

Adam Lauder, ed.

Variable Conditions: Paracomputational Arts in Canada, 1965-1995

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/ Alex Borkowski /

For Leslie Mezei, who taught the first course on artificial intelligence at the University of Toronto (U of T) in the mid-1960s, the conversations taking place today about AI are nothing more than “unfounded speculation and dreaming, or worse, raising false expectations” (235). Mezei’s reflections on contemporary socio-technical imaginings, gathered by scholars and curators Mark Hayward and Adam Lauder in an interview for *Variable Conditions: Paracomputational Arts in Canada, 1965-1995*, are informed by the intertwining of scientific research and artistic practice that characterized his pioneering work in computer graphics—a perspective worth heeding within the current climate of AI hype.

Mezei is a focal figure in *Variable Conditions*, which seeks “to uncover alternative lines of intellectual and creative affinity and influence” (15) in the history of Canadian media art and theory. The book substantially expands upon groundwork laid in the exhibition *Computational Arts in Canada 1967-74*, co-curated by Lauder and Hayward at the McIntosh Gallery at the University of Western Ontario (UWO) in 2020. A historical survey of Canada’s contributions to computer art, the exhibition and accompanying catalogue included many of the same artists foregrounded in *Variable Conditions*,

including Greg Curnoe, Suzanne Duquet, Vera Frenkel, Gilles Gheerbrant, Leslie Mezei, N.E. Thing Co., Ltd., and Roger Vilder.

While the exhibition highlighted collaborations between artists and researchers facilitated by the Department of Computer Science at UWO, *Variable Conditions* expands this project by bringing together case studies that illuminate the network of institutions that fostered developments in computational art in Canada. In his introduction to the collection, Lauder suggests that the book “fills a regional gap” (14) in the documented history of digital media arts, citing various contributions that foreground UK and US contexts.¹

Lauder describes the collection’s over-arching narrative as one that “brings into visibility the emplaced material conditions that gave shape to early applications of computation by Canadian artists” (14). Indeed, the centrality of institutions and infrastructures to *Variable Conditions’* telling of this history is palpable throughout the various contributions to the book and is further underscored by a concluding glossary. Rather than providing definitions of key terms, nor indeed the names of artists or exhibitions, the glossary comprises an alphabetical list of galleries, research institutes, businesses, funding bodies, and corporations: from Active Surplus, an idiosyncratic electronics supply store on Toronto’s Queen Street West, to Véhicule, an artist-run centre in Montreal; from Ars Electronica festival in Linz, Austria, to Xerox’s head office in Vancouver. Although the utility of this glossary for readers of the book is somewhat unclear, Lauder’s decision to collate this list in such a way implies a desire to give form to a transnational network that undergirds the development of computational art in Canada, and to cast institutions as key players in this history.

Variable Conditions is further distinguished by its emphasis on “para-computational arts,” as specified in the book’s subtitle. For Lauder, this term signals “a deliberate departure from the narrow compass of some recent computational-formalist and media-materialist histories of ... computational aesthetics” (20), and invites a broader consideration of computational art practices within the sociohistorical milieu from which they emerged. Further, the term “para-computational” facilitates the inclusion of artists

working in analog media whose work nonetheless might be understood to anticipate or incorporate computational logics. For instance, in a chapter aptly titled “Circling the Computational,” Elizabeth Legge analyzes Michael Snow’s canonical film *La Région Centrale* (1971) in para-computational terms. As a formalist exploration of camera movement, the film relied entirely on mechanical innovations; yet, Legge argues, insofar as the camera appeared to respond to the environment in a feedback loop, *La Région Centrale* signals a “cybernetic *understanding*” even in the absence of software (143). The rubric of the para-computational thus brings together artistic practices with varied approaches and proximities to innovations in computation throughout the twentieth century. Lauder’s own contribution to the book, specifically his analysis of the work of photographer Suzy Lake, further clarifies the concept of the para-computational. Lauder situates Lake’s practice in scientific and cultural milieu fostered in Montreal in the 1970s, noting her close professional relationship with artist, gallerist, and early promoter of computer art Gilles Gheerbrant. While Lake’s self-portraits have recently been lauded by critics as prescient pre-figurations of contemporary selfie culture, Lauder’s analysis foregrounds the serial permutations that characterize her work as evidence of the “computational context” from which it emerged (117).

In order to craft a somewhat linear genealogy of these para-computational experiments, *Variable Conditions* unfolds in three sections. Part one explores the early days of computational arts in Canada, beginning with an excerpt from Mezei’s previously unpublished 1971 book manuscript which set out to chronicle this nascent field. In addition to sketching out the network of colleagues that comprise this “international movement uniting cybernetics, computers, and creativity” (35), Mezei elaborates upon the concept of “controlled randomness,” which accounts for the underlying constraints that guide even seemingly chance computer-generated visual effects. Mezei writes plainly and lucidly about the algorithmic procedures that comprise his own experiments, with the palpable intention of demystifying computation for a non-expert audience. As Ashley Scarlett explains in a subsequent chapter, Mezei was invested in fostering critical engagement with computational tools as they

became increasingly prevalent in shaping socio-political domains—a project in which Mezei envisioned the “citizen artist” playing an important role.

