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Virginia Woolf's Brain: Mysticism, Literature and Neuroscience

WHEN I WAS A CHILD, I used to lie on my back in the long grass at the side of the house and gaze up through the leaves of the apricot tree. The sight of the summer sky against the green filled me with an enormous but indefinable feeling. I want to say joy, a sense of infinity. I want to say that my heart grew in my chest. I want to say that I flowed out of myself and into eternity. But none of those conceptions occurred to me at the time. I felt that it was something wonderful and important—which is why, surely, I remember it so vividly—but it wasn't on an altogether different scale to the other wonderful and important things (bonfires, tree-houses, sea anemones) of which life was proving itself capable.

This feeling is nevertheless the closest thing to a mystical experience that I can recover from my childhood. Compared to many accounts of revelatory childhood experiences by both secular and religious figures of the last century, it's pretty tame. One writer on matters spiritual, Jean Houston, has described an experience she had at the age of six while trying to pray to the Virgin Mary:

Everything around me, including myself, moved into meaning. Everything—the fig tree blooming in the yard, the plane in the sky, the sky itself, and even my idea of the Virgin Mary—became part of a single Unity, a glorious symphonic resonance in which every part of the universe was a part of and illuminated every other part, and I knew that in some way, it all worked together, and it was very good.¹

¹ Jean Houston, "Introduction," *Seeker: Travelling the Path to Enlightenment*, Archetypes of the Collective Unconscious, Vol. 3 (New York: Jeremy P. Tarcher/Putnam, n.d.) 12.

Similarly, the Catholic contemplative Bernadette Roberts writes of how, at the same tender age, she experienced an altered state of consciousness:

Lying in the bow of my father's boat, my body in tune with the roll of the sea and my mind absorbed in the rhythmic splash of the water, I felt I had gently and quietly dissolved, and all that remained was a small, weightless cork floating aimlessly and contentedly in a vast, endless sea.²

Novelist Virginia Woolf goes back even further, to infancy, to uncover the memory she describes as the base on which her life stands:

[It] is of lying half asleep, half awake, in bed in the nursery at St Ives. It is of hearing the waves breaking, one, two, one, two, and sending a splash of water over the beach; and then breaking one, two, one, two, behind a yellow blind. . . . It is of lying and hearing this splash and seeing this light, and feeling, it is almost impossible that I should be here; of feeling the purest ecstasy I can conceive.³

For all three women, these were foundational experiences. They had been given a glimpse of what seemed to be a hidden reality, and the everyday world would never be quite convincing again. They all went on to have other such experiences, both spontaneous and willed, and to develop a personal philosophy to explain them. Houston became a New Age guru and best-selling author of spiritual self-help books, while Roberts became first a Catholic nun, and then a lay contemplative and writer. Woolf, however, wrote a series of experimental novels that challenged the way we both see and depict reality. She was not interested in religion, and so, unlike Houston and Roberts, she did not seek a religious framework for her experiences. Instead, she saw them as simply part of the range of human experience, and accordingly put them in her fiction. In the memoir she began in her late fifties, she wrote that throughout her life she had had the “sensation that we are sealed vessels afloat on what it is convenient to call reality; and at some moments, the sealing matter cracks; in floods reality.”⁴ These moments of

² Bernadette Roberts, *The Experience of No-Self: A Contemplative Journey*, 2nd ed. (Albany: State U of New York Press, 1993) 99.

³ Virginia Woolf, *Moments of Being: Unpublished Autobiographical Writings* (Sussex: The University Press, 1976) 64–65.

⁴ Woolf, *Moments of Being*, 122.

in-flooding are present in almost all her novels. They are sometimes joyful and sometimes devastating, but always of supreme importance because they reveal that what she elsewhere calls the "habitable world" is not the real world. Appearances drop away and both the world and the self are revealed as other than they seem. It is this that gives so much of Woolf's writing its mystical flavour.

Until recently, however, it has been difficult for Woolf's readers to approach the mystical elements of her writing, except perhaps through philosophical abstraction. There certainly are connections between Woolf's ideas about reality and those of philosophers from Plato to Bergson. But Woolf's mysticism is not primarily philosophical; as she says in her memoir, her conviction about the true nature of reality is "instinctive" rather than reasoned: "it will not bear arguing about; it is irrational."⁵ Even so, traditional understandings of mysticism are patently inadequate for interpreting Woolf's work. Evelyn Underhill's classic 1911 study defines mysticism as a direct encounter with God, a definition that would rule out Woolf's experiences. Secular approaches, however, tend to see mysticism as a form of psychopathology.⁶ Science, too, has had a propensity to dismiss the mystical as the domain of cranks and crackpots. Certainly some eminent scientists (including J.J. Thompson, John Tyndall and William Crookes) have been involved in researching a range of psychic, spiritualist and mystical phenomena since the late nineteenth century, as Janet Oppenheim points out in her study of such research in Victorian England. But this work was never accepted by the wider scientific community. The problem, according to Oppenheim, was that such phenomena could not be investigated using the much-prized scientific method. As a rule, they "were incapable of demonstration by the acknowledged methods of observation and controlled experimentation, under predictable circumstances, with all variable factors identified."⁷

