. Emerson's transparent "eye-ball," for example, is an embodiment of his conviction that the world/environment is only the self unrealized: "I become a transparent eye-ball; I am nothing; I see all; the currents of the Universal Being circulate through me. . . . In the tranquil landscape" and "the distant line of the horizon, man beholds somewhat as beautiful as his own nature."⁸ The individual's porous relationship with nature allows for an individual to draw in the environment and become a fully realized self (the world becomes "his own nature"). In turn, the world is actualized *through* the individual, and all things seen and experienced through the individual produce the environment. Indeed, as a self-realized individual (the world incorporated into the self), one's variable feelings can alter the world: "the same scene which yesterday breathed perfume and glittered as for the frolic of the nymphs, is overspread with melancholy today," as "Nature always wears the colors of the spirit" (Emerson, *Nature*, p. 29). Though in this case it may appear that nature purposefully dons one's emotions, "the power to produce this delight [the alteration of nature], does not reside in nature, but in man, or in a harmony of both" (Emerson, *Nature*, p. 29). Proleptically expanding cognitive science's emphasis on using the entanglement between self and world to one's benefit, Emerson's transcendental worldview optimistically aggrandizes the self, reducing the environment to being only its veiled reflection.

Poe's version of the interdependence of the self and the environment, however, differs from Emerson's insofar as, for Poe, the self (while still inextricably linked to the world) is secondary to the environment. As I demonstrate later in my analysis of *Eureka* and the Dupin tales, the self in Poe's

⁸ Ralph Waldo Emerson, *Nature* (1836), in *Emerson's Prose and Poetry: Authoritative Texts, Contexts, Criticism*, ed. Joel Porte and Sandra Morris (New York: W. W. Norton and Co., 2001), p. 29.

cosmology is subordinated to the environment—even as the self can use this subjugation to enable certain revelations beyond itself. Poe delineates (largely unlike Emerson) that the porous nature of self and world can lead to extrapersonal universal insights *and* be detrimental to the self due to the simultaneously self-constituting and self-annihilating power of the cosmos. Mesmerism, for instance, emphasizes for Poe the danger of fully opening the aperture between self and world, as the self completely (both physically and psychically) dissolves into the world while accessing the truths that lie beyond it. Poe, however, retains a qualified form of extrapersonal insight in the form of *intuition*—the means by which the universe’s irrevocable conjunction of the phenomenal and the noumenal can be partially and momentarily apprehended. And yet, though Poe depicts intuition as enabling certain extraordinary insights, the cosmic processes it relies upon are, in the end, radically corrosive to the largely optimistic anthropocentrism at the heart of much contemporaneous science and philosophy.⁹ Unlike scientific objectivism and transcendentalism, that is, Poe’s cosmology insists on humanity’s merely conditional and transitory existence in a fundamentally inhuman universe.

Whereas, then, previous scholarship often has framed *Eureka* as parodic and the Dupin tales as centered on rationalist epistemologies, I read them as coextensive and earnestly cosmological.¹⁰ As I will show, when Dupin *intuits*, he engages in

⁹ Furthermore, Poe’s vision ultimately depends on a nonanthropocentric (and possibly anti-anthropocentric) cosmos insofar as the conditions that make Dupin’s intuitions possible are also ones that make Dupin into more of an object than a subject.

¹⁰ Previous scholarship interprets the Dupin tales as vivisections of rationality or as sites ripe for psychoanalysis (see Jean-Michel Rabaté, “The Literary Phallus, from Poe to Gide,” in his *The Cambridge Introduction to Literature and Psychoanalysis* [Cambridge: Cambridge Univ. Press, 2014], pp. 122–49). Scholars such as Maurice Lee interpret Dupin’s intuition as an analog for an educated guesser, delving into the idiosyncrasies and connections between rationality and chance, while others read Dupin as a cipher for analysis itself, as in psychoanalytic arguments made by Jaques Lacan, Jacques Derrida, and Paul Hurh. See Maurice S. Lee, *Uncertain Chances: Science, Skepticism, and Belief in Nineteenth-Century American Literature* (New York: Oxford Univ. Press, 2012); Jacques Lacan, “Introductory Note,” *Yale French Studies*, 48 (1972), 38–39; Jacques Derrida, Willis Domingo, James Hulbert, Moshe Ron, and M.-R. L., “The Purveyor of Truth,” *Yale French Studies*, 52 (1975), 31–113; and Paul Hurh, “‘The Creative and the Resolvent’: The Origins of Poe’s Analytical Method,” *Nineteenth-Century Literature*, 66 (2012), 466–93.

what Poe depicts to be a novel cosmological interaction that unlocks knowledge inaccessible to physiological observation and logical inference alone.¹¹ To make this claim, I first map out *Eureka's* intuited cosmology before turning to “The Murders in the Rue Morgue” (1841) and “The Purloined Letter” (1844) to explore how the intuitive process functions at smaller-than-cosmic scales.¹² I then contend that this cosmology, while it resonates with certain self-composing features of transcendentalism and cognitive science, ultimately illuminates the potential destructive—or de-constructive—forces inherent in the porous linkage between self and environment.



