

Undone Codes: Ethics in the ACM 1966-1992

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Gist of contribution for programme:

This paper examines the history of the Association of Computing Machinery's code of ethics and Computers and Public Policy Committee during the Cold War as a site of undone science.

From 1966, as the United States careened to the peak of civil unrest in that decade, to 1992, as the Cold War ended and the Democratic Party upheld information technology as a universal salve for the country's political economic malaise, computer professionals debated how computers shaped society and their professional associations' role as political actors. Specifically, these experts tussled over whether "politics" were part of the ACM's work and whether "codes" should regulate their work.¹ Throughout the Cold War, the Association for Computing Machinery (ACM), founded in 1947, dedicated committees to investigating the "social responsibilities" of computer people, the "social implications of computing," "professional standards and practices," and "computers and public policy" which grappled with the development of codes. Alongside other computer-focused professional societies, like the Association For Information Processing Societies (AFIPS) and Data Processing Management Association (DPMA), and other organizations of technological and scientific experts, like the Institute for Certification of Computer Professionals (ICCP), the ACM struggled to balance concerns about the social implications of emerging technologies with the politics of its members.²

Indeed, a close reading of archival material related to social responsibility, social impact, ethics, and professionalism, with special attention to the memos and correspondence exchanged

¹ For discussions of different kinds of codes in computing and politics, please see Yost, Jeffrey R., and Gerardo Con Díaz, eds. *Just Code: Power, Inequality, and the Political Economy of IT*. Johns Hopkins University Press, 2025.

² See: Ensmenger, Nathan. *The Computer Boys Take over: Computers, Programmers, and the Politics of Technical Expertise*. History of Computing. MIT Press, 2010, p 176-180; Haigh, Thomas David. "Technology, Information and Power: Managerial Technicians in Corporate America, 1917–2000." Ph.D., University of Pennsylvania, 2003.

<https://www.proquest.com/docview/305306390/abstract/F37F52C0B16F4334PQ/1>.

between those responsible for committees on these subjects, reveals an organization in the throes of intellectual crisis.³ One formal expression of how the ACM understood its role in society was through its codes of ethics. Beginning with a “Guidelines for Professional Conduct in Information Processing”—first adopted in 1966, and later replaced by the “ACM Code of Professional Conduct” in 1972 and an updated “Code of Ethics and Professional Conduct” in 1992—the ACM made strides toward professional cohesion in the form of general principals and mutually agreed upon purposes, but they often fell far short of addressing the vexing issues of social and political impact.⁴ Instead, abstract appeals to a member’s “proper regard for the health, privacy, safety and general welfare of the public in the performance of his professional duties,” as was expressed as point 1.1 in the 1966 Code, hardly encountered resistance from the ACM’s leaders or rank-and-file membership.⁵ The Association stumbled, however, when weighing when members and committees had standing to engage in political debates, or to what extent a “certification” would solve the problem of professional identity and the enforceability of ethics codes—and . Across nearly two-and-a-half decades, the ACM struggled to conceptualize, implement, and, ultimately, enforce codes of ethics and professionalism.

Our paper examines one of these tensions: the internal debates of the ACM’s “Computers and Public Policy Committee” (C2P2), from the 1970s through the late 1980s. Building on the work of Janet Toland, we contend that C2P2’s actions suggest that a Cold War liberal professionalism thoroughly shaped what the ACM saw as acceptable debate around issues like social responsibility, ethical work, and societal impact.⁶ Indeed, where C2P2 directed its attention became a regular source of debate for ACM members—and when the committee chose to focus on scientific freedom and human rights abuses in countries like the USSR or People’s Republic of China, ACM members wondered why C2P2 had not engaged with questions around the Civil Rights and Women’s movements in the U.S. The ACM was not alone in navigating this tension.

This was a tricky time for professional societies in America—civil rights activists implored the country’s organizations to do better by women and minorities; countercultures created new genres of thought leaders while pro-market gurus railed against government action, challenging the very notion of that there was “expertise” only certified professionals could possess; and recurring political upheavals, from mass protests against the Vietnam War to radical activism seeking to remake American institutions from within rocked the post-war administrative order in

³ Our work draws from archives at the Charles Babbage Institute at the University of Minnesota (including the papers of Donn Parker, AFIPS, ACM, George Glaser, and Donald MacKracken), The Bentley Library at University of Michigan (including the papers of Aaron Finerman, Bernard Galler, and the University Committee on Computer Policy and Utilization), and others.

⁴ Parker, Donn B. “Rules of ethics in information processing.” *Communications of the ACM* 11.3 (1968): 198-201. doi: [10.1145/362929.362987](https://doi.org/10.1145/362929.362987); Eric A. Weiss. 1990. The XXII self-assessment: the ethics of computing. *Comm. ACM* 33, 11 (Nov. 1990), 110–132. <https://doi.org/10.1145/92755.92780>; Association for Computing Machinery. “1992 ACM Code of Ethics and Professional Conduct.” 1992. <https://www.acm.org/code-of-ethics/1992-acm-code>.

⁵ Parker, Donn B. “Rules of ethics in information processing.” *Communications of the ACM* 11.3 (1968): 198-201.

