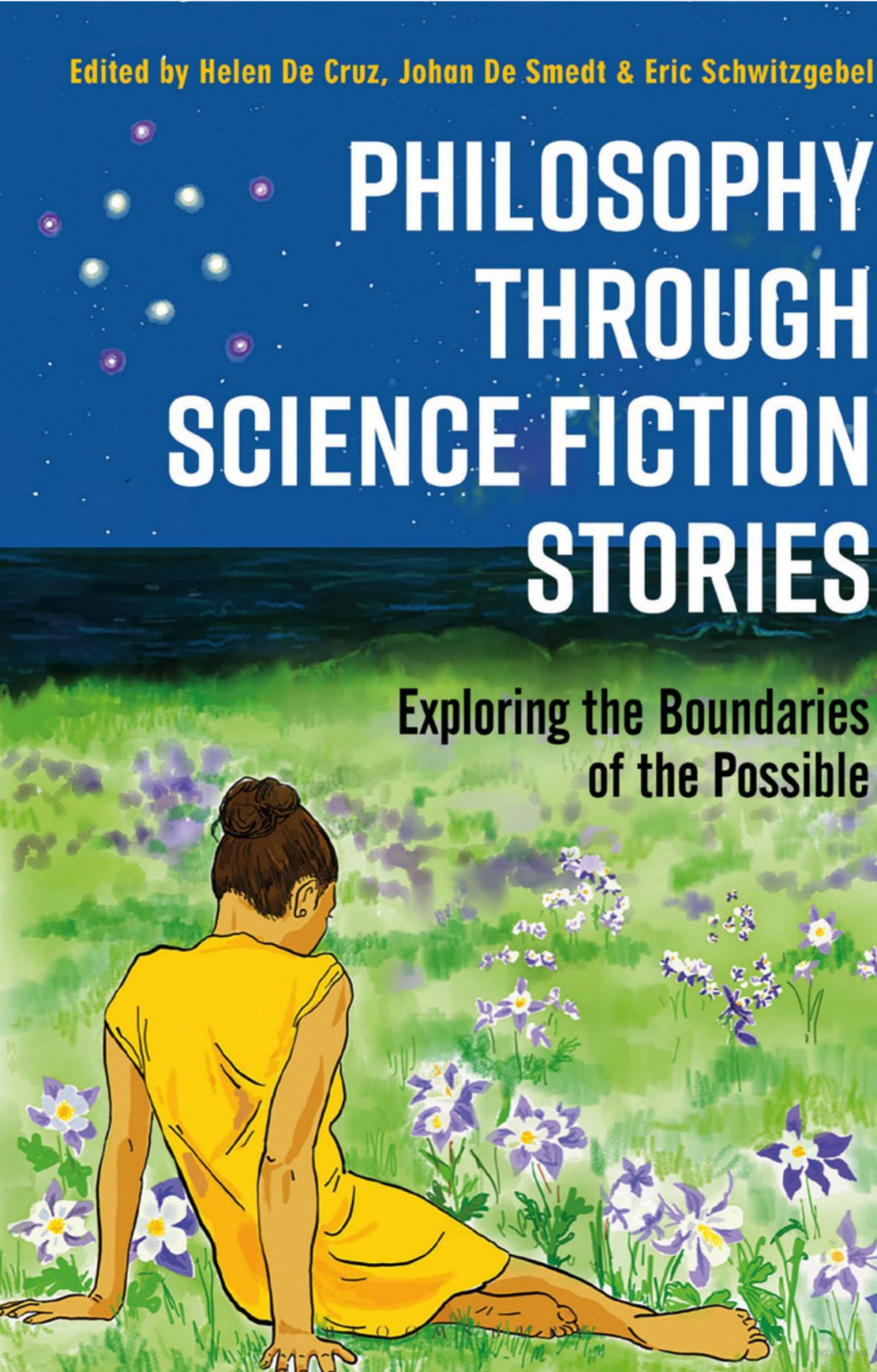
Edited by Helen De Cruz, Johan De Smedt & Eric Schwitzgebel

PHILOSOPHY THROUGH SCIENCE FICTION STORIES

Exploring the Boundaries of the Possible



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"Adjoiners" first appeared in *Sci Phi Journal* in 2017 as "The Adjoiners", URL: https://www.sciphijournal.org/index.php/2017/06/30/the-adjoiners-by-lisa-schoenberg/, and is reprinted here with some revisions.

"Hell is the Absence of God" first appeared in *Starlight 3,* ed. Patrick Nielsen Hayden (pp. 15–47). New York: Tor, 2001

Introductory Dispute Concerning Science Fiction, Philosophy, and the Nutritional Content of Maraschino Cherries

Helen De Cruz, Johan De Smedt, and Eric Schwitzgebel

"—this dialogue, for example," said Johan, folding his arms, gazing across the table in the hotel bar at the meeting of the American Philosophical Association. "It didn't even happen. Fictional philosophical dialogue is out of fashion for excellent reason."

"But that's the beauty of it!" replied Eric, looking slightly hurt. His imaginary cocktail was bright pink, with three cherries and an umbrella.

