In the Dashes of the Military-Industrial-Academic Complex: Toward a Global History of Partial Cybernetics

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The history and design of computing may be, with a nod to Vannevar Bush, precisely not as we may think. Contemporary understanding of computing and design theory is prospective at best. In this paper I test run a proposition behind a larger project: that a partial, fractious history of computing debates and their consequences will help retell and reclaim the twentieth-century history of computation, cognition, and communication design. Namely, this paper seeks a history of computing in particular that is conceptually distinct from the well-established literature on computation as the operation of abstractions and computers as the industrial manufacture of hardware artifacts; instead it outlines how computing takes shape in the semiotic-material practices of small groups attempting to formulate and solve intellectual problems. Such small groups—or what I identify as "computing thought labs" in, to name several examples, the early pragmatist debates about the scientific method in Boston and Cambridge, the discussions of the philosophy of science in Vienna and Berlin Circles, the name-worshipping cult behind transfinite set theory innovations in post-revolutionary Moscow, and emergence of cybernetic discourse in the Ratio Club in London, the Macy Conferences on Cybernetics in New York, and the Dartmouth conference on Artificial Intelligence, among others—prove temporarily generative in feeding seemingly foundation ideas about computing to founding military, industrial, academic, and philanthropic institutions. Against this backdrop, the paper experimentally stages and examines the specific debates around one such idea—that the computer is like a brain—and seeks to disassociate it from its formation in the midcentury politics of the mind (individualistic, strategic, open, and almost always male). Instead of understanding computing as what which a brain does, this paper seeks to show how computing itself belongs to a social group practice of problem design. The conclusion suggests how the twentieth-century knowledge base behind cybernetic discourse has given unnatural coherence, color, and longevity to one such mistaken idea about computing. The way forward may be the recognition that computing has literally never been as we may think— and that it is perhaps the fortunate lot of no small group to solve such problems.