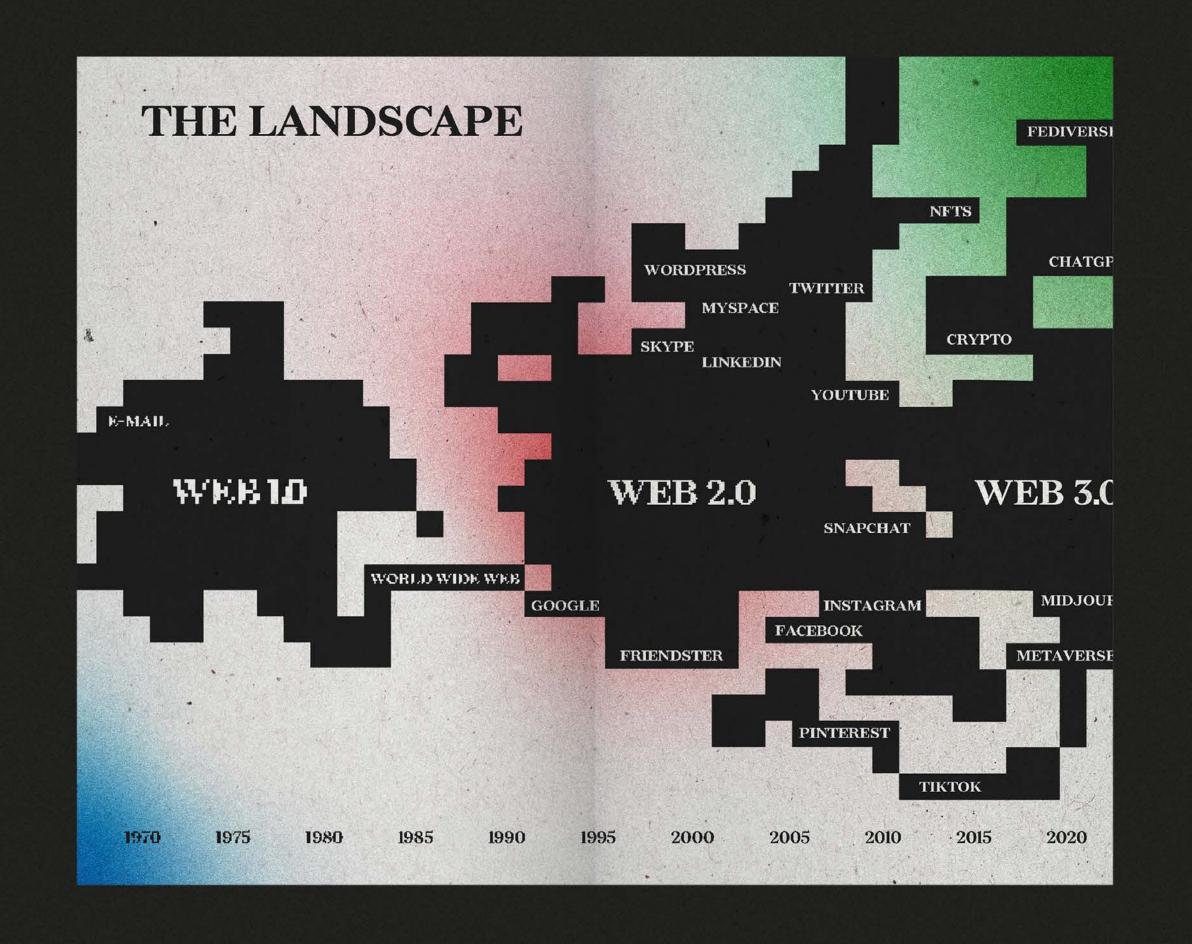


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As long as humans have existed, so has technology. From the wheel to modern computers, technological development has been an essential characteristic of civilization. Borrowing from philosopher Marshall McLuhan (1911-1980), technology can be considered anything that is an extension of humans. There have been technological revolutions, such as the Agricultural Revolution and Industrial Revolution, which ran their courses in tandem with scientific, cultural, intellectual, political and social revolutions. The relationships among these facets of humankind are inextricably connected, as our ideologies are reflected in technology as an extension of ourselves. The technological progress over centuries continues to grow exponentially. Progress since the Industrial Revolution is comparable to that of the entire preceding span of human history. The internet is among the greatest inventions we have seen thus far, expanding the ways that we interact with each other, even beyond what its creators imagined. The technology that the internet has given rise to has been unpredictable and unprecedented, and while the internet has been around for over forty years, we are still trying to understand the digital landscape it has created. As Web 3.0 emerges, we are not sure what developments will unfold, and we have concerns about what we have already seen. The lines between human and digital are now less clear than ever, and the landscape of the future of technology is blurry.

