

Tom Haigh - thaigh@sas.upenn.edu

Lost In Translation: Total Systems from War Room to Boardroom, 1954-1968

The role of the United States military in the creation of computer and electronic technology has been well documented - from the creation of ENIAC to the development of the Internet by DARPA. More recently, the computer's construction as an icon of control and rationality during the Cold War has been documented powerfully in Paul Edwards' [The Closed World: Computers and the Politics of Discourse in Cold War America](#). But so far little attention has been paid to the spread of these military conceptions of information, systems and control into the world of corporate administration. To what extent did the Cold War politics from which they were conceived accompany the artifacts of computing as they moved from one sphere to another?

I follow the "systems concept" from the elite of the military-industrial complex (chronicled, among others, by Thomas Hughes and Stuart W. Leslie) through the efforts of Cold War contractors such as SDC (a RAND spin-off) to establish themselves as experts on "management control systems" and into the rank-and-file of corporate data processing managers. Systems concepts were bundled together with the computer itself, and sold rhetorically as part of the same package. In my previous work (presented at SHOT and published in *Business History Review* and elsewhere) I have explored the social architecture of corporate computing in this period, but never before probed the relationship between the new Cold War systems concepts and the earlier tradition of systematic management indigenous to the corporation.

In the suddenly fashionable, RAND Corporation language of systems theory, managers could use the computer to control the firm as a "total system" rather than "sub-optimizing" the performance of its component parts. The "totally integrated management information system", an idea promoted by the Navy in 1959, soon became the accepted form in which the computer could realize its "true potential" in business. This system would encompass all information needs of all managers, at all levels and in all parts of the firm. This dream of total control was explicitly military in its origins, as were the technologies by which it was expected to be achieved. Enthusiasts promised that executives would gather in a "war room", to interrogate projected displays of the progress of their business and feed new strategies into the machines.

Only by situating these ideas within the broader frame of cold war science and technology can we understand them. However, I argue against the idea that this "discourse" is an explanation in its own right – suggesting instead that Edwards' grand connections between political culture and electronics can not in themselves dictate how technologies and ideas play out in this new realm. Within the corporation, the Cold War symbolism around the machines served primarily as a resource upon which different social groups drew selectively to further their more parochial objectives. Examination of archival SDC materials, advertisements, and the newsletters, journals and conference proceedings of various specialist groups suggests that, though phrases and images passed from military to managerial worlds, the meaning and significance of these things were often garbled terribly in translation between the two worlds.

In this case, computer manufacturers and consultants saw a chance to move their products and services beyond the administrative routine of "data processing" in which computer technology was in practice mired, and into the greener pastures of cybernetics, systems theory and feedback. Meanwhile, corporate "systems men" (experts in administrative technologies and techniques) and computer specialists tried to make the almost mystical powers attributed to the combination of the computer and the systems approach into a claim to broad managerial authority. While Cold War provided a stage, scenery and some props, the drama acted out there was an older one. Like Taylor (and an intervening cohort of "Scientific Office Managers"), these corporate specialists sought to use new and ostensibly scientific approaches to turn technical skill into the core of managerial empires.