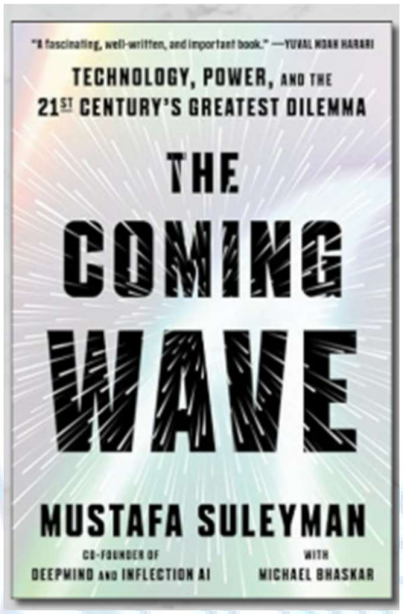
Book Reviews

The Coming Wave: Technology, Power, and the Twenty-First Century's Greatest Dilemma

Author: Michael Bhaskar and Mustafa Suleyman



Reviewed by Lokesh Swami

In The Coming Wave: Technology, Power, and the Twenty-First Century's Greatest Dilemma, Mustafa Suleyman and Michael Bhaskar present a bold and urgent narrative about the dual-edged power of emerging technologies. Focused primarily on artificial intelligence (AI) and synthetic biology, the book examines how these innovations will shape the future, presenting both transformative opportunities and existential risks.

Suleyman, a co-founder of DeepMind, offers a unique insider perspective into the technology industry, complemented by Bhaskar's thoughtful narrative structure. Together, they argue that humanity stands at an unprecedented crossroads. As we unlock technologies with capabilities that rival "godlike powers," we also risk destabilizing the foundations of global governance, ethics, and security. The coming wave of technological change, the authors warn, demands our immediate attention and a deliberate approach to management and

containment.

A Historical Lens on Technological Waves

One of the book's most striking features is its historical framing of technological waves. Suleyman and Bhaskar take readers on a journey through humanity's past, exploring how each major technological revolution—from the discovery of fire to the industrial revolution—reshaped society in profound ways. These historical examples serve as a reminder of technology's transformative power, but they also underscore the unintended consequences that often accompany progress.

For instance, the industrial revolution brought remarkable economic growth and improved living standards but also led to environmental degradation and widespread inequality. Similarly, the advent of nuclear technology brought the promise of clean energy but also the threat of annihilation. Suleyman and Bhaskar argue that the current wave, driven by AI and synthetic biology, is even more consequential. Unlike past technologies, which were often limited to specific applications, these innovations are omni-use and can be applied across nearly every domain, from healthcare to warfare.

This historical perspective provides a compelling backdrop for understanding the scale and complexity of the challenges posed by the coming wave. It also reinforces the authors' central argument: while technological progress is inevitable, its trajectory is not, and we must act decisively to shape its impact.

The Containment Dilemma

At the heart of the book is the "containment problem," a term the authors use to describe the difficulty of regulating technologies that are inherently designed to proliferate. Containment, as defined by Suleyman and Bhaskar, refers to the ability to monitor, control, and potentially restrict the use of powerful technologies to prevent misuse or catastrophic outcomes. However, they argue that containment is becoming increasingly difficult due to several key factors.

First, the pace of innovation is outstripping the ability of regulatory frameworks to keep up. AI systems are evolving rapidly, with capabilities that were once the realm of science fiction now becoming commonplace. From deepfake videos to generative AI models capable of producing human-like text, the potential for misuse is vast. Synthetic biology presents similar challenges, with breakthroughs in gene editing and bioengineering enabling the creation of engineered organisms that could revolutionize medicine—or be weaponized.

Second, the democratization of access to these technologies exacerbates the containment problem. Unlike nuclear weapons, which require significant resources and state-level support, AI and synthetic biology tools are becoming increasingly accessible to individuals and small groups. This democratization raises the specter of "asymmetric proliferation," where rogue actors or non-state entities could use these technologies for malicious purposes.

Third, the economic and geopolitical incentives driving innovation often conflict with efforts to prioritize safety and ethics. Suleyman draws on his experiences at DeepMind to illustrate how competitive pressures in the tech industry frequently prioritize speed and profitability over long-term consequences. The same dynamic is evident in synthetic biology, where nations and corporations are racing to develop breakthroughs in areas like gene editing, often with little consideration for potential risks.