In an effort to survey this landscape, I met with four practitioners to discuss their histories, experiences, ideas, fears, hopes and dreams about what the future of technology could be. I hope that together, with intention and effort, we (you, dear reader, included) can choose to act with radical optimism in the face of uncertainty and traverse this blurry landscape together.

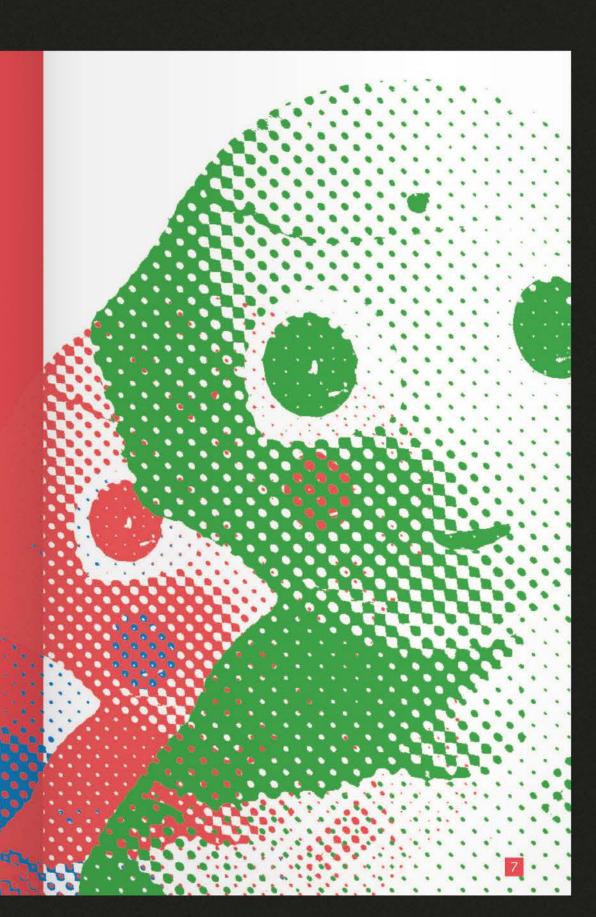


WITH SPECULATIVE DESIGNERS

ANTHONY DUNNE & FIONA RABY

The future is blurry. This seems to be true now more than ever when talking about technology. With the inundation of new technologies, significant updates and technological connectivity being ubiquitous, we are moving at a faster pace than ever before. Web 3.0, AI, robots, machine learning and quantum computing are all on the rise, while the majority of people (and governments) are not entirely sure what these all are, let alone what they entail What happens next is a question on a lot of people's minds. While an important question to ask, another more important one must be asked first: What happens now?

Anthony Dunne and Fiond Raby, the design duo more commonly known as Dunne & Raby, are always considering not only what happens next but what happens now. These two designers founded the field of speculative design, "where conjecture is as good as knowledge."



I spoke with the two of them as practitioners who have seen the landscape evolve firsthand and traversed the unknown, forging their own path for others to walk along. Anthony recalls that when he began his career, his department had one computer with one email account.