¹¹ Poe's intuition is distinct from Kantian intuition in that it is not merely pointing to a phenomenal representation.

¹² Scholars have parsed Poe's cosmology through the lens of subject-object dualism, often recently reading Poe as engaging with either transcendental Romanticism (despite his documented disdain for “Frogpondians”) or a variation of scientific objectivity—i.e., how observation and analysis lead to new knowledge. Whether the focus is on light, spectacles, daguerreotypes, observational techniques, or interest in materiality via the printing presses, recent Poe scholarship dwells on optical engagements both material and immaterial that communicate an objectivist determination of the universe. Additionally, scholars such as Hurh take up Derrida's and Lacan's conversations of *how* analysis is featured and theorized in Poe's detective tales, especially with regards to the bridges between creativity and analysis. Sean Moreland and Devin Zane Shaw, for instance, read Poe as a transcendentalist in light of F. W. J. Schelling's “identity-philosophy”—or the idea that objectivity and subjectivity can only be explained through the “original identity of the absolute,” which Poe takes to mean the symbolic, or the “absolute form” (Sean Moreland and Devin Zane Shaw, “As Urged by Schelling”: Coleridge, Poe and the Schellingian Refrain,” *Edgar Allan Poe Review*, 13, no. 2 [2012], 60). According to Moreland and Shaw, Poe's take on Schelling is that the refrain (the “differentiated repetition of an original identity”) is the particular to explain the universal, or the unifying factor of the work of art—or the absolute form/absolute idealist result (Moreland and Shaw, “As Urged by Schelling,” p. 70). In essence, Moreland and Shaw read Poe along transcendental Romanticist lines, arguing that Poe is an absolute idealist who employs the complete combination of subject and object that foments an individual's subjective annihilation. Though I draw upon John Tresch's methodology in reading Poe as reconciling scientific objectivism with transcendental Romanticism, I depart from Tresch's constructive conception of “mechanical Romanticism” by clarifying that Dupin, in the context of *Eureka's* cosmology, is in fact able to access local truths without having to combine his subjectivity with technology because he is an intuitive agent maneuvering through *Eureka's* cosmology. See John Tresch, “Estrangement of Vision: Edgar Allan Poe's Optics,” in *Observing Nature—Representing Experience: The Osmotic Dynamics of Romanticism 1800–1850*, ed. Erna Fiorentini (Berlin: Reimer Verlag, 2007), pp. 155–86.

Consistent with their readings of the Dupin tales, scholars often read *Eureka* as parodic or as an elaborate nihilistic con that pokes fun at contemporary scientific theories.¹³ Others, however, contend that Poe's prose-poem is a serious endeavor to chart the ostensible individual within a greater cosmology.¹⁴ As one of Poe's final works completed soon before his death, *Eureka*, I believe, represents a culmination of Poe's ideas of how the universe operates. Before approaching how Dupin intuits seemingly impossible revelations, then, it is essential to understand how *Eureka's* cosmology synthesizes the individual and the environment on a particulate scale, because it is this synthesized makeup of the universe that allows for Dupin's powers.

Broadly speaking, the universe in *Eureka* is both an individual, as all matter diffuses from a single divine spirit, *and* an environment, as all matter diffused from this spirit coheres into ostensibly discrete objects or beings. *Eureka*, that is, posits the original unity of a divine, noumenal spirit (or primordial particle) who then decides to atomize or radiate into the phenomenal universe in order to experience multiplicity:

“What you call The Universe of Stars is but his present expansive existence. He now feels his life through an infinity of imperfect pleasures—the partial and pain-intertangled pleasures of those inconceivably numerous things which you designate as his creatures, but which are really but infinite individualizations of Himself.”¹⁵

Given the nature of this divine diffusion, the resulting “numerous things” both do and do not have identities of their own, and both are and are not individuals. Significantly, the putatively individual atoms are not synecdochic representations of the entire universe; they remain connected to each

¹³ See Daniel Royot, “Poe's Humor,” in *The Cambridge Companion to Edgar Allan Poe*, ed. Kevin J. Hayes (Cambridge: Cambridge Univ. Press, 2002), pp. 57–71. See also Susan Manning, “‘The Plots of God Are Perfect’: Poe's ‘Eureka’ and American Creative Nihilism,” *Journal of American Studies*, 23 (1989), 235–51.

