**0**

Thank you very much to everyone for joining me here today and sharing your thoughts in what I hope will be a creative and challenging discussion. And thank you to the extended community who have joined us remotely via video conferencing. If I can remind everyone to use their microphones when they speak, we will be able to include those who weren’t able to join us here in person. I want to welcome you all to the Inclusive Design Research Centre; I’m very pleased to be able to present in the place where these creative ideas and practices grew up, supported by the context of our research here.

I’ll keep my formal remarks somewhat brief; we’ve all seen the videos now, and have all read the paper, so I’m particularly interested in the conversation, critique, and discussion that emerges from this. Instead of summarizing the videos and adjacent theories, I will elaborate on a few key ideas and attempt to situate this project within the context of both the history of computation and alongside the work of experimental film and video artists who are germane to my practice.

**1**

To start, I want to pick up this concept of adjacency, which forms the bulk of Section 1 of the thesis and try to elaborate on what’s at stake for me. My initial motivation stems from a desire to establish a theoretical model of practice in multiple disciplines that avoids what I see as two sides of the same tarnished conceptual coin of interdisciplinarity: the idea that disciplines must either be in harmony with each other, or must inevitably perform the hierarchies and antagonisms of the academy today, with its—very familiar to us here at OCAD—increasing prioritization of technological research over the arts and creative practice.

Adjacency is an attempt to prevent myself from reading the relationships amongst my video, music, and software practices as if they were somehow, deep down, “the same thing.” No, I want there to be enough space within my own work to accommodate the *difference* between disciplines and practices—the different modes of working and seeing and thinking in each discipline—and to envision these differences as potentially generative of new kinds of relations and effects that emerge from the gap between them, from the cracks in the disciplinary establishments. Just last week, I presented a portion of my work on Flocking to a European Commission review panel comprised of computer and information scientists. And there, the kinds of arguments I have made in this project regarding the values, purpose, and potentials of my work simply would not have translated. It’s another system entirely, complete with customs, terminology, and methods that reinforce and co-constitute each other. To imagine that the two disciplines could be resolved via direct communication and translation leads, I argue, only towards intellectual tourism or imperialism. And so I have attempted to shift my focus here towards the often-overlooked energies—the ripples and wake produced by activities in one discipline and their effects on the others. My movement around and amongst these disciplinary thickets occasionally catalyzes something new in one or the other areas of my practice, however indirect and difficult to place.

Adjacency, then, is not an argument for the lack of influence amongst disciplines in my practice, but rather a means of asserting that these relations need not be strictly defined by concepts of *unification* or *presence,* but also by simple proximity or perhaps a kind of *presence in absence*.

**2**

Next, I’d like to briefly discuss the specific technical operations that are at play in my work, and the larger technological context that they operate within. In the paper, I argued for a different approach to conceptualizing computation and the digital—different from what I see as the prevailing rhetoric of universalism, abstraction, and generalizable representation. These intellectual currents are felt today throughout computer science, information visualization, and design practices (among others). Jeanette Wing argues in her article, “Computational Thinking,” that computational methods and models are “universally applicable,” a fundamental skill for everyone, characterized by the values of “solving problems efficiently,” “correctness,” the use of “abstraction and decomposition,” and “thinking in terms of prevention, protection… [and] damage containment”(33-4). Most crucially to my project, Wing argues that Computational Thinking is characterized by “ideas, not artefacts” (35).

In contrast, I have constructed a system for creative computation that is distinctly material and artefactual, and that aims to enable the growth of communities of practice *within and around* a shared artefact. For me, computation is not primarily abstract in nature (though it undoubtedly deals in abstractions, as every part of our lives inevitably do), but is in some sense real and embodied.

In this regard, my project was significantly informed by an essay by Antranig Basman entitled *If What We Made Were Real,* in which Basman argues for software’s current construction as a kind of film set sham, so profoundly inflexible and one-dimensional that it fails to accommodate even the slightest shift in perspective from the one it was originally designed for. While I largely agree with this position, part of my goal here was to elaborate the ways in which digital artefacts, including software, *are* real, and to explore the effects they have on our bodies and ways of seeing.

My concept of lensing serves in part as a means to account for the material, embodied effects of the digital in the world, and to acknowledge and explore the ways that technology couples with and is constitutive of our embodiment. Lensing is an attempt to speculate on the forces and energies that digital technologies exert on our sensing bodies, and those that we reciprocally can exercise on them, either as makers or as so-called spectators.