Part two chronicles artistic practices from the late 1970s to the mid-1990s that unfolded alongside the transition from mainframe to personal computing. Contributions to this section chart the often fruitful yet equally uneasy relationships between artists and industry in this period. If earlier proponents of fusing art and technology were moved by a belief that they, as Mezei described, “were going to solve the problems of the world” (234), a subsequent generation of artists experienced a tension between their own values and the ambitions of the telecommunications and aerospace industries. Henry Adam Svec’s chapter on Robert Adrian X’s project *The World in 24 Hours* (1982) follows the artist’s initial media utopianism and later wariness towards the relationship between computational art and the military-industrial complex. As Adrian describes: “When the Gulf Wars happened ... all of a sudden it seemed like all these art projects we’d been doing were only there to make those telecommunication technologies look good” (200). Nonetheless, industry and government partnerships were a necessity for artists seeking to access costly equipment that would have otherwise been beyond their reach. Caroline Seck Langill suggests that such collaborations in fact enabled the establishment of new media as a means of artistic production, citing works by Vera Frenkel, Judith Doyle, and Nell Tenhaaf. Indeed, Frenkel viewed her performance *String Games* (1974), which made use of Bell’s then brand-new teleconferencing facilities, as a two-way relationship from which the company equally learned from her experiments. As Frenkel herself slyly explains: “I ... saw myself as giving them a fair exchange because they learned a lot from what we did ... I wasn’t charging them” (179).

Approaching the imbrication between computational art and industry from a decolonial perspective, Jessica Jacobsen-Konefall’s chapter analyzes the exhibition *Beyond Electronics*, held at the University of Manitoba and the artist-run centre Artspace in 1989, which showcased artistic explorations of electronically-mediated relationships. Although exhibition documentation makes no explicit reference to Indigenous

lands, Jacobsen-Konefall retrospectively asks how the show “figures computation as responsive to the culturally and materially configured animacies that power it” (211). Noting that the exhibition, like the entire urban centre of Winnipeg, was powered by hydroelectric dams with devastating ecological effects on rivers that sustained Indigenous ways of life, Jacobsen-Konefall asks how we might “care about Ininev rivers while apprehending these works of electronic and computer art” (206).

The third and final section of *Variable Conditions* comprises nine original interviews with artists, researchers, and curators who appear in the previous chapters. The interviews further flesh out the network of para-computational experimentation that the book seeks to define, although it bears noting that Frenkel and Zainub Verjee, media artist and former executive director of Vancouver artist-run-centre Western Front, stand out as exceptions to the otherwise exclusively white and male canon assembled in this section. Given the capaciousness of the term para-computational, one might have expected greater diversity among the artists interviewed. Cree-Métis artist Cheryl L'Hirondelle, whose reflections on digital infrastructures and Indigenous lifeworlds are integral to the line of argumentation pursued in Jacobsen-Konefall's chapter, would seem an obvious choice. Likewise, Kanien'kehá:ka artist Skawennati work's *Cyber PowWow* (1997–2004) also receives a passing reference in the book, but her contributions to computational art merit more attention.

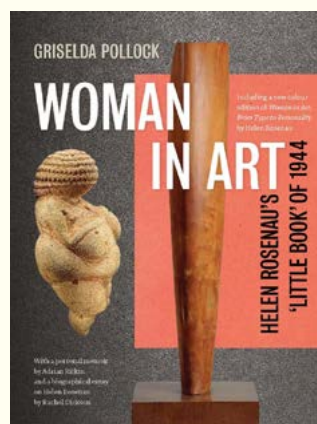
Lauder's editorial decision to dedicate such a significant swathe of the book to allowing practitioners to speak in their own words suggests that *Variable Conditions* not only provides a critical contribution to the under-explored arena of Canadian media arts, but itself operates as an archive. Indeed, the book provides an invaluable corrective to the insufficient recognition of twentieth-century computational art practices within arts institutions, as well as the ongoing challenges associated with exhibiting and preserving these pioneering art works.

Variable Conditions collects and crystallizes traces of this important history in the face of the technical obsolescence that threatens the memory of these innovative art practices. The book offers important reflections on the institutional and industrial

underpinning of computational art, as well as how these entanglements informed creative imaginings and modes of resistance. Indeed, Mezei refers to his own practice as “sort of dreaming out loud” (236). Given the aggressive future-oriented-ness of contemporary tech discourse, revisiting the dreams of the past is a necessary critical intervention.

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- 1 These include *White Heat, Cold Logic: British Computer Art 1960–1980*, ed. Paul Brown et al. (Cambridge, MA: MIT Press, 2009); *Mainframe Experimentalism: Early Computing and the Foundations of Digital Art*, ed. Hannah B. Higgins and Douglas Kahn (Berkeley: University of California Press, 2012); and Zabet Patterson, *Peripheral Vision: Bell Labs, the S-C 4020, and the Origins of Computer Art* (Cambridge, MA: MIT Press, 2023).



Griselda Pollock with Adrian Rifkin and Rachel Dickson
Woman in Art: Helen Rosenau's "Little Book" of 1944

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400 pp., 140 colour & b/w illus.
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/Nicholas Chare/

In 1944, a small English avant-garde press established by Anthony Froshaug, Isomorph, published Jewish refugee art historian Helen Rosenau's *Woman in Art: From Type to Personality*. In a letter, Rosenau would later modestly refer to the monograph as a “little book.” Now,