¹⁴ See Matthew A. Taylor, “Edgar Allan Poe's (Meta)physics: A Pre-History of the Post-Human,” *Nineteenth-Century Literature*, 62 (2007), 193–221.

¹⁵ Edgar Allan Poe, *Eureka: A Prose Poem*, in *Poetry and Tales*, p. 1358. Further references are to this edition and appear in the text.

other through both their common origin and the universal forces of attraction and repulsion, but they are severed from omnipotent, omniscient oneness until the future time when they will rush back together in a cataclysmic collapse that will restore the original unity by obliterating the universe of distinct things. Thus, the cosmos, to Poe, is partly a self in that it stems from—and is returning to—an original being, and partly an environment in that the divine diffusion inaugurates the entirety of the cosmos. In such a cosmology, the seemingly individual self is *somewhat* distinct from the environment (it is not one with the environment) but is also an effect of the environment (it has no existence separate from its environment). Consequently, individuality both is and is not real.

Even on an atomic scale, *Eureka's* cosmos insists on the convergence of self and environment, specifically fusing interior and exterior worlds. The diffused individual atoms and things of the universe are at the mercy of two dictatorial laws, attraction and repulsion.¹⁶ In Poe's model the universe is rushing back to a state of unity due to the force of attraction; however, there are temporary limits on the degree of fusion possible until the final collapse occurs due to the power of repulsion. The interplay of these two forces dictates the movements of physical bodies as well as the movements of minds. As Poe presents it, the forces of attraction are responsible for "the body," while those of repulsion determine matters of "the soul," or the mind.

On the one hand, this model represents the unity of mind and matter; on the other hand, it does not imply access to total knowledge of the cosmos. While all individualized things are rushing back toward unity, they have not yet achieved it. Therefore, no one thing or being can apprehend the universe in its entirety and remain an individual. As a result, the only extra-personal truths that are accessible to an individual are local, limited insights into one's environment gleaned from one's attracting and repulsing interactions with other (pseudo)individuals.

¹⁶ In fact, *Eureka* clarifies that "Matter *exists* only as Attraction and Repulsion—that Attraction and Repulsion *are* matter" (*Eureka*, p. 1283; emphasis in original).

Intuition is the name that Poe gives to this limited extra-personal insight. Intuition, according to *Eureka's* narrator, both results from and allows one partially to access the processes by which the cosmos is ordered. *Eureka's* narrator notes that charting the cosmos requires intuition, which he defines as “*the conviction arising from . . . inductions or deductions of which the processes are so shadowy as to escape our consciousness, elude our reason, or defy our capacity of expression*” (*Eureka*, pp. 1276–77; emphasis in original). Unlike a priori or a posteriori knowledge, intuition is a form of apprehension that is untraceable and finally unknowable. In fact, the author of the anachronistic letter in *Eureka* mocks these previous forms of epistemology, claiming that Aristotelian (pejoratively misnamed “Aries Tottle”) self-evident truths are inaccurate, and Baconian (“Hog-ian”) fact-accumulation is plodding and ineffective. He then notes shrewdly that “you can easily understand how restrictions so absurd on their very face must have operated . . . to retard the progress of true Science, which makes its most important advances—as all History will show—by seemingly intuitive *leaps*” (p. 1264). Unlike previous “restrict[ed]” approaches, that is, intuition operates because of the coexistence of the physical and the spiritual in a particular place and time. This happens on the cosmic scale, where the self and environment are inextricably linked, and also on the individual scale, where an individual’s mind and body are inextricably linked and equally inseparable. *Eureka's* narrator emphasizes that “the Material and the Spiritual . . . accompany each other, in the strictest fellowship, forever. Thus *The Body and The Soul walk hand in hand*” (p. 1306; emphasis in original). This interlinkage of minds, bodies, and environments in Poe’s cosmology provides the foundation for Dupin’s intuitive insights, where one can “leap” from knowing one’s own mind-body to understanding the mind-body of another (albeit limitedly) precisely because both selves stem from the same material-spiritual makeup of the universe. Because the intensity of attractive and repulsive interactions between seemingly separate things increases with proximity—indeed, because these interactions compose individuals (minds and bodies alike)—each “individual” is both a product of its local environment of other selves and a partial producer,

in turn, of these other selves: both imprint and printer. Thus, while the cosmological principles by which intuition operates do not quite erase individuality, they do reduce it to a temporary—and largely illusory—effect.