"No one will believe it. What's the point? It's a waste of time. If you're doing philosophy, just lay it out straight. Say what you want to say. Don't decorate it with fiction." Johan pointed accusingly at Eric's cocktail. "I mean, why an umbrella? It's silly froufrou."

"It's cute!" said Helen, who you didn't picture until just now, but who had been sitting at the imaginary table all along. "It enhances the mood. It adds color. Even if strictly speaking it has no nutritional content, its vivid turquoise complements the pink and red of drink and cherry. Fiction dresses an idea, invites you to engage with that idea, makes it attractive in a certain sort of way."

"The wrong sort of way!" said Johan.

"Fiction is the very flesh on the bones, not decoration," said Eric.

"Imagine a man who is explicitly sexist," said Helen. "He is committed to patriarchy, thinks that women should only have certain roles. They should only be mothers and homemakers. Now give him a story to read. Tell it from a woman's point of view. Make it some future dystopia where women are oppressed in a way that even he would say is bad. Get him to sympathize with those fictional women, really feeling their plight. Tell the story vividly, emotionally, with depth and detail over three hundred pages.[1] When he pokes his head back up out of the story, maybe he'll see the world a little differently. Maybe he'll have a little more sympathy for women in oppressive systems. Maybe he'll see similarities between the exaggerated situation in

the fiction and the experiences of women in his own society, and maybe he'll be a tiny bit more open to change. He'll have shifted a little, philosophically, in his view of the world. That's the kind of work philosophical fiction can do."

Johan looked around the bar. For a long time, academic philosophy in Europe and North America had been almost exclusively the province of white men, and—since what is not made explicit in fiction conforms to the reader's beliefs about the actual world[2]—it still showed in the demographics of the discipline[3] in this imaginary hotel. Aristotle, Kant, and Locke could probably have benefited from imaginative exercises like the one Helen was describing.[4] And yet . . . "that's not really philosophy, exactly, I'd say." Johan paused, gauging Helen. "Philosophy is about rational argumentation. Of course, things other than rational argumentation can change your worldview. Even listening to a great piece of music, such as Beethoven's Eighth Symphony[5], can be emotionally profound. It can fill you with awe just by its very sound, with no rational content at all. And maybe, in the right circumstances, it could color your future perspective. But that wouldn't make Beethoven a philosopher or his symphonies philosophical works."

"If the work explores or promotes a worldview," said Eric, "I don't see why we shouldn't call it philosophical." He pierced a maraschino cherry with the stem of the umbrella, then lifted it to eye level. "Now suppose that the intent of this cocktail, in its pink and turquoise flamboyance, is to celebrate life's capacity to delight us with sweet, luxurious, unapologetic indulgence. The manager highlights this drink on the cocktail list with that very intent, and knowing that intention, the bartender mixes and presents it. This cocktail[6], then, is itself an act of philosophy, even if certain dowdy no-funners are unable to appreciate it." With one finger, Eric flicked the cherry off the umbrella, high into the air, aiming to catch it in his mouth on its downward arc. The cherry struck him on the chin, then bounced to the floor. The bartender, who in mixing the cocktail had no such intentions as Eric described, glanced critically in their direction.

Helen stooped to retrieve the cherry, then set it on a napkin in front of her. "So, we can drink philosophy as well as read it, Eric? Should we invite the bartender to give a colloquium talk?"

Eric lifted his cocktail. "That would be awesome! But of course she will need to perform in her accustomed liquid medium."[7]

"Argument by cocktail? I wouldn't go as far as that," Helen said, gazing absently at the hotel's logo on the crumpled napkin. "But maybe a great painting can express a philosophical idea more vividly and effectively than an expository essay. Take Picasso's *Guernica*—such an austere, quasi-monochrome study in the horrors of war.[8] A few days ago, I was in a museum and saw a

painting by, I think, a French painter, of glossy horses standing in the shade and bedraggled donkeys standing in the glaring sun.[9] It showed how they kept those animals for hire, but clearly it was also a social commentary. Its basic content was kind of obvious and simple—but it was political philosophy. And maybe it would reach people better than an essay. I imagine some aristocrat contemplating the painting, pitying the donkeys. Maybe later, as he's rolling along in a lovely carriage, he sees someone selling apples in the bleaching sun and thinks "What are we doing? We're treating people as badly as those donkeys!" It's not like he couldn't get similar ideas from prose and think the same thing non-metaphorically, but the vividness of the metaphor hooks him in, leads him along, makes the idea salient and emotional and memorable in a way it wouldn't otherwise be."

"But, Helen," groaned Johan, "now everything will become philosophy. You can't sustain the compromise position you want. Every work of fiction, implicitly or explicitly, critiques or celebrates a worldview. The main characters have ideals and values, they make life choices, and by portraying these sympathetically or unsympathetically, and by showing us how those values and choices play out in the story, the fiction nudges us toward a worldview. But surely, we don't want to say that all fiction is philosophy. And it isn't just fiction. All movies and TV shows, all lyrical songs, and maybe all songs of any sort—maybe even architecture and fashion and product design. If you say that painting is philosophy, lots of things risk becoming philosophy, until you end in the inanity of turquoise-umbrella cocktail philosophy. Eric's ability to appreciate the cocktail in phenomenological terms does not turn the bartender into a phenomenologist. Where do you stop?"

