

The Mind of Modernism
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I still remember fondly Charles Altieri's reaction to Susan Stanford Friedman's recommendation that we consider modernism from a planetary perspective in her keynote address at the MSA conference in Montreal in 2009. Standing at the back of the ballroom, Altieri paced a little, agitated. His question – almost plaintive – was how on earth he was supposed to do modernist studies in a comparative perspective when he lacks the necessary linguistic and cultural competence. How could *anyone* acquire sufficient expertise to fulfill Friedman's vision of planetary modernist studies? In his inimitable way, Altieri pinpointed one of the essential problems that face those of us who wish to understand modernism in global terms. This is the challenge of superabundant material versus a relative deficit of time, resource, and ability.

Think of the enormity of the task. You would have to read all the literature, look at all the paintings, watch all the plays and dances and films, listen to all the music, visit all the buildings, examine all the designs, and trace all the intellectual contexts. Even if you could translate all the work into a single language, you would still face a crushing wealth of material, an n-dimensional world of cultural production whose richness would instantly outstrip the capacities of even the most encyclopedic among us. Think of the candidacy exams! And even if you could, by some superhuman monkish devotion – and

no doubt with some chemical enhancements – become familiar with all the key figures, movements, works, techniques, events, places, and concepts in all the forms of modernist expression around the world, you would still face the exponentially more complex task of tracing the relationships that obtain among them.

Far more than simply knowing who Pablo Picasso was and what *shen-kabuki* theatre was, you would have to be able to outline the relationships between them – ideally all possible relationships between them – integrating information about all the intermediate steps along the way. You would have to be able to say who influenced whom, whether the relationship was reciprocal, how strong the influence was, whether it was positive or negative, who practiced which techniques and what local variations of those techniques were in play, and which works refer to which other works across traditions, disciplines, geographies. You would, in other words, have to be able to **read the mind of modernism**, to know its by-ways and pathways, its elements and entities, and the cunning passages of its full global scale. Doug Mao and Rebecca Walkowitz traced the early going of this move in their 2008 description of the new modernist studies as expanding the field vertically, horizontally, and temporally. I argue that it's now time to abandon the arborescent model still implicit in their lexicon, and to insist upon studying modernism in all its rhizomatic complexity. Modernism is not a tree that

branches out. And to think of scholarly practice as branching out from a stable trunk with deep roots to include previously marginalized work doesn't really get us that far. It still relies upon the stability granted by that trunk, that tradition. Instead we must reconceive of modernism as a potentially-infinite agglomeration of items – bits of data – and relationships occurring in trans-disciplinary, trans-historical, and trans-geographical manifestations. It has no centre and must be navigated simply from wherever you happen to be. SLIDE TWO You are Here. Now go find Modernism. SLIDE THREE It's a dream worthy of Casaubon, and clearly beyond the capacity of any one person to achieve.

But it's not by any means beyond all of us. Some of you will have heard the term "hive-mind"? On social media, people seeking answers to difficult or obscure questions will often simply post a query addressed to the "hive-mind" – all of us together, our collective knowledge and expertise. As what follows will show, I think this is the future of modernist studies, as we rise to the ethical responsibility to maintain a basic fidelity to the event of modernism.

SLIDE FOUR

If we are going to understand modernism on its own terms as and where it emerges, including versions of it that openly or completely contradict the Anglo-Euro-American model, then we need to work with our colleagues around the world and across the arts. Chinese dance scholars: meet European

cineastes. Eastern European literary scholars: meet North African music critics. Middle Eastern dramatists: meet North American philosophers. South Asian painters: meet South African architects. And so forth. Some of this work can be done face to face, and this conference affords a primary venue for that work. But much of it presents logistical challenges that dwarf such approaches. To meet these challenges, I argue that Big Data offers some key strategies for realizing the dream of a genuinely rhizomatic modernist studies — one that is truly trans-disciplinary and global in its outlook without demanding impossible linguistic and scholarly competences from its practitioners. SLIDE FIVE

Big Data approaches employ machine processes to manage and sift huge quantities of material. They include approaches such as topic modeling, inferential algorithms, statistical processing, data visualizations, social network analyses, and so forth. As Franco Moretti, Matthew Jockers, Stephen Ramsay, and others have shown, Big Data approaches make possible “distant reading,” methods for reading whole corpi of works simultaneously. Following Gertrude Stein’s insistence on “composition as explanation,” distant reading allows us quickly to seek patterns in the whole that are difficult to detect in serial reading, and/or that escape our capacity to detect independently. They represent the latest evolution of the move inaugurated by Derrida and developed by N. Katherine Hayles, away from depth models of meaning towards surface patterns of signification. In a way, they complete the Flaubertian dream of a

work with no content, but pure style: they wager everything on form, and leave content to the close readers.