At first blush this model of intuition may seem consistent with Emersonian transcendentalism, where the self's combination with the environment leads to a kind of transcendence. Poe's mesmeric tales, however, reveal a radical divergence from transcendentalism; here, the total convergence of the self with the environment results in annihilation, not elevation. Emerson's transcendental vision emphasizes self-exaltation in that the revelation of the self's identity with the cosmos enables it to access the unity of spiritual and physical truth; the self, that is, transcends itself to *become* the universe. Alternatively, Poe's mesmeric vision of the cosmos necessitates that obtaining universal knowledge requires both physical and spiritual self-annihilation; universal knowledge is irreconcilable with individual identity.¹⁷ For instance, Mr. Vankirk, the subject of mesmeric passes in "Mesmeric Revelation," accesses universal truths about the soul, but is found to have already died hours before he finished communicating with the narrator. In "The Facts in the Case of M. Valdemar," Valdemar's journey

¹⁷ In "A Tale of the Ragged Mountains" (1844), "Mesmeric Revelation" (1844), and "The Facts in the Case of M. Valdemar" (1845), Poe makes this cost explicit through his depictions of mesmerism. Popularized in America in the early to mid nineteenth century, mesmerism became a paradigm for a spiritual and physical interconnectedness between people. When a mesmerist performed the mesmeric passes, he influenced what was considered the "vital fluid" that, like an interstitial thread, connects all creatures, bodies, and subjects in the cosmos (see Emily Ogden, *Credulity: A Cultural History of US Mesmerism* [Chicago: Univ. of Chicago Press, 2018]; and Alison Winter, *Mesmerized: Powers of Mind in Victorian Britain* [Chicago: Univ. of Chicago Press, 1998]). By accessing this cosmological fluid, a mesmerist created an electrical current between himself and the participant. During this practice, termed "Animal Magnetism," both mesmerist and participant became conduits for breaking the bonds of individual subjectivity, with the effects ranging from the amelioration of illness to the accessing of hidden cosmic truths (see [Anon.], *Wonders and Mysteries of Animal Magnetism Displayed; or the History, Art, practice, and progress of that useful Occult science, From its first Rise in the City of Paris, to the present Time. With several Curious Cases and new Anecdotes of the Principal Professors and Patients* [London: J. Sudbury, 1791]).

into the afterlife after his corporeal form dies results in his gleaning universal knowledge, but as soon as he is released from the mesmeric influences, he melts into a decayed ooze, underscoring Poe's point that abstract omniscience is incompatible with personal existence. Whereas Emerson's vision regards the synthesis of self and cosmos as a beatific, elevating, and ennobling *achievement* (wherein the phenomenal universe is revealed to be only an encrypted, impersonal form of self-expression), Poe's version of complete cosmic synthesis entails the self's horrific decomposition (wherein accessing universal truth comes only at the cost of one's life).

Dupin can, however, access seemingly impossible knowledge without immediately perishing. According to the Dupin tale narrators, intuition is the method by which Dupin resolves seemingly insolvable cases, and yet the exact mechanism of intuition is not immediately apparent. However, when reading Dupin's cosmos as coextensive with *Eureka's* cosmos, Dupin's intuitive process becomes surprisingly clear. Despite Poe's mutual exclusion of abstract omniscience and personal existence, some form of extrapersonal knowledge is possible in his universe due to the local and temporary forms of access to cosmic processes that intuition affords. Unlike Poe's mesmerized characters, Dupin demonstrates a hybrid approach that enables accessing *some* impersonal truths at the cost of *some* personality. Intuition, that is, allows insights beyond oneself without fully losing oneself because it offers a way of *partially* accessing the cosmic environment. Specifically, intuition harnesses the physico-spiritual laws governing the interconnectedness of matter to allow someone momentarily to resonate or fuse with another local cluster of matter (whether person or thing) and thereby divine otherwise impossible knowledge. This hybrid middle ground allows for a new understanding of the Dupin stories: the detective character is not necessarily a talented guesser, nor is he a master of traditional analytical skills; he is a metaphysical agent that maneuvers through *Eureka's* cosmology.