"Why stop?" said Eric. "I rather like the idea that everything you do is implicit philosophy. Every choice you make manifests your worldview. Every public act is a kind of advertisement for a way of being. We are all always philosophers. Why does philosophy need to be some rarified, privileged activity?"

"Are we doing okay here?" The server appeared in severe gray and black hotel uniform—a uniform that expressed, if Eric was right, the hotel management's particular philosophy of hospitality. Smoothly, she cleared the cherry and napkin. "More drinks? How about some food?"

"We're discussing the philosophy of cocktails," said Helen. "If you don't mind my asking, in your opinion, is there a philosophy of cocktails? Would you describe yourself as a philosopher?"

The server looked annoyed. "I don't know about any of that. Are you guys okay on drinks, then?"

"We're fine," said Johan, sympathetically. "Thanks."

"Okay, maybe she wouldn't be a good choice for a colloquium slot," conceded Eric.

"There have to be boundaries," pressed Johan. "If everything is philosophy, then nothing is. To be a coherent discipline, you need to rule some things in and other things out. A work of fiction, or maybe even a cocktail, might be in some broad sense 'philosophical'—but unless you have an expository argument for a philosophical thesis, you don't really have a work of philosophy."

"How about Wittgenstein, Confucius, Thales?" suggested Helen. "They didn't always present arguments for their claims, but we recognize them as philosophers, right?"

"Wittgenstein did provide arguments, even if they were sometimes sketchy and fragmented. Confucius and Thales make an intriguing case. I think it's fair to say that many don't consider them to be philosophers by today's analytical standards," said Johan.

"How about the famous 'trolley problem'?" said Helen, arranging peanuts on the glossy, dark brown tabletop, five nuts[10] in one row and an outlying nut about eight inches away, near Johan. She grabbed Eric's maraschinoed cocktail and started sliding it along the tabletop toward the group of five nuts. "An out of control trolley is headed toward five people who will certainly be killed if nothing is done. But wait. You see that you're standing next to a switch that can shunt the trolley onto a side-track. If you flip the switch, the trolley will be diverted away, saving the five people. Yay!" Helen diverted the glass from its path toward the five nuts, aiming instead toward the lone nut. "Sadly, there is one person on the side track who will now be killed by the trolley. The question is, if you're standing there with that choice, should you flip the switch? Should you kill one person in order to save five? Or is killing such a forbidden and horrible act that you shouldn't do it, even if it means five people will die as a result of your inaction?"[11]

"Yes, we all know the trolley problem," said Johan, rolling his eyes just the tiniest bit. "It's a colorful way of posing the ethical question of whether you should do what maximizes good consequences or whether you should instead abide by rules such as 'do not kill' even in the face of bad consequences. My point is that you don't need that fluff. You don't need to make a story of it. In fact, the story is distracting. It contains irrelevant detail that could illegitimately influence your judgment. And then again, it doesn't contain enough detail for your purposes. No blood splatters, no anguished screams, no frantic arm-waving by those people who apparently can't leave the tracks. I mean, what are these people doing on trolley tracks anyway? Why can't they get out of the way? Are they tied down, or what? And it's even sillier the way you've done it just now, with this pink cocktail and peanuts, as though

somehow having these legumes here helps us think about it better. The whole thing is absurd, not conveying the gravity of real life and death choices. And because it's so comical, maybe it's easier than it should be to just count up the peanuts, and say 'flip the switch'. You might actually reach a different and worse judgment than you would in real life. Better to stick with the core arguments and considerations, rather than add irrelevant details."

"Johan, you have too high an opinion of the rationality of philosophers," Helen replied. "Maybe some god or ideal cognizer could just think about abstract principles like 'maximize good consequences' or 'don't kill innocent people' and then figure out all the implications, weigh them against each other, and reach a well-grounded ethical conclusion undistracted by irrelevant details, as you call them. But that's not how the human mind works—not even the minds of great philosophers. We need a story to think through the implications. We need something specific to consider, something that ignites the imagination and the emotions. That's what fiction, especially, is so great at, and why it can have such philosophical oomph. A superhuman genius could maybe think abstractly about a government with the power to rewrite history and the news and see all the horrible things that would flow from that. For the rest of us, to really grasp its awfulness, it helps to read George Orwell's *1984*.[12] Or consider . . ." Helen thoughtfully munched a peanut saved from the trolley, "what if we could upload our consciousness onto computers and live in artificial computational worlds? So much of philosophical interest could follow from that! We could duplicate ourselves, back ourselves up, totally rewrite our own values and priorities if we wanted, give ourselves any sensory experiences we desire. The nature of risk, selfhood, scarcity, and death would all change radically. Thoughtful science fiction stories, like Greg Egan's *Permutation City* and *Diaspora*, can help us imagine what it might really be like, help us see aspects that might not be immediately obvious.[13] If you try to just sit and think about it abstractly, you'll fail. To make progress you need to think narratively—what someone would do if such-and-such, and then how others might react, and what would happen next. That's how human brains work.[14] Even just 'abstractly,' once you really start to think about it, you begin to write a mini-fiction. That's why philosophers so often use thought experiments, to help their audience think along with them. So why not just acknowledge that fiction is part of how we do philosophy?"

