On April 9, Tara McPherson (School of Cinematic Arts, USC) presented an overview to her work, “Animating the Archive: Old Codes and New Media,” to an enthusiastic audience in Curtin 175.

In self-deprecating manner, McPherson warned the audience that her lecture would be “a little bit unrehearsed and wacky” in that she would try to bring together two very different parts of her professional life by mapping together her current book project that looks at the origins of digital media and her work with “bleeding edge” new media, such as her online scholarly publication, Vectors Journal.

In the first part of her lecture, “Two Fragments Cut from History,” McPherson attempted to integrate two deeply siloed sets of archival knowledge from the 1960s and early 1970s: a technological history of digital computing and a social and cultural history of race and media. In the former case, McPherson emphasized the increasing modularity of both hardware and software, especially through the development of the Multics and Unix operating systems and their heirs: Linux, Apple, Windows NT. Yet for those interested in the history of race relations, the touchstones from the same time period are quite different: passage of the Voting Rights Act, the Watts riots, assassinations of Malcom X and Martin Luther King. Rarely do audiences for each of these histories ever meet. “As one delves into the intricacies of Unix, race recedes far from our line of vision. Likewise, detailed examinations into the shifting registers of racial visibility don’t easily lend themselves to observations about the emergence of object-oriented programming.”

For McPherson, however, “the two tales are deeply interdependent; in fact, they co-constitute one another, comprising not independent moments in history, but instead related and useful lenses into the shifting epistemological registers driving U.S. and global culture” of the time.

Early forays into new media in the late 1990s maintained the separation of these two tales. New media theorists of the time retreated into a kind of “cyber-structuralism, intent on parsing media specificity,” while often disavowing, for instance, decades of critical race theory. Scholars, such as McPherson herself, who worked hard to instill race as a central mode of analysis in film studies...
were disheartened to find that new media theory could “retreat into a formalism familiar from the early days of film theory.”

Early analyses of race in the digital often took two forms: a critique of racial representation in new media (i.e., on the surface of screens) and debates about access to new media, often coalescing under discussions of “the digital divide.” Such work rarely pushed toward analyses of phenomenology or computation—the things that were so compelling in the work of Lev Manovich, Mark Hansen, or Jay David Bolter and Richard Grusin.

The very incompatibility of these two tales—digital computing and race—is “part and parcel of the organization of knowledge production that operating systems like Unix helped to disseminate.” That is to say, there is something about the very forms of electronic culture that seem to encourage such a partitioning.

“A lenticular logic is the logic of the fragment, a way of seeing the world as discrete nodes, a mode that suppresses relations.” –Tara McPherson

New media scholars have noted the parallels between the ways of knowing modeled on computer culture and “the greatest hits of structuralism and post-structuralism.” On the other hand, critical race theorists and post-colonial scholars have illustrated the structuring role race plays. These two arguments can be brought together by triangulating race, electronic culture, and post-structuralism, leading one to further argue that race, particularly in the U.S., is central to this undertaking, fundamentally shaping how we see and know, as well as the technologies that both underwrite vision and knowledge.

“Certain modes of racial visibility and knowing dovetail with specific ways of organizing data.” Technologized ways of seeing and knowing took shape in a world that was also struggling with new “parsings of race.” McPherson asks, “If race is a fundamental organizing principle of social relationships, at both the macro and micro levels, how might we understand the infusion of this organizing principle into the technological organization of knowledge?”

In previous work, McPherson has termed the racial paradigms of the post-World War II era as “lenticular logics,” after the lenticular printing process that gives us, for instance, the 3-D post card. Unlike the popular stereoscope card of the industrial era that melds two different images into an imagined whole, the lenticular image partitions and divides, privileging fragmentation or modularity. “A lenticular logic is the logic of the fragment, a way of seeing the world as discrete nodes, a mode that suppresses relations.”

The popularity of lenticular lenses, especially through the 3-D post card, coincides historically not just with the rise of the civil rights movement, but also with the birth of digital computing. “Unix is the way that the poor logic of the lenticular and the multicultural gets ported into our computational systems.” Unix was conceptualized “as a toolkit of synergistic parts that allow for flexibility and depth.” One of its design philosophies is that a program should “do one thing, and do it well,” not unlike our “deep disciplinary drive in parts of the university.”