"The Murders in the Rue Morgue," for instance, showcases Dupin's intuitive mechanism—or his partial combination with cosmic processes—as an equally embodied and immaterial

operation, but without Dupin ending in a mesmeric ooze. After Dupin uncannily recounts every thought the unnamed narrator has while on a walk, the narrator proceeds to describe how Dupin adapts his self to intuit:

[Dupin] boasted to me . . . that most men, in respect to himself, wore windows in their bosoms, and [he] was wont to follow up such assertions by direct and very startling proofs of his intimate knowledge of my own. His manner at these moments was frigid and abstract; his eyes were vacant in expression; while his voice, usually a rich tenor, rose into a treble which would have sounded petulantly but for the deliberateness and entire distinctness of the enunciation. Observing him in these moods, I often dwelt meditatively upon the old philosophy of the Bi-Part Soul, and amused myself with the fancy of a double Dupin—the creative and the resolute.¹⁸

Dupin, while intuiting another person's intentions and thoughts or intuiting a crime scene, becomes less of a personal being. He is "abstract," neither completely himself nor completely another. His manner alters. Specifically, the pitch of his voice rises from a rich tenor to a treble precisely because of this personal abstraction. It is as if he begins vibrating at another frequency. Dupin becomes a semi-impersonal being in order to access the ostensible personality of another. In addition to morphing his spiritual makeup in this way, when in his "double Dupin" state, Dupin simultaneously changes his physical comportment. He becomes "frigid" and his eyes become "vacant" and fade into expressionlessness. As both an embodied material being and an abstracted immaterial being, Dupin is both himself and not. He is a divided self—a Bi-Part Soul—but not a fully dissolved self. By altering both his personality and his bodily forms while intuiting, Dupin demonstrates the linkage between the spiritual and physical within *Eureka's* cosmology, where intuition is characterized by "leaps" that symbolize both the action of a particular body *and* a momentary break from mundane ties (*Eureka*, p. 1264).

¹⁸ Edgar Allan Poe, "The Murders in the Rue Morgue," in *Poetry and Tales*, pp. 401–2.

Furthermore, as both “creative” and “resolvent” (involving both more and less than himself), Dupin’s intuitive process is a dichotomous interaction that parallels *Eureka*’s vision of attraction and repulsion by emphasizing that self and non-self alike are constructed (and deconstructed) through a single operation. In this way, the narrator’s description demonstrates that the same forces at play in *Eureka* are at play in Dupin. Ultimately, it is through this doubled self that Dupin can momentarily, partially access cosmic processes that reveal local truths. Unlike Emerson’s transcendentalist (who knows all by being all) or Poe’s mesmerist (who knows all by dissolving himself), the intuitive agent is a temporarily semi-impersonal and semi-embodied being.

At the same time, intuition is not a method or a result of scientific objectivity, which presumes to isolate reality from the subject (and its errors). Scientific objectivity is incompatible with—and rejected by—Poe’s cosmology; in a universe where individuals are inextricable from their environment, there is no way to perceive reality without recognizing the self’s constitutive connection to its context. In fact, Poe pushes against the necessity of technologically mediated vision in “The Purloined Letter.” The detective story highlights the fallibility of technologies of vision as well as nineteenth-century anxieties concerning their ability to visualize universal truths. In the context of the tale, just because the prefect can look closely at objects with a microscope does not mean that he will find what he is looking for. The earnest prefect employing detective Dupin for assistance in locating the purloined letter admits that he and the Parisian police have looked everywhere to no avail in the rooms of the suspected perpetrator, Minister D—:

“we examined the rungs of every chair in the hotel, and, indeed, the jointings of every description of furniture, by the aid of a most powerful microscope. Had there been any traces of recent disturbance we should not have failed to detect it instantly. A single grain of gimlet-dust, for example, would have been as obvious as an apple. Any disorder in the glueing—any unusual gaping in the joints—would have sufficed to insure detection.”¹⁹

¹⁹ Edgar Allan Poe, “The Purloined Letter,” in *Poetry and Tales*, p. 685.

