BROWN

Lachlan Kermode — Cover Letter
Department of Modern Culture and Media | Computer Science

Dear Search Committee,

I am writing to apply for the position of Tenure Track Assistant Professor in Technology, Society, and Power in the School of Information at the University of Michigan. I am a Ph.D. Candidate in Modern Culture and Media with an accompanying Sc.M. in Computer Science as an Open Graduate Fellow at Brown University, with research and teaching experience in both departments. As an interdisciplinary scholar trained in both the humanities and CS, I publish, teach, and collaborate with researchers in both sets of fields. My work aspires to integrate the best of both methods through an open ethos of collaboration, a dual dedication to rigor and receptivity, and a recognition that technical cultures are not found ready-made in nature but produced socially in history.

My dissertation and first book project, *From One to Zero: Capital, Calculus, and the Cradle of Computer Science*, argues that Marx's philosophy of value bears directly on the discipline we today call computer science. By tracing the cradle of computer science through its mathematical origins in set theory, *From One to Zero* offers a prehistory of computational logic that reveals the ongoing pertinence of Marx's work for a political theory of the computer in the present day. The first chapter argues that Marx's theory of the commodity form in *Capital* Volume I implies a complementary 'theory of the subject', where a subject is a necessary social being riven by its self-contradictory nature. Capital and the automation it advances cause us to disavow this nature, to disregard the quintessence of contradiction in the stature of our thought and labor, and therefore to forget the formal possibility of freedom in modernity. The second chapter examines Marx's mathematical manuscripts (1858–83), writings for which there is little contemporary critical scholarship, to expound the relationship between the role of automation in his critique of political economy and the social stakes at work in the conceptual manipulation of symbols and numbers that we now call calculus. The third chapter provides an intellectual history of the relation between Marx's work and set theory, from Georg Cantor's seminal writings (1874–84) to Alan Turing's influential work (1936–54). My final chapter argues that the modern discipline of computer science was forged in the crucible of the 20th-century ascendancy of two preponderant concepts, calculus and capital.

My second book project builds on the historical and philosophical groundwork of my first to suggest how critical theory can guide our everyday practice as software engineers, data scientists, and computer programmers. Drawing on experience as an Advanced Software Researcher at the human rights research agency Forensic Architecture (2018–21), I prototype and narrativize how a critical software practice in the 21st century could attend to Marx and Freud in search of clarity. Marx details how capital can disfigure our productive drives in search of ever more surplus-value in modern society, whereas Freud and the clinical practice of psychoanalysis point to the politics of a necessarily incomputable self: both of these insights are crucially relevant to the question of how and why we build software. To retain something of the powerful original vision of computers as capable of making us more free, a vision developed through the era of personal computing (1970–) and the free software movement (1980–), we need to reckon with the political economy of contemporary software and hardware production. This economy, for example, is structured by the projected profit margins of companies such as Google, Amazon, and NVIDIA, as well as by the curious ideological and intellectual history that has stiffened into the new normal of techno-authoritarian conservatism epitomized by figures such as Elon Musk and Peter Thiel. A sufficiently critical ethos of software production—where *critical* is pronounced with the same spirit as in *critical theory*—cannot rely solely on proxy characteristics such as decentralized, federated, open source, or local-first to do the work of making software that produces freedom rather than an 'updated' kind of capitalist peonage. Critical software practice must take into account the complexity admitted in the question: what *kind* of societal good can computation do for us in the first place?

I would be thrilled to continue my academic career at the School of Information at the University of Michigan on account of its unique commitment to critical thinking in the pedagogy of computing and information. Since my undergraduate degree in Computer Science at Princeton, I have gravitated towards research that places software squarely in the social and material world, recognizing that programming is as much a matter of politics as anything else. I therefore seek to

collaborate broadly with faculty and students not only in CS and the humanities but also in architecture, journalism, legal studies, and design. My research, which aims at both a critical theory and practice of computing freedom, would greatly benefit from discussions with researchers in Critical Studies of Design and Computing (Robin Brewer, Nazanin Andalibi, Matthew Bui, Julie Hui) and HCI (Andrea Forte, Tawanna Dillahunt, Steve Oney) in addition to the impressive set of researchers working in Science, Technology, and Society at the School. Both Silvia Lindtner's and Ben Green's writings on the technological promises of urban modernity were influential for me early in my Ph.D., and Green's work in particular helped me to think politically about CS pedagogy in my role as Graduate Advisor to the Socially Responsible Computing Program in the Brown CS department.

As pedagogy is an essential aspect of my research and critical practice, I am especially excited that there are many faculty who are thinking deeply about how to teach computing ethics alongside technical skills to undergraduates and master's students. At Brown I have taught two original courses as the Instructor of Record, one in the department of Computer Science titled *CS for Social Change* (taught both in 2022 and 2023), and the other in the department of Modern Culture and Media titled *Capital and Computing in the Era of A.I.* (2024). As I have developed coding assignments, given lectures, and run seminars in both CS and the humanities, I would be just as delighted to teach courses ranging from introductory to advanced programming (*IntroProg w Python*, *Data-Oriented Prog*, *Adv Development*) as I would to teach courses on the ethics and critical theory of technology (*IntroEthics*, *Ethics&Info Technlgy*, *Algorithms and Society*).

In addition to my experience teaching courses listed with the registrar, I actively run an open reading group on Math(s), Philosophy, and History that includes faculty and students from Harvard, UCSD, NYU, Yale, among others. In my work as Software Researcher at Forensic Architecture and the LIMINAL Lab at the University of Bologna (2024–), I have steered and written grants for research funding, led and worked multimodally on human rights investigations and reports, and maintained online platforms and open source software. I also run a free online seminar titled *Capital for Tech Workers* that systematically works through Marx's *Capital* so as to make its political insights relevant to software engineers and product managers at companies such as Google and Meta.

I have enclosed the requested materials in this dossier, and more samples of my public-facing software, writing and work can be found at lachlankermode.com. Thank you for your consideration.

Sincerely,

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