

Reading Guide – The Emergence of Computing Technology

This week we begin a new unit of the course, which explores the postwar configuration some historians call “the iron triangle” – better known as the military-industrial-academic complex. Over the next two weeks, we’ll explore the impacts of military funding and sponsorship on industry and science, on the workplace and the economy, and on culture and society. We’ll also examine American responses to the new world of big science, big government, and big industry.

Assigned Materials

- Paul Edwards, “Why Build Computers?” from *The Closed World: Computers and the Politics of Discourse in Cold War America* (1997) 43-74.
- Vannevar Bush, “As We May Think,” *The Atlantic* (July 1945) ~25pp.
- [Optional] Walter Isaacson, “The Women of ENIAC,” *Fortune* 170:5 (2014) 160-165.

Questions to Consider

Historian of information technology Paul Edwards raises a number of important questions about the emergence of computing technology in the chapter we read this week from his book *The Closed World*. The most central of these questions is “why build computers?” but to answer it, Edwards leads readers to several others: Why did the wartime union between the military, industrial, and academic sectors become a permanent one, rather than a temporary wartime measure? How did command, control, and communication become the combined goals of computing designers? Why digital, and not analog? And perhaps most importantly for our purposes, how did established social and cultural contexts shape the development of computing technology, and which cultural contexts were most important?

I don’t want to give you too much advance guidance on Vannevar Bush’s “As You May Think.” Treat it as a think piece, of sorts, and come to class with your own impressions. Edwards discusses Bush briefly in his chapter, assigned this week. There is also quite a lot of information about Bush on the internet (the seeds of which many find in his “memex” machine, described in this essay). Try to read Bush in the context of our class, and especially in the context of wartime and postwar collaborations between scientists in many fields.

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