



Technology Run Amok
Crisis Management in the Digital Age

IAN I. MITROFF



Technology Run Amok

Ian I. Mitroff

Technology Run Amok

Crisis Management in the Digital Age

palgrave
macmillan

Ian I. Mitroff
Professor Emeritus
University of Southern California
Los Angeles, CA, USA

ISBN 978-3-319-95740-1 ISBN 978-3-319-95741-8 (eBook)
<https://doi.org/10.1007/978-3-319-95741-8>

Library of Congress Control Number: 2018948652

© The Editor(s) (if applicable) and The Author(s), under exclusive licence to Springer International Publishing AG, part of Springer Nature 2019

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Cover credit: Head & Phone Image © rudall30/Getty Images Security Camera Icon

© Artdabana/Noun Project

Cover design by Tjaša Krivec

This Palgrave Macmillan imprint is published by the registered company
Springer Nature Switzerland AG

The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

*This book is dedicated to Donna Mitroff, my constant companion,
best friend, and loving wife of 54 years. It would not have been possible
without our daily conversations. They are a joy forever!*

Preface

The Great Transformation/Revolution: The Triumph of Technology

The eminent British writer and scientist C. P. Snow said it best:

Technology...is a queer thing; it brings you great gifts with one hand and it stabs you in the back with the other.

Nicholas Carr did as well:

...More than two decades into the internet revolution, we now know that 'technology is an amplifier' for humanity's worst traits as well as our best. 'What it doesn't do is make us better people.'¹

The enormous transformation for good and bad that is taking place all around us due to the unrelenting advance of technology and its unparalleled effects on our lives is the central topic of this book. It's nothing less than a revolution of monumental, if not cataclysmic, proportions. For many, it represents the clear triumph of technology over the human spirit.

This transformation qua revolution affects every aspect of our bodies and minds, the nature of communication, how we feel about and relate to others and ourselves, and not least of all, the meaning and structure of our basic institutions. Most important of all, it's altering the fundamental nature of reality itself. It's thus no exaggeration to say that the current transformation/revolution is among the greatest that humankind has ever experienced, if not the greatest.

This is not to deny in the least all of the positive benefits of technology. At its best, it's improved our lives in every way possible. We live longer and healthier lives because of technology, not to mention the greater ease with which we communicate and travel.

At the same time, there's no doubt whatsoever that the influence and impacts of technology are more pervasive and invasive than ever before. All of the incredible gadgets we've invented are not only transforming the world, but even more, they are reinventing and transforming us as well.

Unlike old-fashioned, bulky TVs, we not only carry today's technologies around with us everywhere we go—indeed, we're inseparably welded to them—but their demands are relentless. Not only have they disrupted our lives, but even worse, by constantly intruding and thus discouraging us from engaging in ordinary discourse and participation in civic affairs, they subvert normal democratic processes.

What makes the current transformation/revolution so different from others is that it's systemic. It affects every aspect of our being. Our lives have not only become deeply entangled with some of the most complex, messy systems ever created, but they have become literally synonymous them. For this reason alone, we need to have a far better understanding of the complex, messy systems that are affecting us in every way possible. This understanding is one of the primary aims of the book. My fervent hope is that it will allow us to gain a greater control of technology for the betterment of humankind.

In a word, the ethical management of technology needs to be given the highest priority. We cannot continue to dump the latest, great innovations and technologies on the world, and then afterward clean up their less than desirable effects. We have no choice but to do a far better job of thinking about, and thus mitigating, the negative aspects that

accompany all technologies, especially before it's too late to do anything significant about them.

Time and time again, the history of technology shows that all technologies come with negative effects and consequences. More often than not, they are used in ways not envisioned by their creators. Not only are they abused, but they are misused in fundamental ways. Worst of all, far too many don't even want to think about the negative aspects of their prized creations. For instance, Facebook is one of the most prominent examples of our failure to anticipate the negative effects of social media on young people. Unfortunately, with its wanton display of horrific images, YouTube is just as bad, if not worse.

In brief, everything created by humans has unintended negative effects and undesirable consequences. This doesn't mean that we should thereby abandon the constant search for new and better technologies, but that we have to be constantly on-guard against the unintended negative effects and undesirable consequences of our wondrous creations. We have no choice but to do a much better job in anticipating and mitigating the ill effects and consequences that accompany all technologies.

