

RE-ENGINEERING HUMANITY

Every day new warnings emerge about artificial intelligence rebelling against us. All the while, a more immediate dilemma flies under the radar. Have forces been unleashed that are thrusting humanity down an ill-advised path, one that's increasingly making us behave like simple machines?

In this wide-reaching, interdisciplinary book Brett Frischmann and Evan Selinger examine what's happening to our lives as society embraces big data, predictive analytics, and smart environments. They explain how the goal of designing programmable worlds goes hand in hand with engineering predictable and programmable people.

Through new frameworks, provocative case studies, and mind-blowing thought experiments that you'll find hard to shake, Frischmann and Selinger reveal hidden connections between fitness trackers, GPS technology, electronic contracts, social media platforms, robotic companions, fake news, and autonomous cars. The powerful analysis provides much-needed resources for imagining and building alternative futures.

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“Frischmann and Selinger deftly and convincingly show why we should be less scared of robots than of becoming more robotic, ourselves. This book will convince you why it’s so important we embed technologies with human values before they embed us with their own.”

Douglas Rushkoff, author of Present Shock, Program or Be Programmed, and Throwing Rocks at the Google Bus

“Everybody is suddenly worried about technology. Will social media be the end of democracy? Is automation going to eliminate jobs? Will artificial intelligence make people obsolete? Brett Frischmann and Evan Selinger boldly propose that the problem isn’t the rise of ‘smart’ machines but the dumbing down of humanity. This refreshingly philosophical book asks what’s lost when we outsource our decision-making to algorithmic systems we don’t own and barely understand. Better yet, it proposes conceptual and practical ways to reclaim our autonomy and dignity in the face of new forms of computational control.”

Astra Taylor, author of The People’s Platform: Taking Back Power and Control in the Digital Age

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To our families

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Foreword

Human beings have a genius for designing, making, and using tools. Our innate talent for technological invention is one of the chief qualities that sets our species apart from others and one of the main reasons we have taken such a hold on the planet and its fate. But if our ability to see the world as raw material, as something we can alter and otherwise manipulate to suit our purposes, gives us enormous power, it also entails great risks. One danger is that we come to see ourselves as instruments to be engineered, optimized, and programmed, as if our minds and bodies were themselves nothing more than technologies. Such blurring of the tool and its maker is a central theme of this important book.

Worries that machines might sap us of our humanity have, of course, been around as long as machines have been around. In modern times, thinkers as varied as Max Weber and Martin Heidegger have described, often with great subtlety, how a narrow, instrumentalist view of existence influences our understanding of ourselves and shapes the kind of societies we create. But the risk, as Brett Frischmann and Evan Selinger make clear, has never been so acute as it is today.

Thanks to our ever-present smartphones and other digital devices, most of us are connected to a powerful computing network throughout our waking hours. The companies that control the network are eager to gain an ever-stronger purchase on our senses and thoughts through their apps, sites, and services. At the same time, a proliferation of networked objects, machines, and appliances in our homes and workplaces is enmeshing us still further in a computerized environment designed to respond automatically to our needs. We enjoy many benefits from our increasingly mediated existence. Many activities that were once difficult or time-consuming have become easier, requiring less effort and thought. What we risk losing is personal agency and the sense of fulfillment and belonging that comes from acting with talent and intentionality in the world.

As we transfer agency to computers and software, we also begin to cede control over our desires and decisions. We begin to “outsource,” as Frischmann and Selinger aptly put it, responsibility for intimate, self-defining assessments and judgments to programmers and the companies that employ them. Already, many people have learned to defer to algorithms in choosing which film to watch, which meal to cook, which news to follow, even which person to date. (Why think when you can click?) By ceding such choices to outsiders, we inevitably open ourselves to manipulation. Given that the design and workings of algorithms are almost always hidden from us, it can be difficult if not impossible to know whether the choices being made on our behalf reflect our own best interests or those of corporations, governments, or other outside parties. We want to believe that technology strengthens our control over our lives and circumstances, but if used without consideration technology is just as likely to turn us into wards of the technologist.

What the reader will find in the pages that follow is a reasoned and judicious argument, not an alarmist screed. It is a call first to critical thought and then to constructive action. Frischmann and Selinger provide a thoroughgoing and balanced examination of the trade-offs inherent in offloading tasks and decisions to computers. By illuminating these often intricate and hidden trade-offs, and providing a practical framework for assessing and negotiating them, the authors give us the power to make wiser choices. Their book positions us to make the most of our powerful new technologies while at the same time safeguarding the personal skills and judgments that make us most ourselves and the institutional and political structures and decisions essential to societal well-being.

“Technological momentum,” as the historian Thomas Hughes called it, is a powerful force. It can pull us along mindlessly in its slipstream. Countering that force is possible, but it requires a conscious acceptance of responsibility over how technologies are designed and used. If we don’t accept that responsibility, we risk becoming means to others’ ends.

NICHOLAS CARR

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In writing this book over the past five years, we relied heavily on the generosity and ideas of others. We are grateful to the many, many people who have helped us. Looking back, it is difficult to acknowledge all the people, sources, and ideas that contributed to the book. It builds from prior publications, workshops, conferences, and countless conversations.

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The book builds and borrows directly from many of our previously published articles and public presentations. We directly draw from the following:

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Note on the Text

All books run the risk of seeming dated the moment that they're finished. The pages end but time marches on. This risk is especially pronounced with books like ours that discuss technology. We submitted the manuscript for *Re-Engineering Humanity* in the fall of 2017, knowing that publication was scheduled for the spring of 2018 – a gap that can seem like an eternity in tech-time. We hope our readers appreciate this basic publishing constraint and recognize that our goal is to start a conversation about fundamental issues that have enduring relevance.

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