As I hope I made clear in the paper, my aim in outlining a particular set of lenses was not to define a schematic of the relations between these lenses and the works in *Insignificant Surfaces*, since surely the key point of lensing is that it is individually situated and relational. Clearly, however, these lenses can and do operate in my work. For example, in terms of the link between Brakhage’s intimate cinema of the amateur—the hand and the heart transmitted through the technology of the camera—and my own portraits of Darcie and her family and the cat Hugo. But again, the point isn’t to categorize or to enumerate these strategies, but to consider the ways in which technologies and bodies exchange energies via computation and the cinema. All this, just to theorize the tiny, recurrent trembling in my videos—be it bodily, elemental, or technical. <show examples from Tofino, indian horse, in passing>

I situate my own software work (and that of my colleagues here at the IDRC and its wider community) in the missing history of computational environments that support creative tools for end-user development, starting with John McCarthy’s LISP in the 1950s, through Alan Kay’s Dynabook and Smalltalk projects in the ‘60s and ‘70s, alongside David Ungar’s Self and Korz environments, James McCartney’s SuperCollider, and Miller Puckett’s Max. Of course, this probably means little to most of us here. But what remains, I think, notably different about my software—Flocking and Aconite—is the way in which they explicitly acknowledge their *outside*. Where, for example, SuperCollider or Self see the external world as something to model and control and fold into the confines of their little software universe, my work prioritizes *externalization—*software’s engagement with the world and its diverse materials. This is where computation and creative practice meet—in the light and energy of cinema, out in the world of bodies, not in the abstractions and efficiencies of the Computational Thinkers. And so my work is simultaneously *speculative* and *real—*speculative in terms of its reaching towards a new form of creative community not yet fully realized, and real in the sense of its ability to have an impact beyond the laboratory or the seminar room—as the medium of creative expression.

Describing the specifics of my algorithmic interventions in *Tofino*, *In Passing,* or the soundtrack to *Font Màgica* is difficult and technically detailed. In addition to the homoiconic, code-as-data approach that I discussed in the paper, one way to understand my non-musical use of Flocking is to examine at its primary construct, the *signal*. In Flocking, a signal represents a value that changes over time. Signals can be evaluated at multiple time scales—at the “micro” level of audio sample generation, 44 thousand times per second, at the “macro” scale of the compositional flows and changes over the course of an extended piece, or at any interval in between. In *Tofino,* I use Flocking’s musical signals at 24 frames per second to produce the compositional timings and changes that evolve throughout the piece. A triangle wave, oscillating through one period of its cycle every six minutes, controls the playback speed of one version of the video composited over top of. This results in a movement back and forth of the waves in the video, splitting off from each other and catching back up and merging every 3 minutes. A second set of oscillators and envelope generators determine the amount of blending between the layers, so that a second set of visual oscillations unfold. The video is literally made ofwaves. <show Tofino>

What Flocking provides, then, technically speaking, is the ability to *externalize* what might well be internal in another system—to redirect its signals out from its world and into another (in this case, Aconite’s, my video processing software), in a manner that neither tool was explicitly designed for but which is possible because of their materiality and openness.

Although the film is intentionally silent, there is a carefully measured and timed set of spatial and durational operations at play here. They are distinctly filmic techniques, yet share some lingering quality of sonic material. Indeed, sound is a ghostly influence within *Tofino,* its literal absence marking its transformed presence. *In Passing* operates a similar though simpler kind of system. Sound is literally present in this case, serving as marker of the technological and metaphorical transformations that the video is concerned with. From form into dust and light.

**3**

Lastly, I’d like to take a moment to more clearly situate my videos within the context of other film and video work. This starts, most crucially for me, with my now 15-year long involvement with Toronto’s Loop Collective, and the opportunities I’ve had over the years to see and present work by a variety of experimental filmmakers and video. The films and videos of Loop Collective members, especially those by Izabella Pruska-Oldenhof and Kelly Egan, and my creative collaborations with them and other members of the Collective have been hugely germane. Over the course of my (relatively short) video art practice, I have quietly staged, within myself, a conversation between my work and theirs. Where do I fit? Initially, I saw my steady, slowly unfolding *digital* videos as partially a reaction to the extremely filmic, densely layered, expressionistic, and constantly jittering material rhythms of Izabella and Kelly. Yet over time, this approach changed, and I see *Tofino* in some small way as an indirect reference to Izabella’s work, with its layers and carefully-calibrated rhythms.

In the paper, I work through the writing of Stan Brakhage and the films of Chris Welsby (which I presented with Loop and Cinemateque Ontario in 2005) and of Ernie Gehr. Absent from this particular discussion, though of significance to my practice, is the work of Jonas Mekas, particularly the video art he has made this century, which represents for me—more than his films—a much more intimate, ambiguous, and less overtly technical approach to an artist’s transformation of the mundane into the revelatory. Welsby and Gehr are particularly important to me in terms of trying to rethink (and create) a structuralism that is not positioned in opposition to expressionism, nor solely concerned with explication and demystification of filmic processes (as in Gidal’s structural materialism), but, rather, located—as I see my own videos—somewhere between the body and the technique, participating in a network that includes the unpredictable forces of natural elements, technology’s failures and obsessions, creative expression, and our own individual embodied perception.