But distant reading has its problems, too. While it affords previously impossible perspectives on the whole of a body of work or field, it also obliterates attention to the form of individual works. To amend what I just said, then, it wagers everything on the shape of the whole at the expense of the specificities of individual works. It privileges seeing the forest, but sacrifices that close bark-level analysis we enjoy so much and out of which we gain so much insight. It can see shapes, but not detect irony. It can show correlations, but not causality. It can measure word frequency, but not word importance. And so on.

Again we run into the problem of scale. If we want to see the forest, we must go to a high-level overview: distant reading. If we want to understand individual works, we must delve deeper, but how can we know where to delve without the high-level view that illuminates potentially interesting features? We need tools to navigate these levels: tools that will let us enter the universe of modernism at any point, zoom in or out, move about freely in n-dimensions, detect patterns, seek connections, pose complex queries, explore serendipitously, organize, filter, re-organize, and test.

Enter Linked Modernisms. SLIDE SIX Linked Modernisms has just received five years of funding from the Social Sciences and Humanities

Research Council of Canada, for which we are very grateful, and should be online in beta by next summer. SLIDE SEVEN In the rest of my paper, I'll outline what Linked Modernisms is, how it has come together so far, and what you can expect from it in the future. My none-too-modest aim with it is to lay bare the mind of modernism, and to make all of you mind readers.

Linked Modernisms:

Linked Modernisms consists of three layers with a great deal of recursivity and reiteration built in.

Layer One: *The Routledge Encyclopedia of Modernism*. SLIDE EIGHT The REM is a multi-year endeavor to create an online resource with encyclopedia entries on all aspects of modernist cultural production the world over. It features at present nearly 4000 entries written by nearly 1500 contributors – some of whom are here today. It has an editorial board of 60 scholars, sub-divided into eight teams. It will total around 1.5 million words when complete, and will feature rich paratextual materials such as audio, video, graphs, images, and visualizations to illustrate and contextualize the entries. The REM furnishes the content or the main body of data upon which Linked Modernisms is built. It provides what is known as domain-expert crowd-sourced material, ensuring a solid, peer-reviewed foundation for all that follows.

Layer Two: Metadata Survey. SLIDE NINE To harvest all pertinent information about the terms included in the REM, we devised an information ontology framework that describes all the possible classes of terms in the REM and further indicates pertinent characteristics of items in those classes. For example, for Picasso, we fit him into the class of Person, with the sub-class of Producer. SLIDE TEN His characteristics include his sex, sexuality, gender, nationality, primary language, languages spoken, places lived, primary place of work, people influenced, people he was influenced by, religion, political affiliations, etc. This survey has been circulated to all the domain-expert contributors to the REM in an effort to ensure that we get the highest quality material possible. Even so, the compliance rate, and the need for redundancy to smooth out anomalies, will likely mean that we will have to open the survey to crowd-sourcing as well.

This metadata is crucial because

- a) it gives us uniform information about all the terms belonging to the same classes. Ideally, we'll have information on nationality, languages, politics, etc. for all the Persons in the REM.
- b) it gives us information about the terms that may not be included in the entries themselves. For example, if an entry makes no mention of the fact that Picasso was Spanish, we would be able to find that out through the metadata survey anyway.

Layer Three: Machine Reasoning. SLIDE ELEVEN Linked Modernisms has been extraordinarily lucky to partner with the Indiana Philosophy Ontology, run by Colin Allen at Indiana University. InPhO, as it is known, has blazed a path we want to follow by devising a semi-automated means of using machine-reasoning and minimal human intervention to harvest metadata from the content of the *Stanford Encyclopedia of Philosophy*. Their method follows three steps, called a dynamic ontology.