⁶ Toland, J., ““Deeply Political and Social Issues”: Debates within ACM 1965–1985,” in Misa, T.J., *Communities of Computing: Computer Science and Society in the ACM*.

which professionals thrived.⁷ By the late 1970s, the ACM started C2P2, which condemned the suppression of scientists in the U.S.S.R. Led by Anthony Ralston, an MIT-trained mathematician who cut his teeth at Bell Labs before entering university life, C2P2 embraced the role as professional policeman of infringements upon “scientific freedom.” Meanwhile, Jessica Dragonette Gordon, faculty at Columbia University Teachers’ College, was surprised to read an ACM “Report of the Committee on Computers and Public Policy,” which made a public outcry against the oppressions of mathematicians and engineers in the Soviet Union when the ACM’s public stance was against making statements. In 1977, as states refused to pass the Equal Rights Amendment, Gordon observed that the ACM seemed hesitant to touch any “social and political issues at home,” yet it did “not hesitate to take strong positions on the social and political problems of other nations.” The ACM was an international body, but Gordon still argued there was a double standard at play: “I submit that that is hypocrisy,” she concluded.⁸ Gordon grappled with a contradiction at the heart of the ACM’s “undone science” of ethical and professional conduct in the 1970s: the organization’s leaders had hoped that codes of ethics and professional conduct would insulate it from the headwinds of politics. Politics, however, would prove inescapable for computer academics and professionals.

We investigate “undone science” by taking the collection of ACM ethics codes as our starting point and ethics-related debates within the ACM from the 1960s to the early 1980s as our object of study. While the ethics codes are a tidy object, they by no means encompass the entirety of ACM’s discussions about the social, political, and moral dimensions of the work, as our discussion above makes clear. “Undone codes” reveals how ACM efforts in the 1970s and 80s were shaped by liberal professional norms that left questions of political engagement and social responsibility unresolved.

By analyzing the ACM as a “network of scientists” engaged in producing and debating a particular vision of their computing society, we uncover several areas of “undone science” that are consequential because this period of computer science propelled an “industrial transition.”⁹ Scholars have described the era we focus on as a time when the “post-industrial” economy emerged.¹⁰ This new American economy was based in services, grounded in information and data, and supported and shaped by computing technologies that members of the ACM researched and developed. ACM membership acted as a “mobilizing structure” during the shift away from the industrial economy and addressed social movements such as women’s rights, the geopolitics of the Cold War, and, crucially for the problem of the enforceability of ethics codes, the potentials of professional certification.¹¹

⁷ For a recent case study of this period, see Wisnioski, M. *Engineers for Change: Competing Visions of Technology in 1960s America*. MIT Press, 2016.

⁸ Jessica Gordan, “On Scientific Freedom and ACM Policy,” *Comm. of the ACM* 21, no. 1 (Jan. 1978), 98. In Daniel D. McCracken Papers [hereafter DDMP], 1958-1983, box 1, folder 15, “ACM Council.”

⁹ Hess, D. J. (2016). *Undone Science: Social Movements, Mobilized Publics, and Industrial Transitions*. MIT Press, 109-111.

¹⁰ See for example: Castells, M. *The Rise of the Network Society*. Blackwell, 1966; Bell, Daniel. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. Basic Books, 1976.

¹¹ Ensmenger, Nathan. “Computers as Ethical Artifacts.” *IEEE Annals of the History of Computing* 29, no. 3 (2007): 88–87. <https://doi.org/10.1109/MAHC.2007.4338449>.

While the ACM's codes shored up the professional status of computer experts and fulfilled the objective of those committees focused on professionalism [cite ensmenger annals], it did not take a public stance about scientific freedom in its ethics code, nor did the ethics code formalize any of recommendations from committees focused on social implications or responsibility.¹² It isn't clear how meaningful formalization would have been—without professional certification or some way of cutting ties with those who violate the code, an ethics code lacks any governance teeth and is mostly unenforceable.¹³ This mobilizing structure of computing experts working at an important time of industrial transition didn't publicly support women's rights, civil rights, and other domestic issues that carried debate.

The Code, in short, represents a site of “undone science” in computing professions of twentieth-century American life. The history of computing ethics controversies among computing experts contribute to discussions about “industrial restructuring movements” and illuminate how conversations and compromises among networks of scientists bring about down-the-line questions about public accountability, as we see evidence of contemporary computing ethics reckoning at conferences such as “Undone Science in Computer Science.” These lively ethics debates were often in private committee meetings and now live mostly in archives, while the banal professional code was widely publicized and enabled computing to adopt the “neutral” veneer that dominated throughout the 1980s and 1990s. Our paper contributes to the conversations about “undone computing” by focusing on the history of computing ethics at the ACM, and by showing how professional societies in computing have addressed political and cultural movements of the past.

Our presentation, “Undone Codes,” will examine the history of ethics codes in the ACM in five parts: (1) the 1960s and early 1970s, when codes of professional conduct and ethics were first introduced in the ACM (2) debates about the relationship between professionalism and politics rose within the organization's ranks in C2P2; (3) ACM attempted to bolster its codes in the 1970s; (4) reforms to the ACM's ethics codes unraveled in the 1980s, as debates about hacker ethics, lacking curricula, and gender in computing challenged the ACM; (5) parallels between the undone science of historical ACM codes and the evolution of AI ethics codes today.

¹² Ensmenger, N. L. (2001). “The “Question of Professionalism” in the Computer Fields.” *IEEE Annals of the History of Computing* 23 (04), 56–74. <https://doi.org/10.1109/85.969964>.

¹³ Slayton, Rebecca. “Governing Uncertainty or Uncertain Governance? Information Security and the Challenge of Cutting Ties.” *Science, Technology, & Human Values* 46, no. 1 (2021): 81–111. <https://doi.org/10/ggszhs>; Finn, Megan, and Katie Shilton. “Ethics Governance Development: The Case of the Menlo Report.” *Social Studies of Science* 53, no. 3 (2023): 315–40. <https://doi.org/10.1177/03063127231151708>.