Why *Frankenstein* Is Still Relevant, Almost 200 Years After It Was Published

The novel provides the perfect lens through which to examine scientific innovation.

By Jacob Brogan



A statue of Frankenstein's monster in Geneva. Fabrice Coffrini/AFP/Getty Images

Can I be totally honest? All I remember about *Frankenstein* is that Frankenstein is the doctor, not the monster. What happens in it?

That's harder to answer than you would think, because the book is studded with framing details and seemingly extraneous characters, but it goes something like this: Victor Frankenstein is a rich Genevan who shows great promise in scientific research. After his mother's death, he somehow figures out how to endow dead flesh with life, but the being he makes is nightmarishly ugly, so he abandons it. In the wilderness, it manages to educate itself, becoming an astute thinker but also coming to resent its creator.

Soon enough, the man-made monster begins to take revenge on Frankenstein by lashing out at his loved ones, a process that only accelerates after the scientist fails to meet the creature's (relatively civil) demands. Before long, almost everyone is dead, everything's on fire, and Frankenstein and his creature are chasing each other across the Arctic on sleds.

Wait, the Arctic?

Don't worry about it.

OK, fine. I get that this book is important, but why are we talking about it in a series about emerging technology?

Though people still tend to weaponize it as a simple anti-scientific screed, *Frankenstein*, which was first published in 1818, is much richer when we read it as a complex dialogue about our relationship to innovation— both our desire for it and our fear of the changes it brings. Mary Shelley was just a teenager when she began to compose *Frankenstein*, but she was already grappling with our complex relationship to new forces. Almost two centuries on, the book is just as propulsive and compelling as it was when it was first published. That's partly because it's so thick with ambiguity—and so resistant to easy interpretation.

Is it really ambiguous? I mean, when someone calls something *frankenfood*, they aren't calling it "ethically ambiguous food."

It's a fair point. For decades, *Frankenstein* has been central to discussions in and about bioethics. Perhaps most notably, it frequently crops up as a reference point in discussions of genetically modified organisms, where the prefix *Franken*-functions as a sort of convenient shorthand for human attempts to meddle with the natural order. Today, the most prominent **flashpoint for those anxieties** is probably the clustered regularly interspaced short palindromic repeats, or CRISPR, **gene-editing technique**. But it's really oversimplifying to suggest *Frankenstein* is a cautionary tale about monkeying with life.

As we'll see throughout this month on Futurography, it's become a lens for looking at the unintended consequences of things like synthetic biology, animal experimentation, artificial intelligence, and maybe even social networking. Facebook, for example, has arguably taken on a life of its own, as its algorithms seem to influence the course of elections. Mark Zuckerberg, who's sometimes been **known to disavow** the power of his own platform, might well be understood as a Frankensteinian figure, amplifying his creation's monstrosity by neglecting its practical needs.

But this book is almost 200 years old! Surely the actual science in it is bad.

Shelley herself would probably be the first to admit that the science in the novel isn't all that accurate. Early in the novel, Victor Frankenstein meets with a professor who castigates him for having read the wrong works of "natural philosophy." Shelley's protagonist has mostly been studying alchemical tomes and otherwise fantastical works, the sort of things that were recognized as pseudoscience, even by the standards of the day. Near the start of the novel, Frankenstein attends a lecture in which the professor declaims on the promise of modern science. He observes that where the old masters "promised impossibilities and performed nothing," the new scientists achieve far more in part because they "promise very little; they know that metals cannot be transmuted and that the elixir of life is a chimera."

Is it actually *about* bad science, though?

Not exactly, but it has been read as a story about bad scientists.

Ultimately, Frankenstein outstrips his own teachers, of course, and pulls off the very feats they derided as mere fantasy. But Shelley never seems to confuse fact and fiction, and, in fact, she largely elides any explanation of *how* Frankenstein pulls off the miraculous feat of animating dead tissue. We never actually get a scene of **the doctor awakening his creature**. The novel spends far more dwelling on the broader reverberations of that act, showing how his attempt to create one life destroys countless others. Read in this light, *Frankenstein* isn't telling us that we shouldn't try to accomplish new things, just that we should take care when we do.

This speaks to why the novel has stuck around for so long. It's not about particular scientific accomplishments but the vagaries of scientific progress in general.

Does that make it into a warning against playing God?

It's probably a mistake to suggest that the novel is just a critique of those who would usurp the divine mantle. Instead, you can read it as a warning about the ways that technologists fall short of their ambitions, even in their greatest moments of triumph.

Look at what happens in the novel: After bringing his creature to life, Frankenstein effectively abandons it. Later, when it entreats him to grant it the rights it thinks it deserves, he refuses. Only then—after he reneges on his responsibilities—does his creation *really* go bad. We all know that Frankenstein is the doctor and his creation is the monster, but to some extent it's the doctor himself who's made monstrous by his inability to take responsibility for what he's wrought.

OK, hold up. I'm paging through the book now, and this is how Shelley has Frankenstein describe his creation: "yellow skin," "watery eyes," "shriveled complexion," "straight black lips." Plus, it's like 8 feet tall. That sure sounds like a description of a monster.

What matters most there isn't the creature's terrifying appearance but how poorly the doctor responds to it. In his **essay** "The Monster's Human Nature," the evolutionary biologist Stephen Jay Gould argues that there's nothing fundamentally wrong with Frankenstein's goals. Instead, Gould writes, "Victor failed because he followed a predisposition of human nature—visceral disgust at the monster's appearance—and did not undertake the duty of any creator or parent: to teach his own charge and to educate others in acceptance."

In other words, Frankenstein stumbles as a science educator, not as a scientist. Some academic critics have **taken issue** with that reading, arguing that the bad doctor's faults run far deeper. But it may still be helpful to reckon with the connection between Frankenstein and Adam, a man given stewardship over the creatures of the earth. Shelley's protagonist is monstrous because he doesn't take his own similar responsibility seriously. The book's subtitle—*The Modern Prometheus*—also contains an important mythological clue: Prometheus brings fire to the mortals and unleashes dire consequences in the process, granting them the ability to burn down the world.

That last association is fitting, since *Frankenstein* is, to some extent, a story about the unintended consequences of our actions. That angle on the book has helped turn it into a prop for those driven by anti-scientific skepticism, an interpretation of the text that's been circulating for decades at the least—probably much longer. It's been especially central to **debates around genetic engineering**, for example. There and in other contexts, it's often colloquially cited ("You're going to create a Frankenstein's monster!") to cut off scientific inquiries before they even begin. Indeed, as Romanticism scholar Richard Holmes has **suggested**, though many describe *Frankenstein* as the first major work of science fiction, we should also recognize it as "one of the most subversive attacks on modern science ever written." For all that, Shelley spends far more of her book worrying over inadequate parenting than railing against bad science.

Got it. One last question?

Hit me.

Are you sure you're not the monster?

I think it's time for you to leave.