A Vision for Responsible Innovation

Despite the daunting challenges outlined in the book, Suleyman and Bhaskar offer a hopeful vision for how humanity can navigate the coming wave. They propose a ten-step framework for addressing the containment problem, which includes measures such as:

- Developing robust international treaties to govern the use of AI and synthetic biology.
- Promoting interdisciplinary collaboration between technologists, policymakers, and ethicists.
- Embedding ethical considerations into the design of new technologies.
- Raising public awareness about the risks and benefits of emerging innovations.

One of the most thought-provoking aspects of their framework is the emphasis on striking a balance between openness and control. The authors advocate for a "narrow path" approach, where technologies are neither entirely unrestricted nor overly regulated. This middle ground involves creating layered safeguards that operate at multiple levels—technical, societal, and legal—to mitigate risks without stifling innovation.

The Ethical Imperative

What sets The Coming Wave apart from other books on technology is its focus on the ethical dimensions of innovation. Suleyman and Bhaskar argue that technological progress must be accompanied by a democratization of responsibility. This means ensuring that the benefits of innovation are distributed equitably and that all stakeholders—including marginalized communities—have a voice in shaping the future.

The authors raise important questions about the societal implications of emerging

technologies. For instance, how can we ensure that AI and synthetic biology are used to address global challenges like climate change and poverty, rather than exacerbating existing inequalities? How do we balance the needs of innovation with the imperatives of justice and fairness? These questions are explored with depth and nuance, making the book a valuable resource for anyone grappling with the ethical implications of technological progress.

A Personal and Reflective Narrative

Suleyman's personal experiences add a layer of authenticity to the book. He shares candid anecdotes from his career, including moments when he struggled to persuade industry leaders about the risks of AI. These stories highlight the cultural and psychological barriers to addressing the containment problem, such as complacency and short-term thinking.

One particularly poignant moment is Suleyman's reflection on the "pessimism aversion" he encountered among his peers. This term describes the tendency to downplay risks and focus on the positive aspects of technology, even in the face of clear evidence to the contrary. By confronting this mindset, the book challenges readers to engage with uncomfortable truths about the coming wave.

Strengths and Limitations

The greatest strength of The Coming Wave is its clarity and accessibility. Despite tackling complex topics, the authors present their arguments in a way that is both intellectually rigorous and easy to understand. Historical analogies and real-world examples help ground abstract concepts, making the book relevant to a broad audience.

However, the book is not without its limitations. Some readers may find the emphasis on containment overly pessimistic, as it risks overshadowing the transformative potential of AI and synthetic biology. While the authors discuss the positive applications of these technologies, such as accelerating medical research and combating climate change, these sections are relatively brief compared to the extensive focus on risks.

Additionally, the proposed solutions, though well-intentioned, may seem idealistic given the fragmented nature of global politics. Achieving international consensus on technological governance is a formidable challenge, as evidenced by the slow progress on issues like climate change and data privacy.

Conclusion

The Coming Wave is a masterful exploration of the challenges and opportunities posed by emerging technologies. Suleyman and Bhaskar succeed in presenting a balanced and thought-provoking narrative that challenges readers to confront the dual nature of innovation.

By blending historical analysis, personal insights, and actionable recommendations, the authors craft a roadmap for navigating the complexities of the coming wave. Their call for proactive governance and ethical foresight resonates as a powerful reminder of what is at stake.

As humanity stands on the brink of a technological revolution, The Coming Wave offers a timely and necessary guide to steering the future toward progress while averting catastrophe. This book is not just a critique of technology but a clarion call for collective action. Suleyman and Bhaskar's insights will not only inform but also inspire readers to think critically about the role of technology in shaping our collective destiny.

ABOUT THE REVIEWER

Lokesh Swami is a qualified professional in the field of politics. With a Bachelor's degree in Political Science from Delhi University and a Master's degree from Jawaharlal Nehru University, Lokesh has a strong educational background. He has previous experience working on international research project with Stanford University and serving as a teaching associate for Political Theory and Constitutional Law at the Lal Bahadur Shastri National Academy of Administration. Lokesh is now based in Rajasthan as an independent researcher, where he is dedicated to conducting impactful research and making a significant impact in both academic and professional communities.