"Okay, maybe most of us need fiction as a crutch," acknowledged Johan, looking down critically at Helen's diminishing peanuts. "But we should try not to rely on fiction. We should avoid it as much as we can. Think of your trolley problem. There's this interesting study that suggests that if the one person you have to kill to save the five is named "Chip Ellsworth III" and you're a political liberal, you're more likely to divert the trolley to kill him

than if the one person is named "Tyrone Payton," and vice versa if you're a political conservative.[15] The irrelevant details confuse you. You imagine the annoying rich white guy, and suddenly you're a consequentialist! You're fine sacrificing him to save others. But if it had been someone different, you'd have embraced a different moral principle. In a fiction, if you tell the story one way, maybe you sympathize with the protagonist and then you think, okay, what he's doing is fine. If you tell the story some other way, maybe you don't sympathize with the protagonist, and you come to a different conclusion. What drives those sympathies might be how the person talks, their race, whether they're funny, whether they had a sad childhood—irrelevancies. Fiction, maybe, can be a partner or an aid to philosophy, but we should be wary of it, and the best philosophy ultimately pushes such details away to focus on fundamental principles without all the peanuts and umbrellas."

"That's exactly wrong!" intervened Eric, who had been making steady progress on his cocktail while Helen and Johan were arguing. "Take everything you just said, Johan, and reverse it. Standing just by themselves, abstract statements like 'maximize good consequences' or 'act on that maxim that you can at the same time will to be a universal law' are empty slogans.[16] To give them flesh, they need to be applied to real and hypothetical cases. What does it mean to say, with Thomas Jefferson, that 'all men are created equal'? It's vacuous until we figure out how it applies. Does it mean that all men should get the vote? That all *people* should get the vote, and not just men? That no one should be enslaved? That there should be no hereditary titles?[17] Jefferson and his friends could all agree on the slogan, while they disagreed on these other issues. There's no substance until you include the details that you, Johan, want to strip away as irrelevancies. Helen says that fiction is useful for thinking through philosophy, given that we aren't superhuman geniuses, but I'd go farther. Fiction isn't merely an aid. The examples are the heart of the matter, where the best philosophical cognition happens. It's the abstract slogans that are the crutch. Abstract slogans can serve as aids to memory or give hints about a general direction of thought. To treat 'everyone as equal' can mean a great many different things, depending on who says it in what context with what applications in mind. You're right, Johan, that the trolley problem is silly. But you react by running in the wrong direction. It's silly because it has too little detail rather than too much. As you said, we want to know why these people are on the tracks, how did you come to be standing near the switch, what kind of trolley it is, and why it is out of control. Working out the full story in plausible detail will take much more than a paragraph. It will take a fiction. Really thinking through the ethics of a fully-developed imaginative scenario—that's every bit as much philosophy as is some abstract theorizing by Plato or Kant."

"But Eric!" spluttered Johan.

Helen interrupted him with a finger in front of his lips. "Johan, don't forget. *You're* a fiction."

Johan tossed both of his hands into the air. "So what? I'm still right. Pay attention to my abstract content!"

"As you said at the beginning, this whole conversation didn't even happen. We've only met Eric in person once, and at that time we didn't even discuss these issues. Plus, I happen to know that the real flesh-and-blood Johan doesn't agree with you at all."

Johan narrowed his eyes. "That has nothing to do with the merits of my argument."

"Well, we could have you win by wishing Eric away, for example, or having him say something obviously foolish." And indeed, suddenly, Eric and his now-empty cocktail glass were nowhere to be seen. All that remained was a wobbling cherry on the table near his seat.

"Yet another way to cheat in fiction," said Johan. "Give the other side a bad argument, an unappealing representative, or just write them out of the story altogether, maybe in a pink puff of smoke."

"Ah," said Helen, "but another great thing about fiction, much harder to achieve in ordinary expository writing, is that you can present the complexity of things without fully committing to a single authorial perspective. You can leave things unsettled. A fiction can speak to us with the same multivocality in which the world speaks to us. It can include details that surprise the author and that speak to the readers in ways the author couldn't foresee or understand."

"Such as this dialogue here, you're going to say next."

"If we've written it well enough," replied Helen.

"But that's—"

Johan disappeared in a pink puff of smoke.

Now please imagine Helen alone at the table, eating the cherry with a mischievous smile.