Towards the end of the twentieth century, however, this began to change. Advances in technology—in particular, new brain imaging techniques—made it possible for scientists to investigate some of these phenomena in ways acceptable to the scientific community. Various studies of the neurophysiology of religious experience were carried out, such as those reported by Newberg, D'Aquili and Rause in their book, *Why God Won't Go Away: Brain Science and the Biology of Belief*—a best-seller in the US

⁵ Woolf, *Moments of Being*, 122.

⁶ For a critique of traditional psychoanalytic approaches to mysticism, see Dan Merkur, *Mystical Moments and Unitive Thinking* (Albany: State U of New York Press, 1999).

⁷ Janet Oppenheim, *The Other World: Spiritualism and Psychical Research in England, 1850–1914* (Cambridge: Cambridge U Press, 1985) 393–94.

in 2001. Gradually, a physiological basis for mystical experiences began to emerge. Then in 2008, a Harvard-trained neuroscientist named Jill Bolte Taylor published a book describing her altered perceptions following a massive stroke in terms that were strikingly mystical.⁸ She had not become religious; rather, she attributed her changed awareness to changes in brain function that were for her, as a brain physiologist, entirely explicable. As a result of her experience, she became convinced that the quintessential mystical experience of oneness with all that is was not a religious delusion, a manifestation of psychopathology or even an untestable hypothesis, but a simple matter of physiology. In her words, “the feeling of deep inner peace is neurological circuitry located in our right brain” (159). Taylor’s ideas make it possible to reconsider Woolf’s mystical bent in terms that shed light not only on her life but on her writing. The result is that her work becomes at once more explicable and more unsettling. We are no longer able simply to cordon off those things that strike us as passing strange, dismissing them as religious or psychological or even philosophical oddities. Instead, we must consider them as a significant part of Woolf’s vision, her contribution, as a serious novelist. This in turn may lead us to rethink what we know about perception and, indeed, reality itself.



Taylor was thirty-seven when she had her stroke. She woke up one morning with a splitting headache and over the next four hours found herself observing her own brain’s functioning as various aspects of normal, everyday processing shut down or became intermittent. The stroke affected primarily the left hemisphere of her brain, so she was able to discover at first-hand which aspects of ordinary perception and action are determined by the left hemisphere, and what happens when that hemisphere effectively goes off-line. First, she writes, the part of her brain responsible for orienting her body in space began to falter. She found herself unable to “clearly discern the physical boundaries of where I began and where I ended” (42). At the same time, the language centres of her brain began to shut down, and her inner voice, along with the everyday cacophony of thought and observation, suddenly fell silent. “My mind was no longer preoccupied with the billions of details that my brain routinely used to define and conduct

⁸ Jill Bolte Taylor, *My Stroke of Insight: A Brain Scientist’s Personal Journey* (New York: Penguin, 2008). Page numbers for quotations from this work are given in parentheses in the text.

my life in the external world," she writes. "Those little voices, that brain chatter that customarily kept me abreast of myself in relation to the world outside of me, were delightfully silent" (42). But despite losing her inner "I," the site of the conscious self, she did not lose consciousness. In fact, her awareness seemed to be expanding. "In this void of higher cognition and details pertaining to my normal life, my consciousness soared into an all-knowingness, a 'being at *one*' with the universe, if you will," she writes (41). She saw the interconnection, the fundamental unity, of all life and was flooded with a sense of peace, harmony and euphoria. This was, she felt, what the Buddhists call Nirvana; and it was achieved simply by moving out of left-brain consciousness and into the very different awareness of the right brain.

