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Rational Accidents

Reckoning with Catastrophic Technologies

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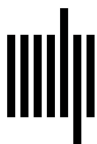
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I spent far too long writing this book. What began as an exciting research project ended as a sort of weird, life-consuming mental illness. I have excuses. Changing jobs, each with new obligations, things like that. I did write a lot of other stuff along the way. A ruptured brain aneurism didn't help; traumatic brain injuries are bad for productivity in my experience. (Although I'd recommend them to anyone looking to invisibly raise the difficulty settings on life.) But probably a bigger issue than all that were the book's outsized ambitions. I had an elaborate map for its argument worked out fairly early on, and in retrospect that argument had too many moving parts. I use myself as a cautionary tale for my graduate students; the next book will follow my own advice to them and have a much simpler structure. It's also true that delay bred delay—the later this became, the better I felt it had to be to justify the lateness. It took me a minute to realize I was always going to be hopelessly underwater on that ledger.

Which is all to just to say that I've been at this a long time and accrued a lot of people I need to thank.

The biggest regret, at least in regard to lateness, is that the book's two biggest academic influences and advocates—Trevor Pinch and Charles Perrow—both passed before I was able to thank them here. I owe them each an enormous debt. I moved to Ithaca to study under Trevor. He became the lead supervisor of my PhD, which, in turn, became the seed from which this book grew. And it was he who suggested that I write about the seemingly paradoxical epistemology of civil aviation safety. Perennially cheerful, idiosyncratic, and supportive, Trevor routinely helped chivvy the drafting of

this manuscript along over the years; offering insightful comments on very early drafts of most of its chapters. It was a great loss to STS in general, and to me personally, when he died so prematurely. Charles Perrow—or “Chick” as he preferred—became a mentor, friend, and (for a time) colleague, after someone sent him a paper I’d written for anonymous review. He somehow figured out who wrote it so he could reach out to talk to me. I was an admirer of Chick’s work, and the gesture meant a lot to me at an early point in my career. He helped me arrange a move to California the following year, where I had the pleasure of getting to know him better. With his enormous curiosity and indomitable generosity of spirit, Chick did academia right. He must have commented on dozens of my drafts over the years—something he did for a lot of people, I think—and always with eagerness, warmth, humility, and insight. He had an outsized influence on this volume, the title of which is an homage to his most relevant and best-known work. I only met him in the twilight of his life, but I miss him, and sociology is poorer without him. He and Trevor were good men.

Very honorable mentions also go to a few others. Sveta Milyaeva, in particular, helped drag this book over the finish line. She read and commented on a late draft of every chapter at least once, sometimes twice, and became the manuscript’s chief advocate and cheerleader. It’s a huge debt I owe her. Hugs also to her partner, Nestor, who gamely said he’d be interested in reading a draft and then actually did—which never happens in my experience. Kudos to his stamina there. I should also thank Carl Macrae, my fellow nerd, who must have read a lot of different elements of this over the years. He’s the busiest man I know, but on the occasions that I can pin him down on something work-related, he always has insightful ideas and encouraging words. And thanks as well to Dr. Adnan Siddiqui—an extremely nice neurosurgeon in upstate New York, who fixed my uninsured brain with two rounds of surgery and an expensive crocodile clip. He was a little skeptical that I’d ever be fit for book-writing, but I promised I’d give him a nod in my acknowledgments. I really appreciate the help, everyone.

Those are the highlights, but there are many other people I want to recognize here. I’ll try to err on the side of inclusivity, so it’ll run a bit long. But I don’t think anyone reads acknowledgments unless they’re looking for their own name so I doubt it matters. Just skip ahead if you’re bored. (And if I’ve forgotten anyone, please know that I’ll feel bad about it.) For the sake of

structure, I'll organize you all chronologically, starting with the book's roots in graduate school.

Top of my Cornell thanks should go to Michael Lynch and Ron Kline, who were on my dissertation committee with Trevor. Like Trevor, both were, and I'm sure remain, brilliant scholars and profoundly good people. I was lucky to work with them. In retrospect, there were several other people at Cornell STS who I regret not getting to know better while I was there. Steve Hilgartner's writing, in particular, has been a big influence on me in recent years. Sonja Schmid and Anna Mareker made up the rest of my diminutive yeargroup; I'm glad they're doing well. Other STS colleagues included Cyrus, Jamie, Hans, Carin, and Dave, who were all fun to know. More broadly, my thanks and best wishes to all my Stewart Little housemates (especially Guillermo Mendoza and Pete Buston, plus Patrick, Soazig, Kevin P., Jacques, Nicole, Gadi, Dave, Megan, Eric, Erica, Zach, Rochelle, James, and Aaron). And, beyond SLC, to Kerry Papps, plus Ross, Lauren, Erin, Laurent, Andrei, Kelly, Kevin O., Valerie, Tamar, Malou, Morten, Andy, Julie, Matt, Kathy, Danielle, Jenka, and Amanda. Thanks also to Terry Drinkard, who was a big supporter of the dissertation over this period and provided a lot of useful feedback and insight. I hope he's doing well.