Notes

1 Atwood, M. (1985). *The handmaid's tale.* Toronto: McClelland and Stewart.

2 Lewis, D. (1978). Truth in fiction. *American Philosophical Quarterly*, 15(1), 37–46.

3 See e.g., Wilhelm, I., Conklin, S. L., & Hassoun, N. (2018). New data on the representation of women in philosophy journals: 2004–2015. *Philosophical Studies*, 175(6), 1441–1464. Schwitzgebel, E., & Jennings, C. D. (2017). Women in philosophy: Quantitative analyses of specialization, prevalence, visibility, and generational change. *Public Affairs Quarterly*, 31(2), 83–106. Botts, T. F.,

Bright, L. K., Cherry, M., Mallarangeng, G., & Spencer, Q. (2014). What is the state of blacks in philosophy? *Critical Philosophy of Race*, 2(2), 224–242.

4 Van Norden, B.W. (2017). *Taking back philosophy. A multicultural manifesto*. New York: Columbia University Press.

5 van Beethoven, L. (1812). *Symphony No. 8 in F major, Op. 93*. The work can be heard here: https://www.youtube.com/watch?v=9-f3iKeUJm4

6 On the philosophy of cocktails, see e.g., Bakewell, S. (2016). *At the existentialist café. Freedom, being, and apricot cocktails*. London: Vintage.

7 Schwitzgebel, E. (2020). *A theory of jerks and other philosophical misadventures.* Cambridge, MA: MIT Press, chapter 50, The philosopher of hair.

8 *Wikipedia, The Free Encyclopedia*. s.v. "*Guernica* (Picasso)" (accessed August 10, 2019). https://en.wikipedia.org/wiki/Guernica_(Picasso)

9 Actually, Joseph Stevens is a Belgian painter. We apologize for embarrassing fictional Helen in this way. The work is linked here: https://commons.wikimedia.org/wiki/File:Joseph_Stevens_-_Horses_and_Donkeys_for_Hire.jpg

10 Real-world Johan wishes to point out that peanuts are technically legumes rather than nuts. Real-world Eric objects to Johan's privileging of scientific over culinary taxonomy, with its implication that you could make a fruit salad from zucchinis and tomatoes. Dupré, J. (1981). Natural kinds and biological taxa. *Philosophical Review,* 90(1), 66–90.

11 The original papers describing the trolley problem are Foot, P. (1967). The problem of abortion and the doctrine of double effect. *Oxford Review*, 5, 5–15. Thomson, J. J. (1985). The trolley problem. *Yale Law Journal*, 94(6), 1395–1415. Since then a whole cottage industry has sprung up analyzing the problem.

12 Orwell, G. (1949). *Nineteen eighty-four. A novel*. London: Secker and Warburg.

13 Egan, G. (1994) *Permutation city.* London: Orion/Millennium. Egan, G. (1997). *Diaspora*. London: Millennium.

14 Gottschall, J. (2012). *The storytelling animal. How stories make us human.* New York: Houghton Mifflin.

15 Uhlmann, E. L., Pizarro, D. A., Tannenbaum, D., & Ditto, P. H. (2009). The motivated use of moral principles. *Judgment and Decision Making*, *4*(6), 476–491.

16 On maximizing good consequences, see Sinnott-Armstrong, W. (2003/2019). Consequentialism. *Stanford Encyclopedia of Philosophy* (Summer 2019 edition). URL: https://plato.stanford.edu/archives/sum2019/entries/consequentialism. On universalizing maxims, see Kant, I. (1785/2006). *Groundwork for the metaphysics of morals* (A.W. Wood, trans). New Haven, CT: Yale University Press.

17 Finkelman, P. (1996). *Slavery and the founders. Race and liberty in the age of Jefferson.* Armonk, NY: M.E. Sharpe.

Part One

Expanding the Human

Introduction to Part One: Expanding the Human

Eric Schwitzgebel

Oh, this primate body—so limited! Future generations could maybe shed it, or at least improve it. How attached are you to your primate form? Do you want to stay forever here on the ground, hooting to your conspecifics in slow language, with two legs, a weak mind, and a body that fails after eighty years if not sooner?

There is something beautiful about natural, unaltered *Homo sapiens,* with all their joy and misery, ability and disability, evil and good. A *conservative* about human enhancement might say: Whatever future technology arises to potentially improve us, let's have no part of it. We are good enough as is. Let's keep technology *outside* of our bodies and minds, an external tool, while we ourselves remain the same. Let's not treat humanity like some genetically modifiable crop to be enhanced for pickability, shelf-life, and resistance to herbicides. *Homo sapiens* ought to stand pat as the wonderful, if flawed, things we already are.

If you're a *moderate* about human enhancement, this reasoning might seem absurd—as absurd as rejecting the invention of penicillin so as to retain our beautiful susceptibility to fatal diseases. If we can improve, without fundamentally changing ourselves, why not do so? If we could extend our longevity to, say, two hundred years instead of eighty, wouldn't that be better? If we could enhance our cognitive capacities, holding more in memory, working better with complex ideas, being less susceptible to fallacies, wouldn't we make better decisions? If we could communicate more directly through brain-to-brain interfaces (with provisions for privacy of course) instead of being limited by slow, imperfect speech, why not go for it? If we can improve without leaving our core humanity behind, we should do it—or at least we should allow people to make such changes if they want.