InPhO are sharing their code with Linked Modernisms, and helping us adapt it so we can supplement the results of the metadata survey with an ongoing process of semi-automated updates. This approach will allow us to mine the entire 1.5 million words of the REM for relationships and connections. We can also run it on the metadata we harvest from the survey results, giving us an additional layer of richness to work with. As the algorithms are increasingly refined – as the machine learns through correction by humans – we will be able to run increasingly precise and sophisticated queries, and to dig deeper than ever into global modernism.

The upshot of all this is that Linked Modernisms will afford a means by which anyone with internet access can explore global modernism across the arts with an emphasis on four key operations: SLIDE THIRTEEN

- a) **discoverability** – rather than searching and finding, users will be able to discover and stumble upon things they didn't know they were looking for
- b) **relationality** – the way the data is structured in Linked Modernisms privileges relationships over content. Though you will still be able to click through to the entries in the *REM*, and read what an expert has written about your topic, Linked Modernisms privileges understanding the elements of modernism in rich contexts.
- c) **customizability** – queries can be filtered and stacked. An initial query may return a set of results, and you can then query that sub-set with a second query, and so forth. You may ask to be shown all the Spanish painters who lived in Paris. Then you may want to further refine that to the years 1930-40. Then you may want to refine that by gender, sex, sexuality, or political affiliation.
- d) **visualisation** – you will be able to express your results in a wide array of visualizations, including graphs, maps, trees, networks, animations, etc. SLIDE FOURTEEN

In the published version of the paper she gave in Montreal in 2009, Friedman wonderfully synthesizes the problems and challenges Linked Modernisms is meant to address. Friedman calls for a “planetary epistemology of modernity, of modernism” (473) that “needs to be relational, delineating not

a nominal set of characteristics ... but rather defining one thing in relation to another” (477-8). The essay is modelled on “Thirteen Ways of Looking at a Blackbird,” and Friedman offers thirteen short sections, each building a bit more on the principle of a planetary modernism. As she goes along, her rhetoric begins to sound more and more digital, even though she makes no mention of DH in the paper. By Blackbird Eight, things are starting to sound very much like a DH manifesto. That title is “Circulations, Networks, and Translations.” Blackbird Twelve gets prescriptive: “The Archives of Planetary Modernism and How to Read Them.” Here we go! Surely DH is going to appear here, right? Wrong.

On the point of the knife, Friedman offers “Re-vision,” “Recovery,” “Circulation,” and “Collage” as four main critical practices making up a “navigational guide” for how to proceed. There is no mention of digital methods, even though such approaches can enable all of these, and enhance them immeasurably. Friedman calls for an “archive of mobility ... [that calls] for the act of seeing linkages, networks, conjectures, creolizations, intertextualities, travels, and transplantations connecting modernisms from different parts of the planet,” (492). This practically describes Linked Modernisms, as does her claim that we need to understand modernism as “a global grid of relational networks” (494).

Friedman is right – perhaps even more right than she knows.

Modernism was indeed global. It still is. It was eclectic, catholic, extravagant, rebellious. Vertical, horizontal, and temporal expansion has paved the way, but it is high time not only to talk the talk of going global, but to walk the walk as well. Linked Modernisms wants to answer the call, and enable this work. It takes its lead from modernism itself in forcing the issue, eschewing existing hierarchies, breaking disciplinary boundaries, and challenging the very tradition of high modernism itself. I've argued elsewhere that that tradition is something of a travesty, a caricature the modernists themselves would have ridiculed. In this respect, Linked Modernisms poses a challenge similar to that encountered by modernists from Ezra Pound to Juan Rulfo, from Xiao Youmei to Atul Dodiya, and from Darius Mehrjui to Solomon Plaatje:¹ to make it new not by eliminating the past, but by attending faithfully to its full messy reality and by taking full advantage of the newly emerging media. SLIDE FIFTEEN. None of us can know the mind of modernism the way all of us together can. Linked Modernisms begins from this premise and will – we dearly hope – reveal the unsuspected circuits of exchange and circulation that made it global in the first place.

¹ Rulfo – Pedro Paramo; Youmei – Shanghai music conservatory; Dodiya – Indian VA; Mehrjui – Arab film-maker.