To accomplish this, we not only need to have a far better understanding of the complex, messy systems that we're creating at an ever-increasing rate, but we need to put our knowledge into practice. In accordance with one of the prime tenets of the philosophical school known as Pragmatism, we don't really know something until we attempt to put what we think we know into practice to correct a series of problems that stimulated our search for knowledge in the first place. As an important aside, being "practical or pragmatic" as is the byword of many technologists is not the same as being philosophically reflective as Pragmatism constantly urges us to be.

Both the nature and the effects of technology cannot be understood apart from the complex, messy systems of which (1) they are fundamentally a part, (2) other systems with which they influence and interact, and (3) others that they are instrumental in bringing into being. In brief, understanding complex, messy systems is itself complex and messy. To further our understanding, I have drawn widely from such fields as argumentation, crisis management, nuclear strategy, psychoanalysis, philosophy, and Systems Thinking, to mention only a few.

Because I'm highly critical of the role that technology plays in contemporary society, I cannot emphasize enough that as someone with advanced degrees in engineering, I am anything but inherently hostile to it. Rather, I am extremely critical and highly skeptical of the mind-set of many technologists. In my view, they are not sufficiently aware of the serious crisis potential of their creations. They are neither inclined nor basically equipped to think about the negative social impacts of their inventions. And, of course, with so much money at stake, there are little incentives to dwell on, let alone contemplate seriously, the negative aspects and impacts. I am especially critical of the fact that never before have so few technology companies had the power to influence literally billions of people to their considerable advantage and profit.

In sum, this is not a simple book about simple ideas. While my intent is clearly to expand the thinking of readers so that we can all understand and cope better with technology, I have tried to make key concepts and ideas as accessible as possible. To accomplish this, I've used a wide variety of examples, many of which relate directly to technology as well as those that at first glance do not. Indeed, the later often illuminate important aspects of technology that the more obvious examples do not.

Crises of Unimaginable Proportions

One of the prime contentions of this book is that in addition to making our lives incomparably better in every conceivable way, the transformation/revolution we are undergoing threatens to bring crises of untold proportions. One cannot tinker with literally every aspect of our being and reality itself on scales not attempted before without producing major crises. In this sense, technology is now one of the greatest threats facing humankind. For this reason, a far greater understanding, and application, of crisis management is vital in coping with the crises brought about by our extreme dependence on—even worse, our deep addiction to—technology. I cannot stress enough that we cannot

continue to dump the latest great technical innovations on the world and then later clean up their less than desirable effects. And, we cannot put the burden mainly on parents to monitor and protect their children from the harmful effects of technology, especially when they are up against some of the most powerful technology companies ever created. We have to do a far better job in anticipating the negative effects of our wondrous creations and doing everything in our power to mitigate their worst consequences.

However, before we can apply what we know from crisis management in dealing with the innumerable crises brought about by technology, we first have to understand as clearly as we can both the nature and the scope of the crises we face. Nevertheless, the crises cannot even be identified, let alone dealt with properly, independently of the complex, messy systems of which they are a part. Once again, we have no choice but to understand complex, messy systems far better than we have. As we shall see, this necessitates a substantial revision and expansion of previous ideas and knowledge about crisis management. It also requires a major revision of our thinking about systems. If we are truly to be able to see and deal with the potential crises facing us, then we have to involve a greater number and variety of factors that have been considered thus far in traditional discussions of Systems Thinking, and hence, crisis management.

For one, it requires that we understand the nature of paradox, for complex, messy systems are riddled through and through with fundamental paradoxes. For instance, bigger or more of something that is beneficial in the small is not always better in the large. Indeed, in many cases, Less is More. Hence, before we can manage them properly, we need to understand the paradoxes that plague complex, messy systems.

We also need to have a much better understanding of the psychological factors that are both basic parts of and impact complex, messy systems. In essence, they are infused with and impacted by powerful forces, many of which are beneath the level of consciousness. And once again, we need to surface and understand the fundamental belief system that undergirds our endless fascination and obsession with technology. I call it The Technological Mindset, a topic I explore in depth.

Previous Revolutions

Technology has always changed society in important, and in many, if not most cases, in unforeseen ways. For instance, the use of movable type to create the Guttenberg Bible not only changed what, but how we read. Most significant of all, it altered fundamentally how we interacted with our fellow beings.