If you're a *liberal* about enhancement, you might ask, what is this supposed core humanity? And why not leave it behind? Why not, if the chance arises, allow something new and radically different to grow alongside, or even

replace, traditional humans? Maybe we could become gods—something fundamentally different and better, something that defies our meager human understanding in the same way that we defy the meager understanding of rhesus monkeys. Imagine some primate 15 million years ago hoping for the end of evolutionary change!

Some of the reasons for conservatism about human enhancement are essentially the same reasons that moved Edmund Burke in his classic defense of political conservatism: Well-intended changes almost always have unforeseen consequences, and those unforeseen consequences can be disastrous.[1] (Burke's example was the French Revolution.) Even if existing institutions, traditions, and policies have some obvious bad consequences, they have stood the test of time and so are, Burke argued, at least minimally adequate. Slow and moderate change is best, if change is to be pursued at all. An extreme technological Burkean could argue that we might even someday regret the invention of penicillin, if an antibiotic resistant superbug eventually destroys us all. Negative consequences might be non-obvious and slow in coming. The first story in this section, "Excerpt from *Theuth,*" explores the possible unforeseen consequences of initially innocuous-seeming cognitive enhancements for lawyers. The second story, "Adjoiners," likewise starts with something seemingly innocent, even joyful—transporting oneself into the mind and body of a bird—and ends by illustrating how the traditional concepts of selfhood and responsibility can break when your body is no longer experienced as your own.

All our values, all our laws, and our whole sense of the human condition are grounded in our particular evolutionary and cultural history: a history of embodiment in primate form, one body at a time, one location at a time, one mind at a time, within a limited range of variation. The Burkean conservative about enhancement holds that we have little idea what disasters might follow from changing this. What might be the consequences for our minds, societies, and personal identities? What unforeseen risks or losses might await us if we create, or become, conscious computer programs? Or if we learn to upload and duplicate ourselves, or merge our minds, or create the illusion of anything we want at our fingertips? Are we ready for the destabilization that would result?

Liberalism about human enhancement vividly raises one of the most fundamental questions in philosophy: What, if anything, is ultimately good? If we can imagine improving ourselves in various different directions, or even radically departing from our human form and past, what direction or directions should we go?

Consider an extreme example. According to *hedonists*, the ultimate good is pleasure (and the avoidance of pain). If pleasure is the ultimate good, here's something we could aspire to: Convert all of the matter of the Solar System into "hedonium"—whatever biological or computational substrate most efficiently generates pleasure.[2] The whole Solar System could become an unfathomably large, intense, constant orgasm. Wouldn't that be amazing? Such a system might know nothing about its human past, nothing about great art or literature or music. It might have no social relationships and no ethics. It might have no "higher" cognition whatsoever. The advocate of simple hedonism is unperturbed: None of that other stuff matters, as long as the pleasure is intense, secure, and durable. (We, the editors, guess that a small but non-trivial minority of our readers will embrace the Solar System orgasmatron as a worthy ideal to aspire to.[3])

According to *eudaimonists,* in contrast, the ultimate good consists of flourishing in one's distinctively human capacities, such as creativity, intellect, appreciation of beauty, and loving relationships.[4] In improving humanity, we should aspire primarily to enhance these aspects of ourselves. A eudaimonist might welcome enhancements, maybe even radical enhancements, that enable our descendants to be wiser, more creative, more loving, and more appreciative of the world's beauty. The third story in this section, "The Intended," articulates one eudaimonist vision. On the surface, the eudaimonists in this story embrace traditional values: monogamous love relationships, gardening, appreciation of nature. But furthering these goals requires, behind the scenes, a radical technology that is arguably oppressive.

In reading "The Intended" you might wonder why societies in the distant future, with great technological capacity, would look so much like our own, populated with people who live in one body at a time and who communicate in oral language through their mouths—and even more specifically, people who love gardening and who act like jerks in love triangles. A possible Burkean explanation is this: We have evolved so stubbornly into the primates we are that the societies that work best for us and for the descendants we grow or build will always take that familiar shape.

All conservatism is tossed aside in the final and most radical story in this section, "The New Book of the Dead," in which we transcend death to become godmachines. If in reading "The New Book of the Dead" you find that you only gain a glimpse of what it would be like to be a godmachine, and if you find the story to be full of metaphors that are hard to translate into literal language . . . well, of course that's because you are still only a weak-minded primate, and everything must be explained to you with pant-hoots and bananas. The godmachines will someday reminisce about us with tenderness and pity.

Recommended Reading/Viewing

Fiction:

- *Sirius* (novel, 1944, Olaf Stapledon). A dog enhanced to have humanlike intelligence struggles to make sense of love, value, and beauty in a world he doesn't fit into.
- *Flowers for Algernon* (short story, 1959, novel, 1966, Daniel Keyes). A low IQ laborer is cognitively enhanced to have superhuman intelligence, but his life does not improve in the ways he expected.
- *Gattaca* (film, 1997, written and directed by Andrew Niccol). A dystopia in which people designed to be genetically superior are privileged over the rest.
- *Diaspora* (novel, 1997, Greg Egan). A future populated with cognitively enhanced artificial intelligences living in simulated worlds, biologically engineered humans of various types, and robots, exploring a wide variety of ways to create a meaningful existence.
- *Feed* (novel, 2002, M.T. Anderson). A teenage character's perspective on a world where most of humanity has the internet piped directly into their minds.

