

OF ANTS AND MIRACLES

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Hobbling on six legs, each half the width of a human hair, an ant, that most modest of creatures, was making its aimless path across the forest's leafy carpet towards me as I lay on my stomach in the woods. It had nowhere to go, no great plans for the afternoon; its microscopic ganglia had the power to ask only three questions: *Am I about to die?*, *Do I have something to carry back home?*, and *Is there a smell I'm supposed to follow?* In that moment, the answers were, respectively, "No," "Not yet," and "It doesn't seem like it." As I watched, though, it found its way by chance to the very fresh carcass of a squirrel, and, without realizing it, released a new smell, one that screamed out to its sister ants, "Follow me!"

Of course, I couldn't detect that smell. And my description of the ant's thought process is little more than educated conjecture. But even to my gigantic, unwieldy, and embarrassingly inaccurate sensory organs, the result was obvious. Within a minute, there was another ant. And then another, and another. Their rate of arrival accelerated like a spherical mass falling in Newton's idealization, and their tiny bodies soon covered the dead squirrel. As each ant answered its own three little questions, they stumbled back along the path they had followed, carrying ant-sized shreds of squirrel in their mandibles. Within an afternoon of my observation, what had been a largely intact squirrel carcass, with flesh and fur, was essentially reduced to a dirty skeleton. That squirrel's body provided fodder for scads of eggs in well-guarded subterranean communes, maintained by tens of thousands of communists whose lives were dictated, at every level, by three simple questions.

Physicists might call this process the property of emergence—the way indescribably complex systems can function through the combined effects of many extremely simple actors. These emergent functions are everywhere, and are fundamental to our understanding of the universe. In fact, both our understanding (the product of hundreds of billions of neurons which can each do only two things: fire a signal across a synapse or refrain from doing so) and

the universe itself (infinite numbers of objects simply falling towards the largest mass they can find) are each emergent functions. Even the words on this page represent an emergent function: phonetic symbols placed in patterns (O'Connor). But despite how common they are, there is something about the very existence of emergent functions that I find miraculous. How can ants, who exist simply by following smells, carrying food, and avoiding death reduce an animal hundreds of times their size into food for their baby sisters, whose existence they cannot understand? Or, even more amazingly, how can such events be so commonplace that we hardly notice them?

The miracle of the scavenging ants is nothing, of course, compared to the miracle that is my consciousness. While an ant is extremely simple, probably as simple as something both living and easily observable can be, it is almost unimaginably complex in comparison to a single neuron in my brain. And yet the emergent function that allows me to appreciate the existence of emergent functions as I walk home through the woods is exponentially more complex (and less predictable) than the scavenging microsystem that played out in front of me. So, if I can call the squirrel's processing a miracle, then maybe I am a meta-miracle, a miracle of miracles. And of course, so are the seven billion other human beings on the planet. And even the seven billion are only simple actors in the vast ocean of civilization: an emergent function comprised of billions of emergent functions. These functions, which occur in every tier of existence that we have so far been able to observe, these meta-meta-miracles, manage to evoke a sensation of awe despite the fact that they are literally everywhere we look.

Terry Tempest Williams would probably describe them as art—conceptual art. In her essay, "A Shark in the Mind of One Contemplating Wilderness," she focuses on the emergent function that is wilderness itself. She refers to the organism that we call a shark as "art by design." Her questions challenge us:

Why not designate wilderness as an installation of art? Conceptual art? A true sensation that moves and breathes and changes over time with a myriad of creatures that formulate an instinctual framework of interspecies dialogues; call them predator-prey relations or symbiotic relations, niches and ecotones, never before seen as art, as dance, as a painting in motion, but imagined only through the calculations of biologists, their facts now metamorphosed into designs, spontaneously choreographed moment to

moment among the living. Can we not watch the habits of animals, the adaptations of plants, and call them performance art within the conceptual framework of wilderness? (Williams)

We can indeed. There is a universality to what Williams says, something we've all observed as we marvel at, if not specifically wilderness, then, at least creation. There is something deep and visceral in our reaction to the world around us. We feel as though the world has been created for us to gaze at in awe, as if it were designed with some sacred concept in mind. We create entire faiths to describe the conceptual artist, carving out our miracles and meta-miracles and meta-meta-miracles, and we are grateful for whatever said artist created for us, so that we might appreciate those miracles.

Maybe this appreciation is part of what John Berger is trying to express in his essay, "The White Bird." Berger says that as we view nature, "What has been seen is recognized and affirmed, and, at the same time, the seer is affirmed by what he sees. For a brief moment, one finds oneself - without the pretensions of the Creator—in the position of God in the first chapter of Genesis . . . And he saw that it was good" (8). Whether one reads Genesis or the Rigveda, every religion is at some level designed to convince us that the world we inhabit was built to be beautiful, and we were built to take in its beauty. But of course, critical thinkers cannot pretend that this is so simple.