The idea that the two hemispheres of the brain are effectively two separate brains, and that each "has a mind of its own," in the words of neuropsychologist Rhawn Joseph, is not new.⁹ Scientists have been able to associate different functions with different sides of the brain for around two centuries, with the help of studies of people with brain injuries and those who have had their left and right brains surgically severed (known as "split-brain" patients). Thus it has long been conventional wisdom that, for example, the left brain focuses on details while the right brain sees the big picture; the left brain takes care of logical and analytical thinking, while the right brain reads emotional and social nuances; the left brain is in charge of speaking, writing and maths while the right brain manages the visual and spatial dimensions of movement and thought. If you're marching, that's left brain; if you're dancing, that's right brain. If you're humming along to music, that's right brain; if you're singing along, that's left brain. But though the two spheres of the brain work together in highly sophisticated ways to give us our everyday perceptions, actions and experiences, when it comes to our own sense of ourselves, the left brain tends to dominate. According to Joseph, this dominance is largely because the left brain is the seat of language and other verbal functions, and thus the site of verbal consciousness. The right brain performs many invaluable functions, but it cannot talk, and so its means of communicating with the left brain are limited. Because our inner "I" is located in the left brain, we have little direct access to the knowledge, perceptions and functions of the right brain. As Joseph puts it, "the right-brain mental system does not rely on linguistic forms of

⁹ Rhawn Joseph, *The Right Brain and the Unconscious: Discovering the Stranger Within* (New York: Plenum, 1992) 67.

analysis; thus, it is quite difficult for the language-dependent left brain to be conscious of what is occurring in the other half of the cerebrum.”¹⁰ In other words, the left brain does not know what the right brain is doing.

What this means is that most of us live our lives with our consciousness firmly centred in the left hemisphere of our brain. We do not know what the world looks like from the point of view of our right hemisphere simply because that perspective is not available to our conscious mind. It is relegated to unconsciousness by the frenetic verbal activity of our left hemisphere. Taylor’s experience is so extraordinary because her conscious awareness shifted from her left to her right hemisphere. She experienced awareness from the right side of the brain rather than the left. And the world she saw was not only extremely different from that presented by the left hemisphere, but also contained some uncanny similarities to the perceptions described in mystical writings, including those of non-religious writers like Woolf. This suggests that there may be a link between right-brain awareness and mystical experience. In fact, one could speculate that those who have spontaneously experienced the oneness of everything (what scholars of mysticism call “unitive consciousness”) may simply have switched from left- to right-brain consciousness.

The research of Newberg and D’Aquili offers some support for this hypothesis.¹¹ They used brain-imaging technology to take pictures of the brains of people who were meditating or praying, and what they found suggests that during these activities, some of the functions of the left-brain are gently disengaged, allowing right-brain perceptions to become dominant. The images taken by Newberg and his colleagues showed a marked decrease in activity in the left hemisphere and a commensurate increase in right-hemisphere activity. The researchers also identified in the brains of meditating subjects a “sharp reduction in activity levels” in the posterior superior parietal lobe, the part responsible for keeping the body oriented in physical space. With this area disengaged, they write, the brain is unable to create a sense of the body’s physical boundaries and thus “would have no choice but to perceive that the self is endlessly and intimately interwoven with everyone and everything the mind senses.”¹² Newberg and his colleagues go on to identify a range of other neuro-physiological systems that

¹⁰ Joseph, *The Right Brain and the Unconscious*, 91.

¹¹ Andrew Newberg, Eugene D’Aquili, and Vince Rause, *Why God Won’t Go Away: Brain Science and the Biology of Belief* (New York: Ballantine, 2001).

¹² Newberg, D’Aquili, and Rause, *Why God Won’t Go Away*, 6.

function in unusual ways during religious experience, and point out that such changes in brain function can be triggered by certain activities, such as the “repetitive rhythmic stimulation” of chanting, drumming and dancing, and the concentrated attention associated with meditation. They emphasise that these changes do not represent a malfunction; while they are “unusual, [they] are not outside the range of normal brain function.”¹³

It seems possible, then, that people who have experiences commonly considered mystical are in fact simply seeing the world from a different perspective—that of the right brain. Researchers in neurophysiology are at pains to point out that neither the left brain nor the right brain sees the world in a truer way than the other. There are no more grounds for considering as objectively true the left-brain perception of the self as a clearly defined solid, for instance, than the right-brain perception of the self as a fluid. One may be more functional than the other, but neither is necessarily a wholly accurate perception. As Newberg and his colleagues put it, “Nothing enters consciousness whole. There is no direct, objective experience of reality.” Instead, reality is constituted for each of us at any given moment by our brains with their highly sophisticated (and largely unconscious) means of gathering, receiving and interpreting sense data. Thus our experiences “are only ‘secondhand’ depictions of what may or may not be objectively real.”¹⁴ Or, as Einstein put it back in 1938, “Physical concepts are free creations of the human mind, and are not, however it may seem, uniquely determined by the external world.”¹⁵

Certainly the processes by which we come to know the world and ourselves are incredibly complex. Perception itself depends not only on the information gathered by our senses but also on the way we interpret that information, which is a function of, among other things, our cognitive structures. In Stephen Wilson’s words, “What we perceive ... depends upon what we are able to *conceive*.”¹⁶ So what we see and know is limited by what we are capable, physically, neurologically and cognitively, of seeing and knowing. Not only that but the brain (both left and right hemispheres) can deceive us—as studies with patients who have sustained damage to specific areas of the brain amply demonstrate. Thus while it may seem entirely counter-intuitive to suggest that the self may be in actual, objective fact

¹³ Newberg, D’Aquili, and Rause, *Why God Won’t Go Away*, 7.