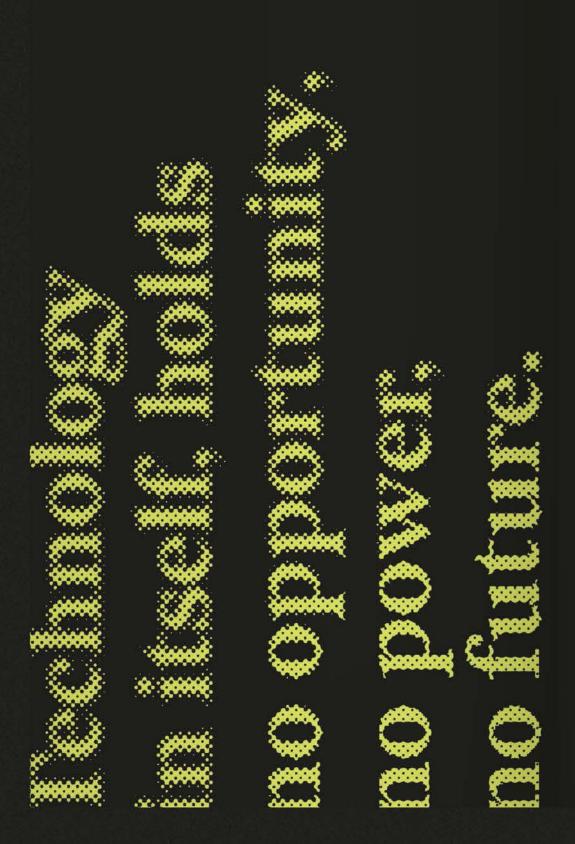
Speaking about the enthusiasm of that pre-World Wide Web era, he says:

_ There was a moment of optimism that, computers are going to empower us and create these spaces where people who are normally neglected for all sorts of reasons can get together and exchange ideas and build up their communities...And even on the physical side, which we're more involved in, we were thinking the electronic will enrich our interactions with the material world and add new dimensions and possibilities and so on. It started to become clear fairly quickly, that it's not really about technology, but the sorts of mindsets or worldviews driving technological development that have the power.

Dunne & Raby, as speculative designers, use the powerful language of design to imagine possible realities guided by alternative ideologies. They think beyond prescription and production in our current landscape to somewhere "not here and not now." Fiona Raby speaks to this in an inspiring way: "You can hold a whole idea through one small observation. If you could clarify it and link it back to these big systems, it's not [as though there is] suddenly this thing you can never connect with and understand."

present

preferable



Technology, in itself, holds no power, no opportunity, no future. Both the creators and users of technology, with our own experiences, biases, intentions and ideologies, impose our wills onto the technology and imbue it with capacity. Technology does not have innate qualities that dictate its trajectory. The fear that we encounter with the unknown future of technology is a fear based on what we do know, of history repeating itself. It's a fear of what we already see happening and, ultimately, a reflection of how we see ourselves collectively.

We have to imagine beyond the constraints of the current landscape we are in and the constraints that we can foresee within it. While the blurriness of the future can cause us to feel afraid and uncertain, what we do now is what will make the future. Rather than imbuing the future of technology with fear or—even worse—doing nothing, I implore that in the face of the unknown, we choose optimism.

The future is not one determined point in time but rather comes to fruition one moment at a time. The choices we make today, the ideas we hold, the things we create, the conversations we have, the tomorrow we dare to imagine today—these comprise the future.

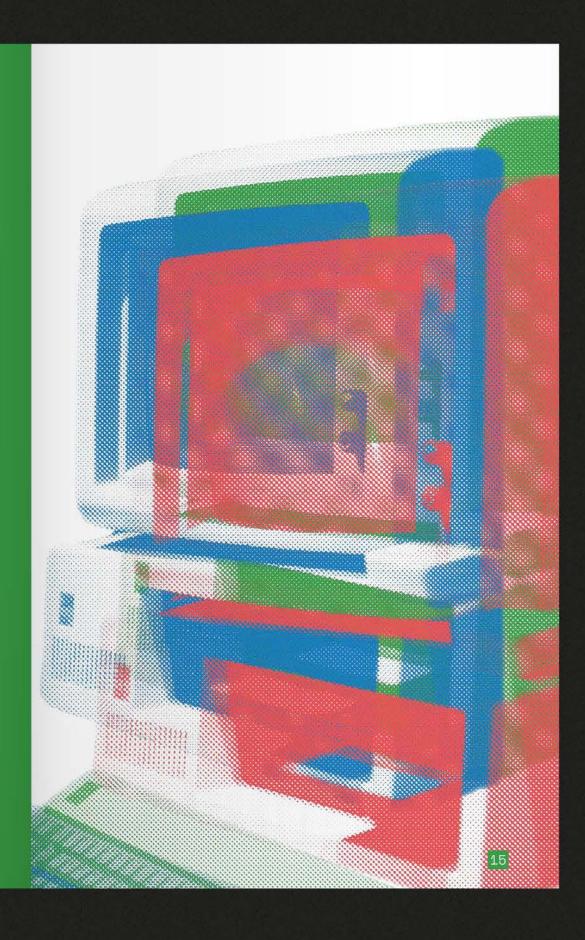
The future is now.

