

State Ideology and Computerized Modernity, 1950-1970

The computer of the 1950s and 60s was a powerful and somewhat remote symbol of technological modernity. Yet, like Woody Allen's *Zelig*, it showed an uncanny ability to reconstruct its perceived characteristics depending on its social and ideological context. This panel examines the divergent forms this took in three nations: Britain, Chile, and the USA. Hicks explores the use made of clerical computing as a tangible symbol of the "white heat of the technological revolution" promoted by Britain's labor government during the 1960s. Although the technology was supposed to erase existing class separations, its implementation ultimately reinforced them. Medina explores the parallel story of Chile in the late 1960s, arguing that the Christian Democratic Party created a distinctive model in which a centralized computing facility played a key part in state-led modernization campaigns. She contrasts this with an alternative and more "American" model adopted by other developing nations. Longo explores a variant American vision held by computing pioneer Edmund Berkeley, who opposed military involvement in computer technology and attempted to establish public control of computing infrastructure via the National Bureau of Standards. Berkeley also fought a losing battle to place social responsibility at the heart of the emerging computing profession. Finally, Robertson contrasts two important early users of computers within the US Cold War establishment, the RAND and MITRE think tanks, to argue that these institutions were pushed onto divergent trajectories by the timings of their origins, the interests of their early sponsors, and the Cold War culture of secrecy.

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Papers

- White Heat in the Office: Clerical Automation in Labor's Britain, Marie Hicks, Duke University
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Marie Hicks

White Heat in the Office: Clerical Automation in Labor's Britain

My paper will discuss the process of computers coming into British government offices in the 1950s and 1960s. I look at the process through the lens of labor, both in terms of the people who labored running the computers, and in connection to Labour Party politics and the "technological revolution" of the 1960s proclaimed by Prime Minister Harold Wilson that actually began under the Conservative government's postwar reign in the "13 wasted years" from 1951-1964.

The Labour Party touted new technology as able to destroy destructive aspects of British working culture: class antagonisms and cronyism would disappear in the "white hot heat of the technological revolution."

Presumably, all workers would be brought up to a similarly high level of skill and a better standard of living. The left-wing Anthony Benn, Britain's first Minister of Technology, was among those who imagined the ideal "industrial revolution in the office" as being markedly different from Britain's earlier industrial revolutions. At the same time, however, the prime focus was on efficiency and productivity through technological advance, aimed towards reinvigorating a war-ravaged society and a shrinking empire.

Through looking at the government's own work-productivity studies, cost-benefit analyses, and struggles with the labor unions, I argue that there was no "revolution" in efficiency with the introduction of computers in this period. I address the utopian aspects of Labor's white hot technological revolution ideal by discussing how in most cases, computerization reproduced existing worker hierarchies rather than destroyed them.

Eden Medina

Feeding the Bureaucracy, Technology for a Government of Advisors

On January 16, 1969, Chile's newly created State Computer Service Enterprise (EMCO) unveiled its first computing machine in an elaborate inauguration ceremony. Chilean President Eduardo Frei Montalva (1964-1970) attended the ceremony and delivered a speech linking the new machine to the creation of a modern state capable of "orienting, advancing, and coordinating all of its national activities." The president argued that tools such as the computer would help bridge the "critical difference" between Chile and the countries of the developed world and allow Chileans to capture the spirit of scientific and technological progress.

This paper analyzes how Frei and the Christian Democratic Party used computers as instruments and symbols of state modernity during the 1960s. It examines how ideas of directed state planning and rationalized order played into the state-led modernization programs promoted by Frei and the Christian Democrats, enhanced Chile's ability to acquire foreign aid, encouraged the application and regulation of imported computer technologies by the Chilean state, and fed the growing Chilean bureaucracy with punch cards and reams of paper. These state planning efforts, in turn, reinforced the values advanced by the Alliance for Progress and enabled the flows of foreign expertise and foreign capital into Chile. The paper also documents the origin of EMCO and discusses why the state control of computer resources appealed to Chile and other nations of the developing world.

Bernadette Longo

Computers for the Masses:

Edmund Berkeley and the Social Responsibilities of Computer Developers

Edmund Berkeley began his career as an insurance actuary in the early 1930s, having graduated from Harvard in mathematics. His work in logic and Boolean algebra led him to recognize the implications for improved human reasoning inherent in digital calculating machines, which were well suited for logic chains of true-false questions. He envisioned a world in which these machines would help people make better decisions and put his ideas to work in Aiken's Mark II lab during WWII. At the war's end, Berkeley was at the center of efforts to transfer computer technology from military to business uses and to integrate these digital calculating machines into popular culture. With others, Berkeley sought to shape a computing infrastructure in the model of a public utility for the common good. Working through the National Bureau of Standards, these advocates of social responsibility in computer development began establishing networks for sharing technology know-how across industries and private organizations. This social ideology did not prevail as the 1940s turned into the 1950s, but in the late 1940s it was still a possible model for integrating computers into civilian life. Berkeley continued to insist that computer developers had important social responsibilities and worked through committees of the Association for Computing Machinery (ACM) * which he helped to establish in 1947 * to put forward that social agenda. Ultimately, business perspectives prevailed in the ACM as well and Berkeley's larger social goals were sidelined. He continued advocating this position until the end of his life in 1988.

Laurie Robertson
Cold War Think Tanks and the Culture of Secrecy

Federally Funded Research and Development Centers (FFRDCs) emerged during the Cold War to provide expertise, advice, and conduct research on difficult topics of interest to their federal (primarily military) sponsors. Popularly known as think tanks, many of these non-profit corporate entities such as RAND, the Institute of Defense Analysis, and the Aerospace Corporation, still exist usually maintaining a very low-profile. This paper will explore how timing of their origins, the composition of their early sponsors, and the Cold War culture of secrecy affected and still affects their research programs and corporate culture.

In *Masks of War*, Carl Builder (a RAND researcher) argues that the various services have their own institutional personalities resulting from their mission, armament, and operations. In this paper I use Builder's thesis to extent Builder's thesis to FFRDCs. In addition, I situate their establishment in the relative "hotness" or "coldness" of the Cold War of institution's date of establishment. I examine how the combination of military sponsor and particular Cold War climate affected the culture and research of these entities – an effect which persists in these FFRDCs today.