¹⁴ *Why God Won’t Go Away*, 36.

¹⁵ Albert Einstein and Leopold Infeld, *The Evolution of Physics: The Growth of Ideas from Early Concepts to Relativity and Quanta* (Cambridge U Press Archive, 1971) 31.

¹⁶ Stephen Wilson, “Perception,” *The Bloomsbury Book of the Mind*, ed. Stephen Wilson (London: Bloomsbury, 2004) 3.

fluid rather than solid, there is plenty of scientific opinion to support this. Quantum physics sees the world as entirely composed of electromagnetic waves, with matter merely a specific manifestation of those waves. Or, in Taylor's words, "everything around us—the air we breathe, even the materials we use to build with, are composed of spinning and vibrating atomic particles" (20). Once that is understood, it is not such a stretch to realise that we are all "literally swimming in a turbulent sea of electromagnetic fields" (20). As for the body, it is itself "a complex construction of living, thriving organisms" (43)—a trillion-strong swarm of cells, all engaged in furious activity at any given moment. From this point of view, the physical self may be seen as literally interconnected with everything around it. The brain is able to map the boundaries of the body and orient it in time and space, but this mapping is merely a strategy, a functional response to reality rather than a representation of it.

Similarly, the sense that the individual is a part of all that is also has a dimension of scientific truth. "Our human genetic code is constructed by the exact same four nucleotides (complex molecules) as every other form of life on the planet," Taylor writes. "At the level of our DNA, we are related to the birds, reptiles, amphibians, other mammals, and even the plant life. From a purely biological perspective, we human beings are our own species-specific mutation of earth's genetic possibility" (13). From this point of view, mystical perceptions of the individual as an integral part of all that is, participating in a life beyond the boundaries of the body, are not so crazy. These are the kinds of perceptions Einstein seems to embrace when he writes: "A human being is part of the whole, called by us 'Universe'; a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest—a kind of optical delusion of consciousness." He adds that "This delusion is a kind of prison for us."¹⁷

Both our left and right brains, then, can be considered to have some claim to be seeing reality as it truly is. People who have never seen from the right-brain perspective tend to be adamant that the left-brain reality is the only one there is, while those who have experienced right-brain consciousness tend to see nothing but falsity, limitation and delusion in the left-brain view. Taylor goes so far as to claim that "For all those years of my life [before the stroke], I really had been a figment of my own imagination!" (70). It took her eight years to recover fully and one of the last things to return was her sense of herself as solid rather than fluid. About this she was ambivalent.

¹⁷ Einstein to Robert S Marcus, February 12, 1950, cited in Silvan S. Schweber, "Einstein and Oppenheimer: Interactions and Intersections," *Science in Context* 19 (2006): 513–59.

“I didn’t want to lose my connection to the universe,” she writes. “I didn’t want to experience myself as a solid separate from everything. I didn’t want my mind to spin so fast that I was no longer in touch with my authentic *self*” (132). Nevertheless, she needed her left brain to be fully functioning in order to be able to “communicate with the external world” (142). For her, the key question in her recovery became how to balance left- and right-brain awareness so that she could still experience right-brain perceptions, despite the dominance of left-brain consciousness.



Taylor’s experience of an altered reality was the result of a stroke, while the religious adepts studied by Newberg and his colleagues deliberately cultivated shifts in perception through practices such as prayer and meditation that quieten or disengage aspects of the left brain. But there also appear to be people who simply stumble into right-brain consciousness. In *The Varieties of Religious Experience*, William James presents first-person accounts of a range of mystical experiences from people with no specific religious affiliation. The Victorian poet Alfred Tennyson describes how, as a boy, he would silently repeat his own name to himself “till all at once, as it were out of the intensity of the consciousness of individuality, individuality itself seemed to dissolve and fade away into boundless being.” He is at pains to insist that “this is not a confused state but the clearest, the surest of the surest, utterly beyond words.”¹⁸ The early mystical experiences of Houston, Roberts and Woolf seem to have been similarly spontaneous. This suggests that in some people, left-hemisphere dominance is less well established, enabling them to switch easily between these two modes of perception. This may well have been the case for Woolf.