In fact, explanations of the Unix philosophy all employ a common set of rules that “complicitly translate into computational terms the chunked logic of the lenticular.” Another Unix design principle, for example, is that “the complexity of a computer program is controlled by a modularity which insists that code should be constructed in interchangeable parts that can be plugged together via clean interfaces.” For McPherson, there certainly are practical advantages to such structures, but they also underscore a world view in which “a troublesome part might be discarded without disrupting the whole.” As Brian Kernighan, coiner of the term Unix put it in 1977, “Tools are meant to be encapsulated to avoid a tendency to involve programs with each other’s internals.”
Additionally, Unix’s “rule of diversity” demonstrates a mistrust of the one, true way. As such, Unix embraces multiple languages, open extensible systems, and customization—all which “read much like the tenets of the neo-liberal multiculturalism, as well as post-structuralist thought.” Unix literature frequently repeats the terms *modularity, compactness, simplicity*, and *orthogonality*; it is meant to allow multitasking, portability, timesharing, and compartmentalizing. For McPherson, it is not much of a stretch to layer these traits over the core tenets of post-Fordism: time-space compression, transformability, mass customization, a public-private blur.

The push to modularity also reflects other changes in the organization of social life in America. If it’s assumed that covert racial logics take hold at the tail end of the civil rights movement, they do so, at least partially, “to cut off and contain the more radical logics implicit in the urban uprisings that shook Chicago, Watts, and Detroit.” By the 1960s and 70s, for instance, Detroit was more segregated than in previous decades, suggesting a different take on the programmer’s vision of the easy removal, or containment, of troubling parts: “whole areas of the city might be rendered orthogonal, and thus disposable.”

This “rule of modularity” is not just an American phenomenon but is found everywhere in the emerging liberal state. For example, the French government, in the aftermath to May 1968, contained the radical force of the uprising by quickly moving to separate the student rebellion from the concerns of labor, employing a strategy of “separation and containment” in which both sides, students and labor, would ultimately lose.

This modularity also characterizes the increasingly “niched production of knowledge” in the university after WWII. While many have written on the twentieth century acceleration of industrial modularization, McPherson would like to see better recognition of the privileged role of digital computers in this process.

Even though “our technological formations are deeply bound up with our racial formations,” McPherson does not argue that one mode is causally related to the other, but that they both represent ongoing moves toward modular organization across all of culture: our code, our universities, our cities.

If scholars of race have highlighted how certain tendencies within post-structuralist theory simultaneously respond to and marginalize race, this maneuver is at least partially possible because of parallel and increasing dispersion of electronic forms across culture, forms that simultaneously enact and shape these new modes of thinking.

McPherson sees a need to further examine how “dominant forms of computation continue to infect other ways of knowing in the academy.” For instance, while C.P. Snow in the 1960s and the Sokol science wars of the 1990s sustained the myth that science and the humanities exist in separate realms of knowledge, “powerful operating systems have surged beneath the surface of how and what we know for over half a decade.” These operating systems, particularly Unix, at least partially “overdetermined the very critiques we imagine we are performing today.”
Now that we—academic humanists—are “complicit with the machine,” McPherson has some ideas on where we go from here. First, she would like us to better understand the machines that powerfully shape our lives, and that which the humanities are woefully ill-equipped to examine. This better understanding means more than simply studying our screens and “the images that dance across them”—a moving beyond both representation and the rhetorics of visuality. As it stands now, we might read representations to search for “symptoms of information-capital’s fault lines and successes,” but we cannot read the logic of these systems and their networks at the surface level of the screen.

Capital is now fully organized under the sign of modularity. It operates via the algorithm and the database via simulation and processing. Our screens are cover stories, disguising deeply divided forms of both machine and human labor. We focus exclusively on the visual, increasingly to our peril. Questions of representation may in fact be distractions from the powers that be, the triumph of the very particular patterns of informationalization evident in code.

Second, we must have at least a passing familiarity with code languages, operating systems, algorithmic thinking, and systems design. Studies of the image and visuality will not be enough if scholars do not attend to the non-visual dimensions of the code and its organization of the world.

