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The Indispensability of Technology: Conceptions From Turing, Albion, and Headrick

Although the nature of their arguments regarding technology varies, Alan M. Turing, Robert G. Albion, and Daniel R. Headrick's work each conclude that technology facilitates society's fundamental strive for innovative advancement and national prowess. First, Turing posits that the progression of technology will someday allow machines to indistinguishably imitate humans' thinking patterns. He demonstrates the "time-invariant" (Turing, 1950: 21) adaptability of machines and their technological coevolution with humans by suggesting that computers can be programmed to simulate a child's mind and be "taught" how to respond to cues. With increasing breakthroughs in technology, machines will not only be able to imitate men but "compete with [them] in all purely intellectual fields" (Turing, 1950: 22), becoming entities influenced by algorithms rather than "human fallibility" (Turing, 1950: 21). Moreover, Turing perceives human cognition and machines as already inherently similar since regulation "by laws of behaviour implies being some sort of machine" (Turing, 1950: 16). Hence, Turing believes that humans' unyielding desire for technological advancement will result in the machine becoming as lifelike and significant as man, its creator.

Whereas Turing believes in the autonomous power of technology, Albion focuses on the humanity-assisting aspect of technology as a means that fostered American society's social, political, and economic development. He claims that, in the 18th century, steamboats, railroads, and canals were integral in "knitting the country together and pushing the frontier westward"

(Albion, 1932: 2) since these channels of communication allowed citizens in geographically-vast states to exchange ideas and unite under one nation. The “rapid dissemination of news” (Albion, 1932: 2) codified the U.S’s centralized commerce and government systems at a time when its industries were still developing. Moreover, these technological developments in the “Communication Revolution” should be compartmentalized from the catchall era of the Industrial Revolution since they allowed for the establishment of the nation prior to labor-related inventions. Because technologies related to interpersonal communication allowed Americans to secure their outreach to widespread regions, Albion attributes these channels and tools to the reason why the U.S can continuously progress today and build on its achievements.

Likewise, Headrick highlights that “technological changes [are] indispensable” (Headrick, 1979: 5) in the bolstering of national power, particularly for the expansion of Europe in the nineteenth century. Rather than attributing the Europeans success to “adequate means” (Headrick, 1979: 5) and increased motives, Headrick believes that more credit should be given to the “superiority” of Western inventions such as steamboats, smokeless explosives, and rifle models. It was precisely the technologies employed by colonial powers that allowed them to conquer Asian and African empires since the weaponry and military tools of the latter were objectively less equipped to defend against attacks. Even if the “motivation was there,” they lacked the “advantage which technological innovation gave the Europeans” (Headrick, 1979: 24), proving how the prowess of machines and inventions surpass the need for physical human strength and ability. Further, the motives for expanding colonial power shape how citizens develop technology to serve their needs, and vice versa. Both Headrick and Albion perceive technology as a means, which then becomes an end in itself since the continuous strive for innovation allows a nation to gain technological power and thus, status on a global scale.

Works Cited

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