One of the most obvious instances of what looks like right-brain thinking in Woolf’s work is her much-quoted statement, in an essay on “Modern Fiction,” about how we perceive things:

Examine for a moment an ordinary mind on an ordinary day. The mind receives a myriad impressions—trivial, fantastic, evanescent, or engraved with the sharpness of steel. From all sides they come, an incessant shower of innumerable atoms; and as they fall, . . . they shape themselves into the life of Monday or Tuesday.¹⁹

¹⁸ Cited in William James, *The Varieties of Religious Experience* (New York: Penguin, 1982) 384.

¹⁹ Virginia Woolf, *The Common Reader*, Vol. 1 (London: Vintage, 2003) 149–50.

The idea that experience begins as a shower of atoms which is then shaped into a series of coherent perceptions is quite accurate from a neuro-physiological point of view. As Taylor puts it, “Independent streams of information simultaneously burst into our brain via each of our sensory systems” (29). Or in the words of Newberg, D’Aquili and Rause, experience is assembled “piece by piece ... from the swirl of neural blips, sensory perceptions, and scattered cognitions dwelling in [the brain’s] structures and neural pathways.”²⁰ But though this is the reality, it is not how most of us experience our lives. Those falling atoms are transformed so seamlessly and efficiently into meaningful information, replete with emotional, cognitive and memory dimensions, that we never notice it happening. Woolf, however, seems to have been aware of both the fall of the “atoms” and their transformation into recognisable experience. What’s more, this awareness lay behind one of the defining impulses of her fiction: the desire to represent experience in its raw state, as it happened, rather than in its final, neatly packaged form. Her rallying cry to modern novelists was to undo the coherence imposed upon the world by language—in order to reveal what would otherwise be hidden, lost. “Let us record the atoms as they fall upon the mind in the order in which they fall,” she wrote. “Let us trace the pattern, however disconnected and incoherent in appearance, which each sight or incident scores upon the consciousness.” In this way, it may be possible to secure “the thing we seek ... life or spirit, truth or reality, ... the essential thing.”²¹ This mysterious “thing” appears again and again in Woolf’s writing. At one level, she is talking about escaping convention, both literary and social, in order to see afresh. But at another level, she is in search of the “reality” that she herself glimpsed beneath the appearances of things. Her artistic goal, which the painter Lily Briscoe expresses in *To the Lighthouse* as the desire to depict “the thing itself before it has been made anything,” coincides with her personal quest for “what I call ‘reality’: a thing I see before me; something abstract; but residing in the downs or sky; beside which nothing matters; in which I shall rest & continue to exist.”²²

“Modern Fiction” contains another famous pronouncement: that “Life is not a series of gig lamps symmetrically arranged; life is a luminous halo, a semi-transparent envelope surrounding us from the beginning of

²⁰ Newberg, D’Aquili, and Rause, *Why God Won’t Go Away*, 36.

²¹ Woolf, *The Common Reader*, Vol. 1, 150, 149.

²² Virginia Woolf, *To the Lighthouse* (St Albans: Triad/Panther, 1977) 178; Virginia Woolf, *The Diary of Virginia Woolf, Volume III: 1925–1930*, ed. Anne Olivier Bell and Andrew McNeillie (San Diego: Harvest, 1980) 196.

consciousness to the end.”²³ In other words, life is not linear, a series of events unfolding in sequence—like a row of carriage lanterns (or, in more contemporary parlance, car headlights) stretching off into the distance. Instead, life is a single expansive moment. At one level, this makes no sense; it seems self-evident that life progresses from one point to the next. But Woolf’s conception of life as a “luminous halo”—harking back, surely, to that childhood experience of lying in the nursery, which she also described as like “lying in a grape”—is a classic right-brain perception. As Taylor explains, “To the right mind, no time exists other than the present moment, and each moment is vibrant with sensation” (30). The right brain presents us with a “master collage” of any given moment—what it “looks like, sounds like, tastes like, smells like, and feels like” (29–30). The left-brain, however, takes that collage and breaks it down into its component parts, imposing sequence and order. In this way, it creates time: past, present and future. Without that division, we would live in the eternal now.