According to the prefect, the microscope—the quintessential modern technology of hypervisibility—should have revealed the location of the letter. Seeing things more closely, from this perspective, should uncover the truth. But the prefect misinterprets the evidence because he has cut out crucial context beyond the microscope’s frame. By zooming in too closely (believing that truth is the result of analysis rather than composition or combination), the prefect removes the larger frame of reference that includes not only the room but also the mind of the minister it reflects. The prefect thus serves as Poe’s exemplar for the fallibility of scientific objectivism—i.e., that its myopic attention to ever-smaller details precludes holistic appreciation of larger contexts, including how the thief’s mental state can be read as reflecting his environment—and *vice versa*. The prefect’s single-minded objectivity makes it impossible to engage with the mind of the minister—and to recognize the irrevocable linkage between seemingly subjective phenomena and seemingly impersonal places and processes.²⁰ In attempting to filter out the self from the environment through a microscope, the prefect blinds himself to how the minister’s personality and his rooms are coextensive and mutually informing (and not only psychologically but also cosmologically). Put another way, the prefect fails to find the letter because he cannot see that self and environment are, if not one, less than two.

Having demonstrated that intuition is neither a form of scientific objectivity nor a morbid version of Emersonian transcendentalism, let us consider how exactly Dupin explains intuition in “The Purloined Letter” as a mode of engaging with the concomitant mind-body and self-environment connections. Oddly, the explanation comes by way of a game, even one for children. When criticizing the Parisian police, Dupin insults the prefect by claiming that the prefect’s reasoning skills are outmatched by those of a schoolboy that Dupin once met who

²⁰ In *Eureka*, the narrator discovers a letter in a bottle, wherein the author from the future muses on “past” epistemologists, retroactively and poignantly condensing the prefect’s frustration into a brief quip, slyly noting that “the error of our progenitors was quite analogous with that of the wiseacre who fancies he must necessarily see an object the more distinctly, the more closely he holds it to his eyes” (*Eureka*, p. 1265).

mastered the game of Even and Odds through the intuitive process. Dupin repeats the schoolboy's answer to an inquiry regarding the means of his success:

“When I wish to find out how wise, or how stupid, or how good, or how wicked is any one, or what are his thoughts at the moment, I fashion the expression of my face, as accurately as possible, in accordance with the expression of his, and then wait to see what thoughts or sentiments arise in my mind or heart, as if to match or correspond with the expression.” (“The Purloined Letter,” pp. 689–90)

The process of accessing the spirit of another through physical mirroring is here made explicit. The schoolboy “fashion[s] the expression” of his face to match that of his opponent in order to gain access to his innermost thoughts and decisions. In short, he mirrors what his opponent looks like in order to access that person's spirit—which includes intentions, will, thoughts, etc. And what may at first appear to be merely a psychological operation is, on closer inspection, a cosmological one. As mentioned earlier, *Eureka* intertwines body and spirit in such a way that one's thoughts and sentiments shape one's physical bearing and expression—and one's physical bearing and expression, in turn, influence one's thoughts and sentiments. Dupin capitalizes on this dynamic by mirroring another's physical embodiment with his own in order to resonate or identify with their inner being. By crafting a particular expression, Dupin creates the cosmically corresponding spiritual state that accompanies that expression. In doing so, he performs a temporary and localized version of what *Eureka* claims to be the telos of all matter: to recombine into absolute Unity.

Intuition, then, taps into this in-common cosmic reality by connecting to both the physical and the spiritual dimensions of matter that compose putative individuals. In fact, Dupin's intuitive process of accessing someone's thoughts by mimicking the person's expressions anticipates what modern cognitive science calls “social mirroring,” where people develop their own inter-iorities by mimicking the external expressions, movements, and gestures of others in a manner that activates a parallel

motor neural stimulation.²¹ Similarly, physical expressions, gestures, and visual activities (actions that require the body—e.g., turning one’s head to see more of one’s environment) have been shown to be essential to cogitation, as when “holding specific body postures or facial expressions, for example, causally or constitutively facilitate both access to and retention of memories.”²² Some cognitive scientists thus research the ways in which individuals become part of an embodied social environment and how that interaction in turn shapes the individual and can be used for therapeutic or self-developmental ends. For instance, one can redraw one’s individual identity by changing one’s environment or whom one interacts with, since any interaction with another individual can shape and reshape one’s makeup. In other words, the thoughts and actions of others can alter how an individual thinks or acts. In these cases, scientists focus on the paradoxical boundedness of individuals paired with their openness to their social worlds, as well as their reciprocal influencing of their social worlds.²³ In the same way that individuals can alter their social environments, their social environments can alter their ontogeny.²⁴

In Poe’s version of this dynamic, the intertwining of body (matter) and spirit (thought, emotion) necessitates that the spirit can directly influence the body in the same manner that the body’s comportment affects the spirit’s. Consequently, Dupin can intuit psychic or spiritual states to glean a physical

²¹ See *Mirror Neuron Systems: The Role of Mirroring Processes in Social Cognition*, ed. Jaime A. Pineda (New York: Humana Press, 2009).