Third, we need hybrid practitioners: artist-theorists, programming humanists, activist-scholars, theoretical archivists. Our current knowledge practices are modularized and “our very scholarly practices tend to undervalue broad contexts, meaningful relations, and a ‘sharing of the internals.’” The intense narrowing of academic specialties over the past 50 years can actually be seen as an effect of, or culprit with, the logic of modularity. Just as Unix works by simplifying data, by creating a system of interchangeable equivalences, scholarly practices tend to exist in hermetically sealed boxes.

Critical theory and post-structuralism have been powerful operating systems that have served us well—they were as hard to learn and as complex as the structures of C++—and academics have learned them well. They are also systems in desperate need of updating and patching. They are lovely and not enough.

Finally, humanist scholars must engage with vernacular forms that make them nervous, authoring in them to better understand them. They must also re-create in technological spaces the possibility of doing work that moves people. Computers themselves are encoders of culture. If, in the 1960s and 1970s, “Unix hardwired an emerging system of covert racism into our mainframes and our minds,” then computation responds to culture as much as it controls it. “Politically committed academics with humanities skill sets must engage technology in its production, not simply as an object of our scorn, critique, or fascination, but as a productive and generative phase that is always emergent and never fully determined.”

Many humanities scholars aren’t really engaged with the technological: they’re more likely to critique the social effects of technology than use it in their work.

In the second part of her lecture, “Animating the Archive and The Scholarly Imagination,” McPherson noted that although her work over the last decade has been oriented toward technology, it hasn’t been motivated by it. Rather, her work has been motivated by “the same concerns that animate the research of many politically engaged interpretive humanities scholars”—an understanding of the emotions, spatiality, embodiment, and social justice. She looks to close the gap between digital platforms/interactive networks and the philosophical and political questions that drive the
humanities. One way to close this gap is to look at various histories, as she sketched in the first part of her lecture. Another way is to “take responsibility for the making of digital culture,” recognizing that many humanities scholars aren’t really engaged with the technological: they’re more likely to critique the social effects of technology than use it in their work.

The early forms of digital humanities projects reflected the niched knowledge production of the university as indicated earlier. Many early projects in the computational humanities emerged when certain scholars in humanities departments fled their home bases after the incursion of post-structuralist theory, feminist theory, and scholars of color into their home departments. Humanities scholars engaged these new forms with suspicion, and frequently contempt.

Meanwhile, the fields of visual studies, media studies, American studies, and digital cultural studies exploded, producing valuable insights into the epistemological, phenomenological, ethical, and cultural dimensions of our visually intense and media rich worlds. Some of the most cutting edge work in the humanities takes up questions of visual and aural culture. For McPherson, it’s time to rethink the very forms that scholarly production might take. Doing this will move the humanist from being a mere content provider for digital projects into new modes of collaborations and authoring. Humanities scholars should not only study and write about new media forms, but they also need to participate more fully in the production of these forms. Surely, those scholars who have devoted their careers to studying narrative structure, social meaning, or the aesthetics or politics of visuality should be able to reimagine the relation between scholarly form and content.

The last decade has given us new forms of multimodal scholarship. The multimodal humanist brings together databases, scholarly tools, networked writing, and peer-to-peer commentary while also leveraging the potential of visual and aural media. McPherson sees the multimodal humanist as one who is not afraid to

- reconfigure the relationships among author, reader, and technology, while investigating the computer as a platform, a medium, and a display device
- think carefully about the relation of form to content, expression to idea
- explore new forms of literacy that include authoring and analyzing visual, aural, dynamic, and databased media
- take cues from popular culture, imagining what it would be like to immerse one’s self in a scholarly argument as one might immerse one’s self in a movie or a video game
- investigate what happens when scholarship looks and feels differently, requiring new modes of engagement from the reader and the user

The multimodal humanist also takes seriously questions such as:

- How does one experience or feel an argument in a more interactive and sensory rich space?
- Can scholarship show, as well as tell?
- Will representing data differently change the ways we understand, collect, and interpret it?
- What happens to argument in a non-linear environment?

Attempts at answering these questions, and others, can be found in McPherson’s online scholarly publication, *Vectors Journal*, at [www.vectorsjournal.org](http://www.vectorsjournal.org).