Woolf seems to have had an intuitive awareness of the timelessness underlying the everyday perception of time, as though she experienced both left- and right-brain ways of seeing simultaneously. Nevertheless, the fullness of the moment generally figures for her as a hidden truth, an underlying reality that is only sporadically apparent. This is something that, once again, she sought to convey in her writing. In her diary for 1926, she records an idea for “some semi mystic very profound life of a woman, which shall all be told on one occasion; & time shall be utterly obliterated.” Past and future will be present in a single moment: “One incident—say the fall of a flower—might contain it. My theory being that the actual event practically does not exist—nor time either.”²⁴ This book was never written—or, rather, it morphed into *The Waves*. But the idea that time does not exist and that past and future are contained in the present moment can be glimpsed in much of her work. In particular, she sought to create a sense of the richness, the comprehensiveness, the multifariousness of each moment. Thus in 1928 she writes in her diary of her desire to “give the moment whole; whatever it includes. Say that the moment is a combination of thought; sensation; the void of the sea. Waste, deadness, come from the inclusion of things that don’t belong to the moment; this appalling narrative business of the realist: getting on from lunch to dinner.”²⁵ Much of her experimental writing, particularly the short stories she wrote in the early 1920s, can be understood

²³ Woolf, *The Common Reader*, Vol. 1, 150.

²⁴ Woolf, *The Diary of Virginia Woolf, Volume III*, 118.

²⁵ Woolf, *The Diary of Virginia Woolf, Volume III*, 209.

in terms of this desire. She includes details that would seem peripheral or irrelevant to other writers, while excluding the kind of narrative progression (exposition, rising action, denouement) that is the staple of most fiction. She wants to capture all the parts that make up the moment, rather than engage in the left-brain processes of selection and exclusion.

Her essay “The Moment: Summer’s Evening” is explicitly an attempt to “give the moment whole”—or rather, as she puts it in the first paragraph, to seek out “the different elements in this situation in order to compose the truth of it, the whole of it.”²⁶ The narrative focuses on conveying all the elements, human and non-human, cognitive and sensual, past, present and future, that make up this particular moment, in which the narrator sits in her garden with three companions as night falls. “To begin with,” she tells us, “it is largely composed of visual and of sense impressions,” and she goes on to describe how the air feels after a hot day, how the light looks, how the leaves “shiver now and again, as if a ripple of irresistible sensation ran through them.” Then she describes her own consciousness, her sense that she is both present and elsewhere, that “the legs of the chair are sinking through the centre of the earth,” and that she and her companions are “spectators and also passive participants in a pageant.” Consciousness then becomes collective, “a nucleus divided up into four heads, eight legs, eight arms, and four separate bodies.” From this expanded awareness, idle words have a physical presence such that they “hit the mind with a wad, then explode like a scent suffusing the whole dome of the mind with its incense, flavour.” Thought itself has physical properties as it “shoots through the moment,” making it “quiver with malice and amusement.” Then the narrative expands to encompass the owl flying overhead, and its consciousness, too, becomes collective as “with our wings spread, we too fly, take wing.”

The essay culminates in an experience that is strikingly mystical. As the four friends sit in the gathering dark, listening to the lowing of the cows and the fluting of the owls, everyday perceptions are undone. The trees grow “heavier, blacker; no order is perceptible; there is no sequence in these cries, these movements; they come from no bodies.” Order and sequence are the stalwarts of left-brain perception; here they are explicitly banished, and without them—as neuroscience would suggest—the self can no longer be clearly delineated. Soon it is lost altogether: “Then comes the terror, the exultation, the power to rush out unnoticed, alone;... to be part

²⁶ Virginia Woolf, *The Moment and Other Essays* (Hogarth Press: London, 1947) 9–13. All quotations from this essay are from these pages.

of the eyeless dark, to be rippling and streaming, to feel the glory run molten up the spine, down the limbs, making the eyes glow, burning, bright, and penetrate the buffeting waves of the wind." It is an ecstatic moment, full of sensation yet difficult, if not impossible, to decipher. It is a description of experience untethered from the physical bounds of the body, yet clearly located in the body (the spine, the limbs, the eyes). No attempt is made by the narrative to explain. Instead, the experience is interrupted by a human voice speaking commonplace words that seem to re-impose separation, sequence and personal identity. The narrator follows her companions back to the house, where "the square draws its lines around us, and here is a chair, a table, glasses, knives, and thus we are boxed and housed."