Before Gutenberg, scribes painstakingly produced books one at a time. As a result, only the very rich and powerful institutions such as the Church could afford to have them. Since books were so rare, the few that were available were read aloud to small groups and audiences. In this way, books were an integral part of a long-standing oral culture where telling stories was not only the norm, but the principal way in which information was communicated. Stories were not only synonymous with information, but with knowledge itself. (Interestingly enough, with the advent of so-called social media, we've reverted to storytelling as the primary mode of communication and knowledge.) Thus, it's not surprising that the first printed books were also read aloud in small groups. Nonetheless, as they became less expensive, and thereby more widely available, over time people retreated to private spaces and became solitary readers—thereby continued the long line of separating and isolating us from our fellow man.

And of course, the first widely available books were strongly opposed by the clergy, for in effect they were displaced as the sole interpreters of the word of God. As we shall see, technologists have become the “new priests”—at very least, a “higher caste”—in that they not only play a fundamental role in the creation of new technologies, but a crucial role as their intermediaries.

Although the wide availability of books greatly impacted how we interacted with one another, they did not change the basic internal structure of our brains. With the advent of dime-store novels early in the twentieth century, there was considerable worry that they would harm the brains of impressionable young girls. New developments have always aroused fears and sparked resistance, often intense.

One of the things that's crucial about today's transformation/revolution is that current, not to mention future, technologies both promise and threaten to change the very structures of our minds, bodies, and social institutions—society itself—from top to bottom, from the outside-in, and the inside-out.

The Industrial Revolution

To take another, the Industrial Revolution did more than merely transform the meaning and the nature of work, which it undeniably did. It also did more than make transportation more efficient and speedier. It basically uprooted people from small villages in the countryside in which they lived side by side for centuries and forced them into dirty, dangerous, foul-smelling factories and even worse dwellings in cramped cities. For millions of people, it broke as never before the long-standing bond between humans and nature, and most of all, from one another.

In sum, the Industrial Revolution altered fundamentally our basic picture of the world. It was no longer a living organism governed by natural rhythms. Instead, it was a machine that was ruled other machines, most notably, rigid, unforgiving clocks that announced when it was time to rise, go to work, eat, and sleep. In essence, everything was nothing but a machine, although some such as humans and other animals were undeniably more complex than others.

A More Recent, Modern Invention

Consider a more recent, modern invention. There is no doubt that the advent of air conditioning in the twentieth century separated humans even further from one another. Before the widespread availability of air conditioning, on hot nights, people congregated on porches or steps in front of their houses. They not only conversed daily, but as a result, got to know one another. If not always for the better, they were intimately

connected. (In a word, they were “connected” in ways far different from how Mark Zuckerberg conceives of it. They did not leave innumerable “posts,” but instead spoke directly to one another.) Air conditioning changed all of this as people retreated to the relative comfort and isolation of their individual homes.

An Obligation to Learn from the Past

The objection is often made that no one could have foreseen all of the effects, both positive and negative, produced by previous revolutions. This is of course true to a degree. But this doesn’t mean that we’re not obligated to learn as much as we can from past efforts and mistakes so that we might better anticipate and avoid future ones. After all, we’re supposed to be learning creatures par excellence.

The Current Tech Revolution

Learning from previous revolutions is made all the more important by the fact that nothing is like the current transformation/revolution we are undergoing. It both promises and threatens to alter every aspect of our being. It’s already changed fundamentally how we communicate. Fewer and fewer of us, most notably young people, are brave enough to engage in unscripted conversations, one of the prime hallmarks of what it’s meant to be human. For who knows what will occur in unpredictable circumstances? Do we dare risk offending anyone by not carefully planning what we’ll text/tweet in 140 words or less?

In this regard, the results of recent studies in the UK are extremely disturbing.² They show unequivocally that social media are a serious threat to the mental health of young people. They only deepen feelings of inadequacy and anxiety. As a result, the UK is seriously considering passing laws that would restrict the content to which young people are exposed on the Internet, as well as apps for so-called smart phones.

In every way possible, the new transformation/revolution is not confined to the surface of our lives. It reaches to the very depth of our

brains, bodies, in short, what's left of our souls. Even more, the threat to replace us with robots that can do everything quicker, cheaper, and more efficiently than humans can or want to do is all-too-real. To say that this is making a whole new slew of crises more likely, widespread, costlier, and deadlier is putting it mildly. For instance, how will society cope with the millions who make their current living by driving cars and trucks if they are replaced by driverless vehicles? Giving people a guaranteed income is not the answer since robbing people of work deprives them of their basic sense of dignity and purpose.