²² Lucia Foglia and Robert A. Wilson, “Embodied Cognition,” *Wiley Interdisciplinary Reviews. Cognitive Science*, 4 (2013), 321.

²³ See Jennifer H. Pfeifer and Shannon J. Peake, “Self-development: Integrating cognitive, socioemotional, and neuroimaging perspectives,” *Developmental Cognitive Neuroscience*, 2 (2012), 55–69.

²⁴ According to Jessica Lindblom, an individual is coupled with both a physical environment and a social one. So, “while an organism can be structurally coupled with the physical environment, as well as structurally coupled with another organism, the ‘perturbations’ between them need not to [be] distinguished from the ones that derive from the physical, and non-living environment” (Jessica Lindblom, “The Nature of Social Interaction and Cognition,” in her *Embodied Social Cognition. Cognitive Systems Monographs*, 26 [Cham: Springer, 2015], p. 162). In other words, individuals both shape and are shaped by their physical *and* social environments. Often this coupling of individual-physical and social environments is used regarding child development.

property. This becomes apparent when he claims to have solved the case of the purloined letter with no clear mirroring of the face of Minister D—. Dupin apparently knows him only through his two primary identities: mathematician and poet. The reason the prefect could not solve the case was because he did not understand the implications of this combination. Dupin notes:

“if the Minister had been no more than a mathematician, the Prefect would have been under no necessity of giving me this check. I knew him, however, as both mathematician and poet, and my measures were adapted to his capacity, with reference to the circumstances by which he was surrounded.” (“The Purloined Letter,” p. 693)

It is with this understanding that Dupin concludes that the minister would have hidden the letter in plain sight, rather than in some conventionally clever hiding spot. It is implied that Dupin was able to access the intellectual frameworks of the minister without having talked to him at all. Such an intuitive effort becomes explicit later when Dupin apprehends the minister’s patterns and decisions concerning where to place the letter, forming a tenuous connection with the minister without him physically being present. When explaining to the narrator how he arrived at the solution, Dupin claims that he “felt” that the “whole train of thought would necessarily pass through the mind of the Minister” (“The Purloined Letter,” p. 693). Similarly, in “The Murders in the Rue Morgue,” the narrator marvels at Dupin’s ability to intuit his own thought-processes as “larger links” of a “chain” after silently walking together through the streets of Paris at night (“The Murders in the Rue Morgue,” p. 403). In both instances, Dupin attunes his mental faculties, or “adapt[s]” his mind to their “capacity,” to match that of the narrator and Minister D—. Mirroring intentionality then extends (by the deterministic law of the cosmos) to mirroring physicality. After forming an imaginary psychological connection with the minister through “reference” to both his biography and his rooms (the “circumstances by which he was surrounded”), Dupin gleans how and where the minister physically placed the letter. By putting himself in the mind/space of the Minister, that

is, Dupin is able to see where his—the Minister’s but also Dupin’s—body would physically place the letter.

What my reading has offered is a new understanding of how Dupin’s intuition operates—namely, within the paradigms of *Eureka*’s cosmology. Poe’s final conception of the universe in *Eureka* is distinct from Emersonian transcendentalism and scientific objectivity, in that Poe’s universe synthesizes the self and environment and maps the connections between individual mind-body connections, and it is in this greater fusion that intuition can operate. Intuition, as I have parsed here, is not a form of reasoning, but rather it is Poe’s materialist, presentist, and surprisingly practical vision of the universe where impossible albeit local truths are obtainable. Paul Grimstad argues that much of Poe’s “fiction is built around perilous physical or psychological extremes which are then submitted to an exaggerated rationality that seems meant to get the peril under control” and to bring “verisimilitude” to his extreme stories, including “The Murders in the Rue Morgue.”²⁵ What I am suggesting is that reading *Eureka* as a cosmological map for Dupin’s tales reveals Poe’s vision of the universe not as one that can be understood or controlled through rationality or ratiocination, but rather as one where momentary local truths can be apprehended through using the inexorable linkage between the physical and the spiritual.