The contrast between the glorious freedom of self-loss and the "boxing" of the self could not be more marked. The return to a single body and a limited consciousness is presented as reluctant and even painful. This contrast can be found everywhere in Woolf's work. In *To the Lighthouse*, for instance, Mrs Ramsay is sitting alone at twilight knitting and looking out at the sea when she falls into a kind of trance: "All the being and the doing, expansive, glittering, vocal, evaporated; and one shrank, with a sense of solemnity, to being oneself, a wedge-shaped core of darkness."²⁷ In this state, the self is unknown and unknowable—a core of darkness. But it is also, as the narrative goes on, a kind of underground pool, spreading out far beyond the conventional limits of the self. "Our apparitions, the things you know us by, are simply childish," the narrative declares. "Beneath it is all dark, it is all spreading, it is unfathomably deep; but now and again we rise to the surface and that is what you see us by."²⁸ The implication is that the cognitive self, the self constructed by the left-brain, is not the true self—or, rather, is one manifestation of something much bigger, the knowable aspect of something that is essentially unknowable. As mysterious as this sounds, there is a kind of logic here in the context of Joseph's research into the relationship between the left and right brains. Most of what is known by the right brain is unknowable by the left—unconscious, and thus mysterious, manifesting in unpredictable ways. What the right brain says about the self is that it is fluid and interconnected with its environment, a perception completely alien to the left brain. Thus when Mrs Ramsay sinks into the spreading deeps and exalts in the freedom she finds there, she could be simply experiencing the world from a right-brain perspective. Through her quiet, solitary, repetitive activity, she has quietened the language centres

²⁷ Woolf, *To the Lighthouse*, 60.

²⁸ Woolf, *To the Lighthouse*, 60.

of the left brain which create the cognitive “I”—the self. With those centres quiet, the self has no voice and thus it vanishes—leading to an expansion of consciousness that is euphoric.

Indeed, throughout Woolf’s work there is a pervasive sense that the bounded, limited, egoic self, the inner “I,” is essentially a fiction. Not only that but it impedes experience, limits pleasure and blocks access to reality. This is discussed fairly directly in the essay “Street Haunting,”²⁹ in which Woolf describes putting off the self in an almost volitional way, deliberately leaving it behind in order to better surrender to the delights of an evening stroll through London. Here she distinguishes between a “convenience” self, who is a single, unified entity, and the “true self,” who is fluid and expansive. Our “souls,” she explains, excrete a “shell-like covering” to “house themselves, to make for themselves a shape distinct from others.” But this covering is merely protective; it may be necessary, but it is not the truth of who we are. “Circumstances compel unity,” she writes; “for convenience sake a man must be a whole.” But there are moments when it is possible to ignore the inconvenience, cast off the shell, and become flooding darkness, “neither this nor that, neither here nor there, but something . . . varied and wandering.” In this uncontained state, the fluid self can experience “the velocity and abundance of life.”

A sense of impatience with the limitations of the egoic self is evident in all Woolf’s later novels. In *Mrs Dalloway* she was already writing that “our apparitions, the part of us which appears, are so momentary compared to the other, the unseen part of us, which spreads wide.”³⁰ In *The Waves*, she tries to show how six individuals are also one: six different bodies, but one “knot” of consciousness, one reality in which each is an equal participant. In *The Years*, published in 1937, she lampoons the insistent self-assertion of certain characters and depicts others as having highly fluid boundaries. Then in her last novel, *Between the Acts*, she seeks to shift the focus away from the egoic self altogether and place it once more on the moment, writing in her diary in 1938: “‘I’ rejected: ‘We’ substituted: . . . ‘We’ . . . composed of many different things . . . we all life, all art, all waifs & strays—a rambling capricious but somehow unified whole.”³¹ This is, in fact, a good description of her final novel, which, like “The Moment,” eschews sequence and selection

²⁹ Virginia Woolf, *The Death of the Moth and Other Essays* (London: Hogarth Press, 1942) 19–29.

³⁰ Woolf, *Mrs Dalloway*, 135.

³¹ Virginia Woolf, *The Diary of Virginia Woolf, Volume 5: 1936–1941*, ed. Anne Olivier Bell and Andrew McNeillie (San Diego: Harvest, 1985) 135. Second and third ellipses in original.

in favour of inclusion and simultaneity. It places human history in the wider context of the continuing evolution of the earth, and human conversation in the context of the bellowing of cows, the rushing of wind, the chiming of bells, and all the sounds of the non-human world. Even the characters' utterances echo, repeat and rhyme with one another's, as though they are, indeed, part of a work of art—not the play that Miss LaTrobe puts on in the book, and not Woolf's novel, but the underlying kinship of all that is. In her memoir, Woolf describes her personal philosophy of life in these terms. Her instinctive belief, she writes, is that “behind the cotton-wool [of everyday life] is hidden a pattern; that we—I mean all human beings—are connected with this; that the whole world is a work of art; that we are parts of the work of art.”³² This is not in any sense a religious truth; for Woolf, the author is definitively dead. But it suggests a mystical apprehension of the interconnectedness of all life, personal and impersonal, that resonates closely with accounts of right-brain perception. “*Hamlet* or a Beethoven quartet is the truth about this vast mass that we call the world,” she writes. “But there is no Shakespeare, there is no Beethoven; certainly and emphatically there is no God; we are the words; we are the music; we are the thing itself.”³³

