

## Our Tools Write Our Stories

Why have homo-sapiens changed relatively little in the time since we split off from our hominin ancestors so long ago? If nothing special separates us modern humans from our early relatives, why did it take us thousands of generations over the course of hundreds of thousands of years to make what appears today as only a small fraction of our collective progress? Scholars theorize that a nuanced interplay between constraints like low population size, limited cultural transmission, and other environmental factors certainly could have slowed our ancestors in their march towards the exponential growth we see today. What allowed for exponential growth to emerge in the first place?

One central theme is that our technology acts to accelerate progress, creating a feedback loop. This leads to subsequent innovations which in turn trigger their own recursive cascade. Not only progress, but an acceleration in the very pace of human progress itself. Agriculture enabled a higher population, encouraging speedier cultural transmission alongside a need for large groups to work in unison, necessitating record keeping and... I think you get the idea. Soon after we found ourselves on the precipice of nuclear war and the digital revolution. *These technologies do not—and could never—exist in isolation. This necessitates a more thoughtful description than simply labeling them as value-neutral tools.*

Some scholars like Andrew Feenberg argue that discussing tools as cultural forces apart from their creators is misguided. “Technology is simply a tool or instrument of the human species through which we satisfy our needs”. For them, it feels like it does not add anything new to the debate to discuss tools as holding cultural sway. Speaking on the role of technology specifically Leo Marx stated “How can we reasonably think of this abstract, disembodied, quasi

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metaphysical entity, or of one of its artificial stand ins (e.g., the computer), as the initiator of actions capable of controlling human destiny?”. I hope my story has conveyed that there is invaluable insight which can be wrought from explicitly discussing how technology influences culture, humanity, and even itself.

Innovation does not happen in a vacuum. As Newton stated “If I have seen further it is by standing on the shoulders of Giants”. He was not talking about the likes of Copernicus or Galileo in isolation from their scientific findings. He was implicitly referring to the technology they developed which enabled him to then see further. It would not make sense to refer to those characters divorced from their academic findings. In contrast, if those very same findings had come to Newton devoid of an author, such that he had direct access to heliocentric theory, or Galileo's observational findings without knowing of their creators, he could have expanded upon their work nonetheless. In this case would it have been as illuminating to say he stood on the shoulders of giants? Maybe he could have simply stood on these prior technologies alone?

We do not know the artisan’s name who first took chisel to stone, or harnessed fire and we don’t need to. Many technologies have multiple disparate creators, separated by time and space. Some technologies have been lost, never to be rediscovered. Others may have only temporarily been lost, later to be found. In such a multifaceted system, how can one hope to convey appropriate meaning without orienting the conversation with respect to how all the numerous factors influence one another? I posit that we can’t. Technology *causes further* technology, culture and value-laden effects on humans. The human factor is crucially important, but it is not the full story and it *never* even could have been. We are as much at the mercy of technology as it is at the mercy of us.