Significantly, Poe’s version of intuition anticipates current thinking on embodied cognition, or mind-body interdependence and mutual influence, specifically through social mirroring.²⁶ Twenty-first-century cognitive science may not invoke the cosmological, and it may focus on patterns of socialization and individualization, but, like Poe, it is increasingly open to the idea that ostensibly discrete selves (that are inextricable mind-body entities) are both objects and subjects of impersonal

²⁵ Paul Grimstad, “Poe and Science Fiction,” in *The Oxford Handbook of Edgar Allan Poe*, ed. J. Gerald Kennedy and Scott Peeples (New York: Oxford Univ. Press, 2019), p. 735.

²⁶ Also, body-soul dualism, or Embodied cognition, broadly defined as “the interpenetration of body, mind, and world in human experience and in the acquisition of knowledge,” focuses on “how the body shapes thought and knowledge” (Engler-Coldren, Knapp, and Lee, “Embodied Cognition around 1800: Introduction,” pp. 414, 413).

processes. However, whereas twenty-first-century cognitive science—like the nineteenth-century transcendentalism of Emerson, Henry David Thoreau, and Margaret Fuller—leverages the mind-body connection for the purposes of individual therapeutics, where adjustments can be made to either the mind or the body to achieve positive outcomes of self-improvement, Poe focuses more on the individual's evanescence.²⁷ Unsurprisingly, Poe's take on this principle is decidedly disturbing because he emphasizes how easily it can destroy the self as well as enlarge it (or even destroy it by enlarging it). Reading *Eureka* earnestly through the lens of embodied cognition thus helps us to see the epistemology in Poe's cosmology and its resonances with transcendentalism's self-aggrandizing principle: that the universe as we know it authors itself using the intertwinement of self and environment. However, in *Eureka* and the Dupin tales, Poe demonstrates the ephemerality of individuality insofar as it is inextricably bound to—and comprised of—environmental influences. For Poe, the self unravels as it takes shape.

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²⁷ Emerson, Thoreau, and Fuller depict the mind-body connection as a duality that necessitates balance and adjustments to maintain homeostasis. Emerson's version of mind-body advances the idea that "the soul made body, & not body soul" (Ralph Waldo Emerson, "Notebook Phi," in his *Journals and Miscellaneous Notebooks, Volume XII, 1835–1862*, ed. Linda Allardt [Cambridge, Mass.: Belknap Press of Harvard Univ. Press, 1976], p. 348). In fact, in *Nature* Emerson writes that "[his] own body" is the "NOT ME" (*Nature*, p. 28). The two components are separate, and when "the two become 'detached,'" via illness, pain, or becoming cognizant of the mind-body duality, "the body [inevitably] begins to dominate," leading to "dire impediments"; the entire system is put into chaos, and adjustments must be made to return to homeostasis (Cynthia J. Davis, "Margaret Fuller, Body and Soul," *American Literature*, 71 [1999], 33). Thoreau's version emphasizes that the body can be perfected by immersing oneself into the spiritual dimensions of Nature: "through [a] perfect body... the Soul can best be attained" (Davis, "Margaret Fuller, Body and Soul," p. 35). Fuller's version of mind-body insists that one turn to one's spirit to gain access to the body (see Davis, "Margaret Fuller, Body and Soul").

ABSTRACT

Stephanie Kinzinger, “Embodied Cognition in Edgar Allan Poe: *Eureka’s* Cosmology, Dupin’s Intuition” (pp. 124–144)

This essay argues that Edgar Allan Poe’s *Eureka* (1848) anticipates contemporary cognitive science’s theories of embodied cognition, particularly the notion that individuals’ minds and bodies are inextricable from their environments. *Eureka’s* cosmology of environmental entanglement, furthermore, surprisingly elucidates detective Auguste Dupin’s uncanny “intuitive” knowledge, as imbrication with cosmic processes affords limited, temporary access to extrapersonal knowledge. Dupin, I contend, capitalizes on the interconnectedness of mind and body, self and environment to attune himself to others, and in the process enacts a precursive version of “social mirroring.” However, along with the enabling possibilities inherent in such interconnectedness, Poe also illuminates its ontological dangers, as Dupin when intuiting transforms into a semi-abstracted self and loses some of his discrete individuality—without going as far as Poe’s mesmerists, whose complete opening to the universe’s extrapersonal forces leads to their annihilation as individual beings. I argue that such dangers shadow not only nineteenth-century transcendentalism’s cosmic egotism but also twenty-first-century cognitive science’s therapeutic agenda.

Keywords: Edgar Allan Poe; Cognitive Science; Transcendentalism; *Eureka*; Auguste Dupin