Non-fiction:

- Haraway, Donna J. (1991). A cyborg manifesto. Science, Technology, and socialist-feminism in the late 20th century. In: D. Haraway, *Simians, cyborgs, and women. The reinvention of nature* (pp. 149–181). New York, NY: Routledge. A feminist, anti-essentialist critique of scientific and technological approaches to the body and the blurry boundaries between animal, human, and machine.
- Humanity+ Board, *Transhumanist Declaration* (1998/2009), https://humanityplus.org/philosophy/transhumanist-declaration/ A brief but influential online statement of fundamental principles of transhumanism, affirming the value of "allowing individuals wide personal choice over how they enable their lives" through future technologies.
- Clarke, Steve, Julian Savulescu, Tony Coady, Alberto Giubilini, and Sagar Sanyal, eds. (2016). *The Ethics of Human Enhancement: Understanding the Debate.* Oxford: Oxford University Press. A multifaceted exploration of the ethics of enhancement from authors with competing views, including several treatments of the case for conservatism.
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I ignored him, the ways sons are supposed to ignore their fathers.

In law school, every Friday there was a presentation in the library from one of the legal tech companies: smart contract toolchain developers, discovery outsourcing vendors that relied on Mechanical Turk-style "crowd intelligence" to do mass document review, AI companies with digital research assistants that helped you track down obscure statutes and decisions. I went to as many of these as I could because I wanted to know what the cutting edge of the modern practice of law was like. The presentations that I found most interesting were on early versions of boosters—except back then everyone still said the whole name: "brain booster" or "cognitive enhancement device."

Back then, there was still a lot of controversy over neural enhancement, and only about a quarter of my 1L class had the brain-computer interface implants to make it work—most of us had been avid gamers or VR enthusiasts. If you had a compatible implant and signed the waiver, these companies would give you an unlimited subscription to their apps and services, free of charge. They weren't doing it out of the goodness of their hearts, of course. The point was to get you into the ecosystem while you were still a law student so that later, after you started practicing, you'd advocate for your firm to pay for a lucrative commercial license.

Compared to even the cheapest devices today, the interface hardware we had was primitive and the software crude. Due to concerns for safety and the limitations of the early technology, you had to initiate every interaction consciously, almost like learning to type using "phantom fingers." But if you put in the time to learn the interface effectively, you could put all your study materials into it and get instant search and recall on cases, case briefs, course outlines, classroom notes, and even lecture recordings. Similar software was just gaining acceptance at top-tier law firms, and people made wild claims about how cognitive enhancement was the real key to the next major productivity leap in the symbol-manipulation economy.

I loved tech and was always an early adopter, so I jumped at the chance to try the boosters. But others were more hesitant. My study group debated the issue endlessly. In the end, the argument that I found most convincing was that if boosters helped you be a better lawyer or doctor, then the interest of the client or the patient not only weighed in favor of enhancement, but actually compelled it. To *choose* to remain unenhanced while representing a criminal defendant with their life or liberty on the line would have to be considered a form of ineffective assistance of counsel, wouldn't it?

Some of my classmates mocked those of us who used boosters, saying that you didn't really learn the material if you relied on a machine. But I thought that was like arguing that you didn't really know math if you used a calculator. I used the booster only about half the time anyway—we were still worried

about the implants "frying the brain," and even with the booster off, I still remembered the rule against perpetuities and could explain the importance of footnote four of *Carolene Products* (though with the booster on I'd be able to give you the exact quotes right away). The booster wasn't a substitute for learning; it just allowed you to read faster and think at a higher level, freeing you from the wasted effort of rote memorization. By taking care of the mechanical details, it unlocked your true intellectual potential. It was a bicycle for the mind, like a supercharged laptop or phone.

Despite the skeptics, the trend was moving my way. As the year-end law review competition approached, many of the holdouts signed up for boosters: nobody wanted to lose out because they couldn't spot an unitalicized semicolon or an improperly abbreviated old administrative agency name as well as someone with a booster that instantly brought up the right rule from the *Bluebook*.

They kept on improving the software. With machine learning and iterative personalization, the booster could pick up your thinking patterns and bring up the relevant information without your having to consciously invoke it. If I noticed an interesting line of reasoning in Supreme Court cases that no one else had commented on while running on the treadmill, I didn't have to scramble to write it down; the booster would track the idea (as long as I had remembered to turn it on) and suggest my own insight back to me when I sat down in my bedroom to write my law review note. When professors called on me in class, the booster observed my answer and anticipated my needs, bringing up relevant cases and canons so that I could rattle off cites and exact quotes, impressing even myself.

Not only did I study more effectively; I *felt* smarter, more confident. The booster didn't cheat me of an education; it made me a *better* me.