The point is often made that driving is both dirty and dangerous, and that therefore freeing people from it by utilizing better technology will be a boon to humankind. While I might agree with this in the long run, transitioning to driverless cars and trucks without offering people good replacement jobs is precisely one of the societal crises with which I'm concerned.

The Technological Mindset

This book not only examines the nature of the transformation we are undergoing, but most of all, it surfaces and critiques the underlying state of mind that is responsible for the revolution that is changing everything like nothing before it. Again, I call it The Technological Mindset. Examining it is a task of the upmost importance. Indeed, it's mainly responsible for the crises that are the direct result of our extreme dependence on, and even worse, our unbridled addiction to, technology.

Although it differs in key respects, The Technological Mindset bears a very close resemblance to what's been previously called Technological Utopianism. Nonetheless, The Technological Mindset is not merely an updated version of Technological Utopianism. It not only reaffirms earlier components, but it adds new ones as well. To repeat, the reach of technology is not only more pervasive—indeed, inescapably so—but more deeply invasive as well. For this reason alone, it constitutes a major threat facing humankind.

The key tenet of Technological Utopianism is: Technology is not only the solution to all our problems, but it's absolutely essential for human

progress. This is aided by the firm belief that everything about technology is positive. As such, it must be strongly protected from any and all interferences from outside forces. Were it not for the heightened dangers that such beliefs pose, they would be little more than naïve. The key point is that The Technological Mindset is even more ominous.

I am especially critical of the notion espoused by many that, as we always have on previous occasions, we will somehow find ways to adapt to technology. Why should humans always be the ones to adapt to technology rather than the other way around? Does technology occupy such sacred ground that humans must every time adjust to it instead of it adjusting to us? What's the point of technology if it's not to serve humans and make our lives better?

I also take strong issue with the division of the world into Techno-Optimists versus Techno-Pessimists. Such a division is far too simplistic. I'm both and neither. If anything, I'm a Techno-Realist.

Closing Remarks

The great transformation/revolution we are experiencing is the result of the confluence of several major factors that have come together at this particular point and time in history. The first is not only the unrelenting pace of the development of new technologies, but their sheer numbers, pervasiveness, and invasiveness. The second is the underlying state of mind—The Technological Mindset—that is the driving force behind the unparalleled explosion of technology. A third is the underlying culture of startups and the predominantly male attitudes that they embody, namely a general lack of social maturity and the accompanying attitude of little if any concern with the societal impacts of technology. It therefore comes as no surprise that there is a marked inability and unwillingness to consider the negative consequences of one's prized creations.

It also comes as no surprise that serious concerns with the social responsibilities of businesses are essentially missing from the vocabulary of too many technologists. The unwillingness to consider negative consequences and the lack of concern with social responsibility are two of the prime components of "The Technological Mindset". Unfortunately,

unless one considers the negative along with the positive, there is little hope of mitigating the worst of their effects.

Finally, while this is primarily a book about the tremendous impacts of technology on our lives, it's also fundamentally about the connections between technology and the larger society. Technology neither exists nor operates in a social vacuum. Indeed, it can't exist independently of all the human institutions that both nurture and sustain it. To reiterate an earlier point, while I have tried in every instance to use examples that pertain directly to technology, I've also used many that relate to much broader concerns. In many cases, they better illustrate the main points of the book. Nonetheless, as we shall see, all of the examples do relate to technology in important ways.

In sum, this book is not only about *Technology Run Amok*, but a world that is increasingly out of control as well. It's about the interdependencies between technology and society, human concerns in the broadest sense of the term.

Berkeley, USA

Ian I. Mitroff

Notes

1. Nicholas Carr, "Connection Can Breed Contempt," cited in *The Week*, May 5, 2017, p. 16.
2. "Facebook and Twitter Harm Young People's Mental Health," <https://www.theguardian.com/society/2017/may/19/popular-social-media-sites-harm-young-peoples-mental-health>.

Acknowledgements

I wish to thank Myles Thompson for his helpful comments on earlier drafts of the book.

Let me also thank Dr. Maureen Franey for the many fruitful conversations we've had concerning the broad applicability of the ideas of Melanie Klein to society as a whole, and not just to individuals for whom the ideas were originally developed.

David Ing and Susu Nousala helped with the many invaluable discussions we've had concerning wicked messes.

Lastly, I want to acknowledge Murat Can Alpaslan for his numerous contributions to my thinking over the years.