Taylor writes that from a right-brain perspective, it is evident that “we are all connected to one another in an intricate fabric of the cosmos” (168). With its big-picture perspective, she says, the right brain “recognizes that everything around us, about us, among us and within us is made up of energy particles that are woven together into a universal tapestry” (168). From a left-brain perspective, however, this is a fantasy. Woolf seems to have experienced both perspectives. In her diary in 1929, she expresses this quite directly: “Now is life very solid or very shifting? I am haunted by the two contradictions. This has gone on for ever; will last for ever; goes down to the bottom of the world—this moment I stand on. Also it is transitory, flying, diaphanous. I shall pass like a cloud on the waves.”³⁴ This double vision informs all her writing: the timelessness and infinity of the present moment versus the logical progression of past-present-future, the fluidity of the unbounded self versus the singleness and solidity of the “I.” For her, the step between a clearly individuated self and a being that is one with flooding or rushing darkness, wind, or water, is very short.

Some critics have sought to associate Woolf's experiences and/or literary evocations of a loss of self with mental illness; she suffered from

³² Woolf, *Moments of Being*, 72.

³³ Woolf, *Moments of Being*, 72.

³⁴ Woolf, *The Diary of Virginia Woolf, Volume III*, 138.

what would today be called bipolar disorder, and experienced a number of episodes of both mania and depression over the course of her life. But while there is little evidence linking the kinds of experiences discussed here with bipolar disorder, the connections with right-brain awareness are manifold. As Newberg and his colleagues point out, the types of brain activity associated with mystical perceptions are unusual but not improper; during such experiences, the brain functions in a different but not a diseased way. Indeed, research into the right brain suggests that mystical awareness is something of which every human brain is capable—in theory, at least. I have speculated that Woolf had more access to right-brain awareness than other people. Whether this relative ease of access could be related to her mental illness might be interesting to explore, but there would appear to be no necessary connection. Many people who have experienced some form of mystical consciousness have never suffered from bipolar disorder. Like her characters, Woolf seems to have found it easy to slip into trance states, being particularly responsive to repetitive stimuli such as the sound of the waves or the sight of leaves stirring in the breeze. Certainly her experience of what appear to be right-brain states of mind made her permanently sceptical about ordinary left-brain awareness and its claims to represent reality. They were for her a kind of siren song, the “singing of the real world” luring her on to further exploration.



It may seem unpleasantly reductionist to approach Woolf’s extraordinary writing—and those of other mystical writers, both religious and secular—through the lens of neurobiology. But to me, this approach opens up, rather than closes down, her work. In the past, critics have tended to give Woolf’s mysticism a wide berth, focusing instead on her experiments with narrative form, her psychology and her feminism, among other things. A neurobiological framework, however limited, makes it possible to revisit the mystical aspects of her texts and consider their implications, not only for Woolf’s *oeuvre* (and, as I have argued, her mystical experiences are central to her formal experimentation, among other things) but for our broader understandings of the world and ourselves. Neuroscience confirms what philosophers have long hypothesised: that reality is constructed by our brains, that what we see is only what our brains are capable of seeing. Since the development of language, our view of reality as a species has been overwhelmingly dominated by the left hemisphere of the brain; that is where most of us “live,” where our “I” holds dominion. Yet the left hemisphere has its limitations. What Taylor and others suggest is that there is another

view of reality, of equal validity, created by our right brains. Right-brain awareness tells us that the self is not the sum of our being, and that we are not as distinct, physically and mentally, from others as we feel ourselves to be. These ideas are not new; they have long existed in the major religious traditions, both Eastern and Western. There are even developmental psychologies (such as transpersonal psychology) that hold that the self should be first integrated and then transcended. But these theories have too often been shrouded in obscure philosophising or New Age fantasy. Woolf presents her own experiences of so-called mystical perceptions without any hidden agenda or pre-determined framework and thus her work can function as a kind of field guide to right-brain consciousness. Her texts give us a glimpse of reality from a right-brain point of view. At the same time, they show something of the complex interrelation of left- and right-brain perspectives that is hidden to most of us. They show what it is like, in her words, to “be on a level with ordinary experience, to feel simply that’s a chair, that’s a table, and yet at the same time, It’s a miracle, it’s an ecstasy.”³⁵ In so doing, they invite us to look beyond what we know, to revise our certainties and to expand our conception of the possible.

³⁵ Woolf, *To the Lighthouse*, 186.