The gut-wrenching, conceptual art experience of Williams's "wilderness" is, in fact, the product of air and continental plates, both following the laws of thermodynamics, and of millions, or billions, or trillions of organisms, simply trying to stay alive. The miracle was not made for us to fawn over, nor were we designed to fawn. The miraculous emergent function of the universe just is. It created itself in what was probably a physical inevitability, and through billions of years of random but probably equally inevitable happenstance, sacks of protein and water on a rock developed the metacognitive abilities required to take it in.

Does the "how" matter, however? As I stared at the miracle of a squirrel reduced to insect baby formula, the world kept turning (part of the emergent function of inertia). At that moment, John Berger may have reminded me that "The first prayer is for protection. The first sign of life is pain. If Creation was purposeful, its purpose . . . [can never be discovered] by the evi-

dence of what happens" (7). My brain, the same brain that took in the miracle of the squirrel, would, on similar nights, spend hours on the phone convincing one of my best friends not to kill herself. The miracle of cellular reproduction that creates our very lives, our very sentience, can twist gently into cancer and end the lives of good people, people I love. The same miracle of our society that I am able to marvel at sits comfortably atop millennia of genocide and imperialism. People themselves, miraculous actors, run around with their eyes closed. Running and hiding from empathy, they throw everything under their feet, except for themselves and what is theirs. The world, despite its abundance of miracles, remains fairly terrible. So, are the miracles that we marvel at just bones we are given, to distract ourselves and avoid that most logical path of existence, complete and fundamental despair?

But miracles do not exist, any more than the adjective *terrible*. They are both constructs of our consciousness, emergent functions of endless chains of proteins swimming in a soup of electroconductive fluid. What makes the death of a loved one any worse than waves crashing on a beach is entirely in our minds. They are not bones given to distract us; they serve no purpose. Unlike scientific concepts, such as emergent functions, the words *miracle* and *terrible* hold literally zero meaning beyond being vague and arising from as-of-yet-unquantifiable electrochemical patterns in our brains.

But that realization provides us no *comfort* (yet another nonexistent abstraction). Because in our minds, whatever a statement means, *miracle* and *terrible* are agonizingly real concepts. So, to function in the world, we must find a better justification than "We can hide behind whatever non-existent concepts we want because our perception of the world isn't real," since, tragically and beautifully, any concept of reality we can possibly achieve as organisms, as humans, as emergent functions, is in the end nothing but the miracle of perception.

The poet Mark Doty grapples with such matters in his essay, "Souls on Ice." A display of mackerel he sees in a Stop 'n Shop fuels his imagination and triggers a process of writing an existential poem. That poem evokes not only his perception of the dead fish in the supermarket but also captures, to some degree, his grief for the loved ones he's lost to AIDS: not only his lover, but also his friends. Reflecting on the poem in "Souls on Ice," Doty tells us:

The one of a kind, the singular, like my dear lover, cannot last. And yet the collective life, which is also us, shimmers on . . . The collective momentum of the fish is such that even death doesn't seem to rob its forward movement; the singularity of each fish doesn't really exist, its "all for all" like the Three Musketeers . . . Our glory is not our individuality (much as we long for the Romantic self and its private golden heights) but our commonness. I do not like this idea. I would rather be one fish, sparkling in my own pond, but experience does not bear this out. And so I have tried to convince myself, here, that beauty lies in the whole and that therefore death, the loss of the part, is not so bad--is in, fact, almost nothing . . . I find this consoling, strangely, and maybe that's the best way to think of this poem—an attempt at cheering oneself up about the mystery of being both an individual and part of a group, an attempt on the part of the speaker in the poem (me) to convince himself that losing individuality, slipping into the life of the world, could be a good thing. (Doty)

And in the poem itself, called "A Display Of Mackerel," he asks, "Suppose we could iridesce, / like these, and lose ourselves / entirely in the universe / of shimmer . . . They'd prefer / plainly, to be flashing participants, multitudinous" (Doty).

Yes, we use miniature miracles like a colony of ants devouring a squirrel to distract ourselves from the world around us that is, in many respects, fundamentally terrible. But that does not make these miniature events any less miraculous. We, the miracle viewers, the emergent functions calling ourselves human beings, are not definitive creatures that wield any semblance of power. Almost like the ants that form a colony, like the cells that build our own bodies, and like Doty's "flashing participants," we lose ourselves in a "universe of shimmer"; we move as actors in a larger system, following simple rules and allowing an ocean of emergence to engulf us. Larger than our communities and our geographical boundaries, even larger than the forces of our society, our system, humanity, has contained 140 billion actors in it throughout the system's span. Most of these actors are long dead, but seven billion still inhabit the earth, each pursuing its own path and yet still forming this creation, this emergent function even in the pursuit of those paths. It is a function that includes the indescribable horrors that exist in the world, and in fact relies on them, just as completely as it relies on a few moments of beauty. But the function is much larger than the paltry term, "terrible."

The miraculous is, by definition, too vast and complex to make sense to us, the humans, the actors. However, I believe that the emergent function that is humanity holds a special place among the miracles. The miraculous sits right on the edge of our comprehension, and when we search for it, it pauses for a moment (and only a moment) to lend us the tiniest of glimpses.

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