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TE ARE THE TECHNOLOG

WITH ARTIST + DESIGNER ADRIENNE CASSEL

I vividly remember the first time I was excited by new technology and amazed by what it could do. I was watching "Jeopardy!", as I used to, at 7 pm every weekday night, but there was something about this one night that would change my perspective on and relationship with technology forever. Instead of a human, in between the two other contestants was a computer named Watson. As I watched, Watson blew the other contestants out of the water, even the highest streakholder at the time, Ken Jennings. My middle-school self was in awe of the speed and accuracy with which Watson was spitting out answers, and I was even more intriqued by the sometimes inaccurate answers it delivered. I later learned that this was IBM's Watson, a deep QA model that would eventually set the precedent for IBM's current AI. For me, this wasn't another trivial, cool toy that, until then, had formed my understanding of technology, but it was a step toward the limitless. As one of the people I spoke with, Adrienne Cassel, remarked about their earliest memory of being excited by tech, "The sensation of it opened up the feeling of all possibilities because [engaging with it means] entering into the unknown of what is possible."



Adrienne is a 3-D arts and designer.
They perform as water lileth, working at PORTAL
the intersection of digital art, energing
tech, sound and performance art. Avatar
filith expires autonomy and remininity
in virtual and enusical paces through
audiovisual narratives and performance of
a preconceived future.

While reflecting on the most recent time we felt excited about the public and Limmediately sturted to or source ChatGPT. Released to the public of November 2020, ChatGPT is a large language model created by OpenAI.

As we relayed our experiences with the new tool, as well as our and others' concerns about it, Adrienne echoed an idea brought up in my conversation with Dunne & Raby: "These questions for me aren't really about technology, they're about the underlying foundation on which technology rests."

They go on further to say, "I think the in order to really understand how to love forward with emerging technology, we have to understand the level of abstraction that it sits upon—the dynamics or the undercurrents of our frameworks and our learned behaviors, and every connection that happens before think about the linear or horizontal movement of the future."

