

ED PENNIMAN

Bean Hollow State Beach, 2017
Oil on canvas, 30 x 40 in



COURTESY THE ARTIST

THOMAS CHRISTENSEN

La Vie en Rose

Contemplating consciousness

*Life's but a walking shadow, a poor player
That struts and frets his hour upon the stage
And then is heard no more. It is a tale
Told by an idiot, full of sound and fury,
Signifying nothing.*

—Macbeth

One morning in 2016, keepers at the National Aquarium of New Zealand arrived at work to discover the institution's inventory of octopuses unexpectedly halved. Mild-mannered Blotchy remained in his tank, his expression revealing nothing. But Inky, his bold erstwhile companion, was nowhere to be seen.

Sometime during the night, it turned out, Inky had worked his way through a small opening at the top of the tank where a cap plate had been set slightly ajar. From there he had descended to the floor and suckered his way eight feet across it, trailing a telltale drippy track. At that point he slid through a six-inch-diameter, 160-foot-long drainpipe—he could probably hear water noises through it—and plopped into Hawkes Bay, an arm of the vast South Pacific. Whether resentful of his imprisonment or simply curious and adventurous, Inky had returned to the sea. He was free!

It's hard not to see some sort of intentionality in Inky's great escape, a crafty octopoean consciousness at work. But René Descartes would have been unconvinced. According to Descartes, only humans possess the nonmaterial mind that he called the *res cogitans*, the realm of thought.

Inky, he would have said, possesses merely corporeal materiality, so his behavior must have occurred within what Descartes called the *res extensa*, the extended realm of noncognitive substantiality. *Cogito ergo sum*, Descartes said—one of philosophy's most famous, and most self-centered, phrases. And something of a fallacious, or at least presumptive, one: What exactly is this "I" that he posits from the presence of thought? Descartes thought, so he thought he was somebody. He did not believe creatures such as Inky could claim the same.

But in 2012 a group of scientists publicly took issue with Descartes. The occasion was the Francis Crick Memorial Conference in Cambridge, England, focusing on "Consciousness in Humans and Non-Human Animals." It assembled, in the words of the Declaration on Consciousness that it produced in a public signing witnessed by Stephen Hawking, "a prominent international group of cognitive neuroscientists, neuropharmacologists, neurophysiologists, neuroanatomists and computational neuroscientists." The scientists found that by stimulating parts of animal brains, even without a neocortex (the most recently evolved part of the human brain), they produced behaviors consistent with similar effects associated with emotions in humans.

"The absence of a neocortex does not appear to preclude an organism from experiencing affective states," the scientists concluded. "Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates."

Good for Inky—I like the way octopuses are specifically included in the Declaration. Yet, with all due respect to the distinguished scientists, I do not see why consciousness must be determined only by reference to its human form. How far is that from Descartes, really?

In a series of 1943 lectures later published under the title *What Is Life?* Nobel Prize-winning physicist Erwin Schrödinger prophetically posited a chromosomal "code-script" governing organic development. Yet he believed