By the time I started at Drummond & Coslett, boosters were practically required for new associates. We all got firm-issued hardware that was a generation ahead of the consumer units. The personal data on our old implants could be transferred over so we didn't lose anything. But to keep client and firm data safe, we had to sign a waiver and agree to some additional surgical modifications to set up isolation protocols and encrypted enclaves.

You know how people always say that law is a conservative profession, and lawyers are the last to adopt a technology? That's only true up to a point. As soon as insurers—advised by AI analysis of malpractice trends—started to raise premiums for attorneys who refused to use boosters in their work, every white-shoe firm seemed to jump aboard overnight. Clients were also demanding more accountability in billing records to justify the ever-rising legal fees, and firms found the audit trail generated by boosters, which

literally tracked every moment you spent thinking about a case, to be the best way to keep clients happy. Senior associates told us how lucky we were to not have to track our day manually in six-minute increments, and we thought it a sign of law firm culture progress that we got credited automatically for every minute we spent editing a memo on the subway or answering an email in bed.

I loved my time as a first-year associate. Everything was new, and I felt I was learning and growing every day. The hours were long and the work was demanding, but the pressure also brought the junior associates closer. We'd gather at a bar in the evenings to have drinks and share office gossip before heading back to bill a few more hours, and on weekends, sometimes we assembled in the office to binge-watch one of the new shows that were designed for booster-wearers, with twisty plots involving hundreds of major characters and flashy edits and dialogue delivered so fast that you couldn't follow the story without your booster on. Good times.

Not all of us were close. There were three un-enhanced associates in my class, and two of them didn't even last through the first year, leaving for less competitive places. The last one, Mina, mostly kept to herself. She had a physiological condition that made it impossible for her to be fitted with a neural implant. The firm went to a great deal of trouble to get her the assistive devices to compensate so she could do her work, but still she struggled, and the rest of us pitied her. She had to work twice as hard as the rest of us just to keep up: replaying recordings of meetings over and over at half-speed instead of trusting the booster to pick up the key points, poring over printouts and highlighting and summarizing instead of relying on instant recall, checking and double-checking her paper notes for a closing instead of having the auto-reminder cue her on what to do. And even with all her extra effort, she took so much longer to do everything. It was rumored that senior associates and partners didn't like working with her, since they had to write off so much of her time as overhead because clients refused to pay for the extra hours.

One night, I stayed especially late at the office to prepare for a closing. As I walked to the copy room, I passed by her office and heard crying inside.

Her door was open and I couldn't just pretend nothing was wrong. I knocked on the door and asked if there was anything I could do to help.

She looked up from her desk, tears glistening on her face. "I can't do this," she was sobbing. "I can't."

Almost by instinct, I waited for my booster to offer a suggestion, the way it cued me on etiquette during client meetings and firm parties. But the booster remained dormant.

So I did the first thing I could think of. I went down to the kitchen and made her a cup of instant noodles. Food was how my grandfather and father always

"I thought I could make it work," she whispered, her fingers mechanically caressing the mouse of her old-fashioned PC. "I thought I just had to work harder."

There was nothing to say to that. Lawyers have never turned down a chance to use technology to build more elaborate structures out of the written word. A one-sentence handshake deal turned into a one-page handwritten contract, which turned into a ten-page agreement in the age of typewriters, which turned into a one-hundred-page bound volume with the advent of word processors, which turned into a ten-thousand-screen neural text module, which would be translated into Jura-SIC and then compiled into a one-hundred-thousand-kiloblock smart contract. The elaboration was driven by the impulse to specify a resolution for every eventuality as well as by the desire to build in strategic points of ambiguity that could be advantageous to the client, a quintessentially human contradiction at the heart of the law. The deliberate linguistic games were intended to clarify as well as to obscure, and that made them impossible to unravel by either pure AI or the unenhanced human mind.

The rest of us, blessed with genes that allowed our brains to adapt to this new upgrade path, were speaking and writing in a way that was literally incomprehensible to her.

I made some excuse and left. A sense of shame that I didn't even understand gripped me. I could do a job that she could not, even though she very much wanted to. My very presence was surely painful to her.

Mina left a month later, not for another firm, but dropping out of the law altogether. The rest of us never mentioned her, as though her very name held the power to bring bad luck.

By the end of our second year, another associate, Karl, collapsed in the middle of a client meeting and had to be rushed to the hospital. His body, it turned out, had developed an allergy-like reaction to the implant, and he had been taking a regimen of experimental suppressors despite warnings from his doctor. The only solution was to take his implant out. Karl messaged the rest of us to not come and visit him, and he never returned to work.

Insecurity hovered in the air like an oppressive thunderstorm. What if we were not, in fact, smart people who used technology to amplify our natural talents, but merely the lucky few who could use the boosters to hide our weaknesses, albeit only temporarily?

So we worked harder, and tried not to ask uncomfortable questions.

One day, the firm called a meeting of all the associates in the largest conference room on the first floor. The topic was simple: we would all be asked to upgrade our boosters to allow "passive billables."

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