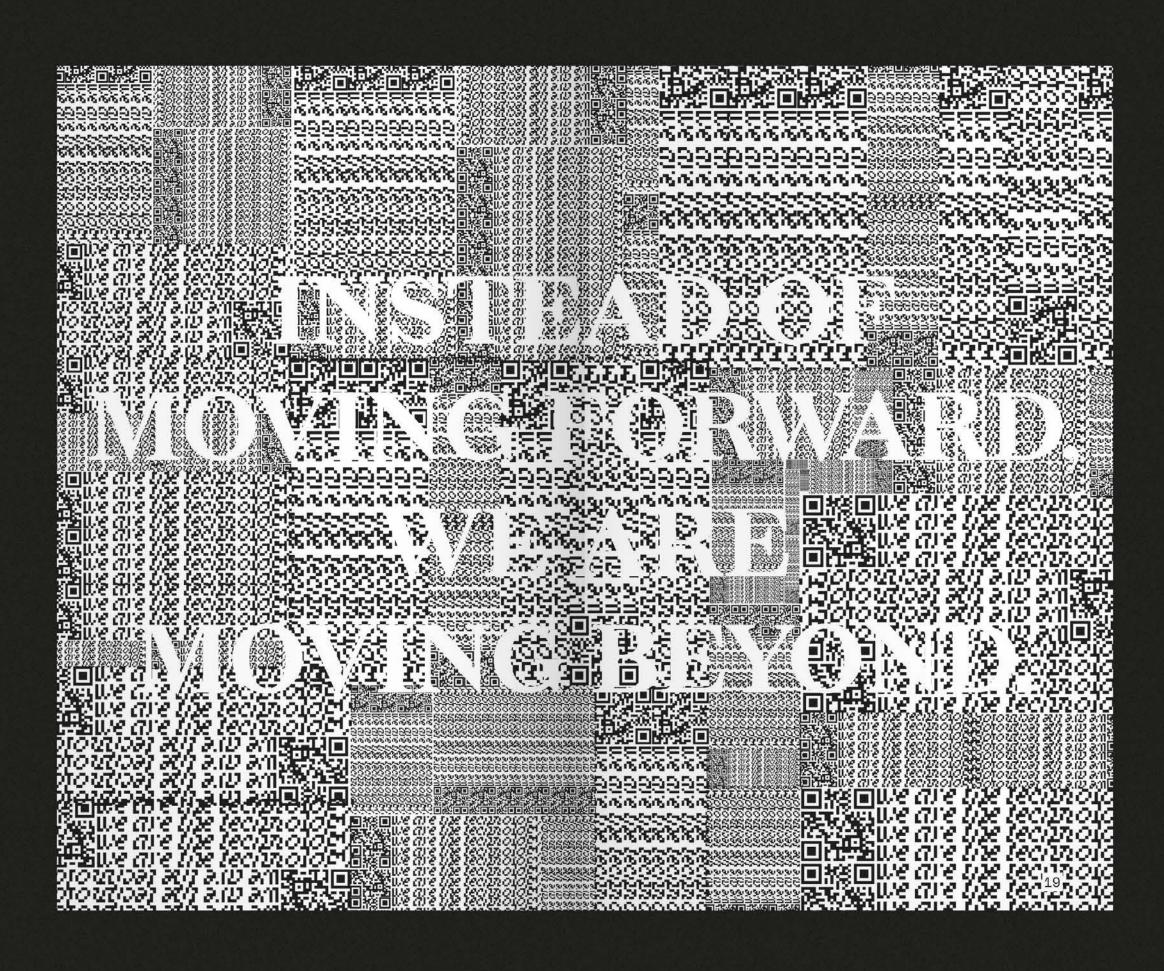
Before we can ever conjectore on the potentialities for the futtee of technology, it's crucial to dederstanding the basis upon which current technology is built, the industry around it and out personal relationships with it. Adrieure does this by "encouraging people to reject linearity, to reject binaries and

embrace multiplicities. And in doing so, people can start to truly understand how to enage with conflicting narratives and hold dissonance in their bodies. Because, really, we are the technologies—we (our spaces the generators of internal and external witton."

As our lives are continuously and progressively integrated with technology, we must consider our symbiotic relationships with technologies through multiple entry points. It is not enough to think, talk and postulate on the ways tech interacts with us (or we with it). Our experience with technology is embadied in our present relationships and interactions with it in our everyday lives. Technology is what moves us forward. Intention, awareness and reflection will allow us to imagine a technological future beyond the constraints we see today.

As Adrienne remarks so option: "Instead of moving forward... we're mying begind."

FOMESS MESS CINES MAIN TON BEIN "



WITH CULTURAL VISIONARY RUBY JUSTICE THÉLOT

Every day, a new shiny technological toy is put before us. These new technologies are often met with one of two reactions: amazement-induced technological amnesia that makes us immediately lose sight of potential negative impacts, or the complete opposite, an overwhelming fear of potential harm and the unknown. To resist the pull of these conflicting reflexes, I find it important to rebalance my perspective by looking at the present.

Cyber-ethnographer and cultural visionary Ruby Justice Thélot observes that "when something new is built, the engineer, the technologist, the technical evangelist, focuses on its future potential. The beauty of a promise is that you don't necessarily have to deliver on it, as it is always soon to come, whereas the consequences oftentimes are immediate and can be sort of analyzed right now."



In recognizing that technology in itself holds no capacity, we must be intentional about the stories we believe about it.
Ruby identifies a certain recurring superstitious narrative, remarking that the big tech industry "feeds off future narratives, narratives of growth.
It needs this potential in order to subsist."