Then I was in London with a hole in my head. I wasn't at King's College London's Centre for Risk Management for long, but I need to thank Henry Rothstein: another good man and fine scholar, who took a gamble in hiring me as his postdoc. I wasn't a great flunky—I was pretty sleep deprived most of the time, and I jumped ship before the project ended, which must have been exasperating—but Henry was very understanding. I owe him a debt. Sebastian and Kristian also were good friends and colleagues there. Moving onto LSE's Centre for Analysis of Risk and Regulation (CARR). Bridget Hutter hired me and always had my back in her own unique way. She was another supporter of the book who sadly passed before it was finished. I think we underestimated, at the time, how much she did to protect CARR's staff and its research culture. My colleagues Carl, David, Anna, and Jeanette all became good friends. And, outside the academy, Paul Yates was the cornerstone of my social life. London was a weird but memorable time.

On leaving London there was Stanford's Center for International Security and Cooperation (CISAC). I was probably out of place as a security researcher, but these were remarkable years for which I will always be grateful. I learned

a lot of unexpected things about nuclear weapons and the US security establishment in general, some of them absurd and most of them pretty terrifying. I got to walk the site of the first atomic explosion, which was memorable, and I was almost, kind of, vaguely spied on by the Russians, which still amuses me. Fukushima happened while I was there, starting a chain reaction that ended up derailing this book for a long time (although I think the argument is stronger for it). Lynn Eden, another scholar I admire, was the heart and soul of the fellows program there; I can't imagine it's the same without her. Scott Sagan unknowingly cost me a case of cheap champagne by not being drafted into government. My fondest CISAC memories are of the other fellows, especially Matthias Englert, lately owner of cheap champagne, and Anne Harrington, who probably still doubts America's appetite for electric vehicles. Beyond them I also want to thank Ryan and Erin, Rob and Bekah, and Jan. Plus Toshi, Gaurav, David, Pablo, Ed, Jason, Katja, and Brenda. Also Rebecca, who made comments on a very early chapter of this manuscript, long before she accidentally became one of its editors. Outside of CISAC, Ross Halvorson was generosity itself; I will always be grateful for his support and friendship. I should also thank Peter Ladkin—whom I happened to meet in person during this period—for originally posing, in an email to Trevor Pinch, the question that inspired this book. He has the keenest mind for engineering epistemology of anyone I know (even if he probably wouldn't call it that).

This brings us to Bristol's School of Sociology, Politics, and International Studies (SPAIS), where I've now been for longer than I'd ever anticipated. The new public management mores of mainstream British academia came as a shock when I joined, and I remain an odd fit in a department that's far more interested in social justice than technological risk (and more power to them). SPAIS tolerates me with grace, however, and Bristol is a neat city to call home. I'm lucky to have worked alongside some great colleagues here. Special mention goes to Miriam Snellgrove and Jess Paddock: fellow "losers," along with Sveta. I would never have survived the pandemic without them. I'm glad to have Tom Osborne occasionally manage my line. In his broad erudition and gently disheveled, well . . . everything, he evokes a simpler time in British academia when nobody used phrases like "pathway to impact." Special mention also to Paul and Nivi, Maud and Ryerson, Jeremy, Junko, Jess O., Tim E., Beckie, Therese, Claire, Max, Alexis, Paul and Pete. Thanks also to all the staff of Coffee #1 on Welsh Back, who let me take up space, year after year, while

I tinkered at this manuscript. I've met a lot of people outside Bristol during my time here as well; too many to mention. I will, however, single out Diane Vaughan, who helped set up a rewarding stint in New York (my self-inflicted visa issues notwithstanding). And, especially, Ramana, whom I'll always admire for so successfully navigating academic bureaucracy without the benefit of a surname (also for his remarkable scholarship, productivity, patience, friendship, and many other fine qualities—but mostly the surname thing).

Returning to the book itself, I should thank my incredibly patient editors of the Inside Technology Series at the MIT Press. Also, my considerable thanks to three anonymous reviewers, whose identities have been fun to guess (five, if you count the series editors). All gave generous, insightful, and useful feedback on the original manuscript, which is significantly stronger for their input. None of you liked the original title; I hope the new one feels like a better fit. Titles are hard.

This just leaves my extended family. A man couldn't ask for nicer step-relatives than Jen, Jan, and Steve. Nor could he ask for more accommodating in-laws than Richard and Alicia, or Krissy and Kevin (and the kids), who have always made me welcome in their homes. I wish that Bristol could be closer to Lake Superior. Will, Rose, and Jack—my perfect nephews and niece—are far too young and sensible to have any interest in this book, but I hope they might one day get a tiny kick from having been mentioned in it. Poms the cat is an adorable ball of fur and exasperating worrier of ankles; he brings me peace. Dave is sadly missing, but never forgotten.

Last, and the very opposite of least, my parents, brother, and wife, to whom this book is collectively dedicated. I'm so deeply grateful for everything they have done for me that nothing I could say here would ever feel remotely adequate. So I'm just going to say that I love you all and let the dedication stand alone. For, as Wittgenstein put it, "whereof one cannot speak, thereof one must remain silent."

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