Technology Innovation and Improvisation: Rhetoric and Reality

Over the past several decades, the phenomena of technology, innovation, and improvisation have come to constitute a kind of holy trinity, each basking in the reflected glow of the other, appealed to with an order of unquestioning faith more reminiscent of a catechism than anything resembling a wrestling with ideas. No matter the problem, technology will almost certainly be inserted into the conversation as the answer. Evidence that suggests the outlandishness of this presumption is often ignored; doubt and uncertainty are treated as signs of uncool, Luddite myopia—as an incapacity to appreciate the power of digital technology, first to transform the world and then to save it. We are in the face of a trend best described as technological fundamentalism.

Examples are legion. Consider this quote from a recently published book:

“Humanity is now entering a period of radical transformation in which technology has the potential to significantly raise the basic standards of living for every man, woman and child on the planet. Within a generation, we will be able to provide goods and services, once reserved for the wealthy few, to any and all who need them. Or desire them.”

History’s littered with tales of once-rare resources made plentiful by innovation. . . . Imagine a giant orange tree packed with fruit. If I pluck all the oranges from the lower branches I am effectively out of accessible fruit. From my limited perspective, oranges are now scarce. But once someone invents a piece of technology called a ladder, I’ve suddenly got new reach. Technology is a resource-liberating mechanism. Problem solved. It can make the scarce the new abundance.¹

Alas, history is also littered with tales of once-abundant resources made scarce by innovation. Innovations in fishing technology have led us to the brink of collapse of our global fisheries and to the extinction or near-extinction of popular species. Technology advances in agriculture and industry for the capture, use, and distribution of water have created tremendous scarcity in many regions of the world. Moreover, technology operates in a world where the enlightened ways it can be used are not necessarily the ways it is used. An especially vivid example of the complexities in the role that technology actually plays on the world’s stage is in laws related to gun sales. As of 2003, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) is barred from using an electronic database to organize its records, forcing the agency charged with enforcing gun laws to use a paper-based filing system; and inserted into the proposed Affordable Health Care for America Act was a provision forbidding federal health programs from collecting or disclosing information about firearm ownership.² In consequence, the formidable capacities of digital technology to collect, organize, and distribute information of vital importance to grasping the extent of access to guns is sidelined, in striking contrast to the use of technology to provide virtually unlimited access to the purchase of guns. It is also worth reminding ourselves that if you want to see the most remarkable examples of technological innovation, don’t go to the Apple Store; go to the Imperial War Museum in London.

In the current claims for the vast transforming power of technology, emphasis is almost exclusively on methods of delivery, combined with a startling complacency about what is being delivered and with ubiquitous references to technology’s gift of innovation. Perhaps nowhere is the obsession with technology as a force in and of itself more evident than in the educational arena. Things that should matter most in addressing educational reform—the substance, quality, and purpose of what is being delivered—are largely ignored; the only subject warranting our attention, prompting our creative imagination, and requiring our leadership is whatever is needed to champion the latest technological wizardry in packaging whatever it is we currently offer.

Claims about the vast power of technology and the promise of harnessing that power to lead transforming innovative change have been repeated virtually verbatim for decades. Twenty years or more ago, leading philanthropic foundations took the position that those educational reform proposals that embraced the new technologies would be the ones given a serious hearing. These technologies were to be the source of transforming possibilities. Even more tragic than the limitations of what this focus could possibly produce was the loss of the many ideas that were never pursued. Far more worrisome than the misplaced emphases and oversimplifications is the stunning shutdown of our imaginative, intellectual, and ethical resourcefulness. Instead of shaping the uses of technology, purposes are shaped to fit what can be most readily reduced to IT mechanisms.

The presence of oversimplifications and unwarranted complacency is worrying enough; but what is left out is more so. Technological fundamentalism invites us to believe that transformations of possibilities—doing things that might make the world a better place—can be accomplished without imagination,
courtesy, uncertainty, and confusion and, most worrisome of all, without deeply considered purposes.

My quarrel is not with the potential value of technology or innovation or improvisation. My concern is the viewing of such complex phenomena as panaceas available on demand, accessible and valuable regardless of context, purpose, or capacity. In truth, when technology promises to extend the uses of our minds, this makes purpose, context, and capacity more, not less, critical. For example, when information technology is connected with a pedagogy of discovery rather than one of consumption, things change. So in a Bennington College curricular initiative driven by the purpose of advancing public action, we are embedding librarians in courses. Why? Because being inside the course enhances librarians’ capacity to assist all of us in finding what we need to know and to grasp the extent of what we don’t know. That matters a lot when we are working on issues for which no one has the answers and for which everyone is responsible for finding them.

Recognizing the importance of technology is very different from making technology, in itself, the consuming object of our attention. Indoor plumbing actually did transform lives, but that somehow did not promote endless talk about sinks and toilets. The Khan Academy is an elegant example of getting it right—all of the emphasis is on the value of what is being learned; the formidable uses of technology are kept pointedly invisible.

Insisting on the importance of what we are trying to do—the “so what?” question—has rarely been more challenging. We are living in a time when avoidance of content is a highly developed art. The rhetoric surrounding technology is by no means the only strategy for avoiding issues of substance. Our affection for expressions like “critical thinking” and “interdisciplinary” is another. By appending “critical” to “thinking” and by celebrating the mere presence of more than one discipline in the conversation, we are presuming that the quality of our thinking is independent of the content of our thought.

The evasion of content is most certainly not a dearth of issues rich in substance, urgency, and complexity—ranging from our predilection for the use of force to our timidity in addressing the environmental crisis. In areas where the United States once led—health, education, the quality of our public life—we are now plummeting. And at a time when clarity of thought and respect for evidence are especially critical, the sensationalism of the media—our other major educational institution—continues undiminished. The distance we have traveled is best measured by reminding ourselves that the Federalist Papers were originally published in just three New York newspapers and then, in response to popular demand, were published in newspapers throughout the colonies.

Education has an enormous role to play in this conversation. But that is not going to happen until we extend our idea of pressing problems beyond anxiety about the sustainability of our current financial models and until we stop expecting technology to “transform” our situation. The real forces that define the horizons for our faculty and our students are not Facebook, iPads, or MOOCs. The real forces are the silos that disciplines create and inhabit, the departmental structures that make the organization of knowledge an organization of power, the knowledge fragmentation that is an inevitable consequence, and the extravagant overvaluation of an increasingly narrow expertise.

At the moment, our use of technology in higher education serves to perpetuate this world rather than to challenge or transform it. Had we the courage and the imagination to address these issues, we would indeed have a shot at using technology in ways that would do justice to its formidable potential.

Notes

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