"Imagine if you could..." This is a phrase I have heard thousands of times in presentations on emerging technology. But, more often than not, what follows is less of an imaginative prompt and more of an unrealistic expectation that won't be delivered upon. What if, instead, we were told what this technology could do now with the same excitement? In order to know where we are going, we need to know where we are. Ruby and I agree. "Clarity enables us to see technology for what it is," he says. "With each new piece of technology, ask: What is this? What can it do now? Who can use it now? And what are the immediate consequences? And when we talk about future possibilities, we need to root them in reality and not just language."

There is another, more insidious consequence that comes from many common narratives around technology that I intend to fight with my work: the lack of digital literacy. Big tech companies often obfuscate information when it comes to their technology. The people who control these narratives profit off ignorance (e.g., Apple's closed hardware ecosystem), and for these tech CEOs, ignorance among the masses really is bliss.

We, the targeted users of technology, want to maximize its potential for good in the world. Finding and spreading knowledge of what technology is (not just what it could be) is a crucial first step. When knowledge about technology is as ubiquitous as the technology itself, we can embrace the necessary criticality toward a future of technology we want to see. When we have access to knowledge and tech becomes demystified and approachable, we will find our own ways into technology and become digitally literate enough to think critically and use tech judiciously. Right now, the majority of widely accessible technology is opaque. Users know the inputs and outputs of these "black boxes" but nothing else.

I will leave you with a call to action Ruby has gifted to us:

My exhortation to individuals like yourself and myself is to find out what your specific skill within that realm is and use that to open or lighten a lot of these black boxes.

AND INTO

IS PROLOGUE

WITH ETHICS ENTHUSIAST DAVID CARROLL

Looking at the past and considering the future through a purposeful lens with the intent of taking action in the present make it abundantly clear that the landscape is not new. While the technologies of today are unprecedented, the issues that surround them are often too familiar. Looking backward, we see that the patterns of technological progress repeat themselves. Web 1.0 and 2.0 invited similar questions and quandaries, which have only compounded over time, but we need not make the same mistakes now that we know better. Technology is a reflection of ourselves as a society and as interconnected human beings. It amplifies the messages we send and the stories we tell. As we have struggled to address various societal ailments, including oppression, racism, classism, fascism and capitalism, their effects have manifested in our technology. Technology will not change itself. We must transform our society, and then changes to technology can follow. It's time we tell a new story.



The last person I spoke with for this piece is no stranger to opening black boxes or changing the narrative. David Carroll is an ethics enthusiast who sued Cambridge Analytica under the UK's Data Protection Act 1998 during the 2016 Facebook election scandal. When this legislation was passed, those who enacted it had little idea what its implications could be, as they could not envision how the technology would eventually be used. Carroll's story, told in the Netflix documentary The Great Hack, is a cautionary tale of what happens when we are not critical of technology from the very beginning. The film also teaches how to be critical at crucial junctures where the opportunity arises.

Carroll begins our conversation with a poignant sentiment:

Ethical technology would require its own mindset. It would have to be created by people who have this mindset and really, with great intent, try to imbue the technology with the mindset and that so that it emanates from it.

This idea of imbuing technology with our will is not new. German philosopher Martin Heidegger (1889–1976) famously addresses this in "The Question Concerning Technology." Carroll builds upon this with the idea that the imbuing is at the center of the technology that emanates outward rather than a reflexive permeation inward.

We are now seeing the response to the public's careless, unintentional and reflexive attitude toward technology, which has created "the energy for people to build the alternative," as Carroll says. He continues,

"We have to think about this sort of [in] the way that energy is dissipated in the universe."

At the center of all these conversations are insights into moving with a sense of direction. To move forward, we must look backward. We must move from within to understand the present, and we must choose to move forward with intention in each step we take. The future is blurry, yes. But what we do in the present paints the picture we want to see. As author Rainer Maria Rilke (1875-1926) puts it, "The future enters into us, in order to transform itself in us, long before it happens." What we do every day—choosing to learn, act and dream, to move confidently toward the unknown rather than stand still—that is radical optimism, now.

SIX LOVE,
RADICAL OPTIMIST

THOUGHTWATTER