

Pythagoras Unchained

Adam Brown

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
in partial fulfillment of the requirements
for the Master's degree in Fine Arts

Visual Arts Department
Faculty of Graduate Studies
University of Ottawa

© Adam Brown, Ottawa, Canada, 2014

ABSTRACT

Recounts the author's trajectory in the Masters of Fine Arts program. Describes the nature of his early practice in interactive sound art and its later development into sculptural, performative and social forms. Key theoretical influences in this development are identified and discussed in detail. In particular the writings of the philosopher Jacques Rancière and critic Claire Bishop are discussed, as well as the work of artists William Pope.L, Joar Nango and Thomas Hirschhorn.

ACKNOWLEDGEMENTS

Thanks to my friends Jessica Mensch and Colin Dorward, who showed me what it means to be an artist - the courage, integrity and self-belief that is needed to sustain a practice.

Thanks to my former and current thesis advisors Daniel Jolliffe and Martin Golland, for your guidance and wise council, as well as to Penny Cousineau-Levine, whose engagement and patience eased the way.

Thanks to my sister Janey Brown, for always believing in me, and to Anne Loosen for your constant friendship.

Finally, thanks to Madeleine Bluteau for all your ideas, for your quick smile and your steadfast heart.

INTRODUCTION

A challenge in reflecting on my time as an artist is reconciling with my earlier careers as a software developer and then as a student of mathematics. The ways of thinking demanded by art and by mathematics are so different, it is difficult to view these practices as part of a whole - unless through a narrative of development and change.

One of the reasons for my exit from academic mathematics was the hermeneuticism and abstraction of that field (seductive as that kind of rarified and meditative inquiry can be). An attraction of art-making, by comparison, is its engagement in the world - its potential to work not only through (as it always does) power structures but also to work on those networks or to point to them.

A challenge then was to discover how to address the political through my work (my framework for understanding what it is to speak of “politics” or “the political” coming largely from Jacques Rancière, whose thought is discussed later in this paper). The work of William Pope.L, among others, was an inspiration and a model for my strategy of activating objects, sites or situations through performance - later presenting these actions and their adjoint artifacts in the gallery space through documentary installation. At the same time, my performative gestures were informed by a relationship to the ideas of DIY (do it yourself) and open source.¹

In my on-going research, I’m expanding my practice to include social or “relational” elements, to create spaces of activation and conversation on the possibilities for creation and collaboration in the contemporary art scene and post-utopian social landscape, as well as engagement with a public beyond the walls of the university or indeed the gallery. In this research, I find the critics Nicolas Bourriaud and Claire Bishop to be of key importance as well as the artist Thomas Hirschhorn.

¹ Open-source is a concept that had its genesis in the early days of the internet, in the free software movement. As defined by Richard Stallman, a free software pioneer and advocate, “free software is a matter of the users’ freedom to run, copy, distribute, study, change and improve the software.” (3)

In recent years the idea has been extended to fields as disparate as hardware design, governance, beer brewing and filmmaking.

To come to study and practice art has been for me a profound personal challenge and has brought commensurately great reward. In this paper I'd like to give a sense of my trajectory in the MFA program at the University of Ottawa - which has also been the journey of my developing an art practice.

1. NEW MEDIA ART

At McGill University, where I completed my MSc in theoretical computer science (pure math, essentially), my area of specialization was foundations: set theory, theory of computation and especially proof theory.² These are branches of mathematics that set out (quite successfully, by the standards of the field) to account for the foundations of mathematical truth and inquiry, and to do so in the language of mathematics.

Proof theory was ushered in by Kurt Gödel's surprising 1931 Incompleteness Theorem and gave a precise mathematical formulation of the mechanism of formal proof. The bombshell in Gödel's paper was that no system for mathematics, no set of axioms and rules for inference, can be both consistent and complete. Which is to say that such a system is either wrong or unfinished.³ My thesis paper, "Infeasibility of solving finite mathematical problems", demonstrated a new theorem related to Gödel's that reconsidered his result in the light of the finite proof lengths implied by computation as we know it and in light of Kolmogorov information complexity theory.

By the end of my MSc I had concluded that I would leave the field. Mathematics can be a realm of abstraction somewhat seductively remote from the world. To pursue pure math, one has to give oneself over to it and to, in a sense, turn one's back on the world. Around that time (winter 2008), I'd come to be interested in electronics. Circuit design and fabrication were exciting and frustrating challenges. It was my first time grappling with what I suspect most artists know well - the stubborn materiality of things. The resistance of objects and the world to being worked. This was somewhat of a revelation to me - my professional background being software development - working in a digital universe within which I was used to having an almost dictatorial level of control.

² "Theory" in mathematics denotes a body of known techniques and truth, rather than a speculation or hypothesis.

³ This was a distressing conclusion for the mathematicians of the early 20th century - David Hilbert and Bertrand Russell prominently among them - who wanted to devise a foundation for future mathematicians that would allow every proposed proof to be checked with mechanical (if labourious) precision and absolute certainty. It is rather less upsetting for 21st century mathematical researchers, who perhaps appreciate the latitude and opportunities for stylistic innovation afforded by a less-formal proof strategy.

Electronics were also a bridge for me to my burgeoning art practice. In fall 2007, I visited the *e-art* exhibit at the Musée des Beaux-Arts in Montreal, presenting collaborations between artists and engineers funded by the Daniel Langlois Foundation for Art and Science. I encountered there for the first time the tradition of media art - concerned with the mediations and altered subjectivities bred by the technological changes of the information age. Jessica Field, a Canadian new media artist, showed her 2003 robotic sculpture *Semiotic Investigations of Cybernetic Behaviour* (figure 1) in the *e-art* exhibition. *Investigations* consists of two robotic bodies, each equipped with a different sensor technology - one which detects motion and one which detects proximity. As each spectator approaches, the robots dialog with one another about what they “perceive” of the viewer’s presence. This piece struck me in particular as speaking to the possibilities for technology to engage with an art audience and to reflect on our post-digital condition. Likewise, the artist Cory Arcangel, whose 2003 *Super Mario Clouds* (figure 2) consists of video produced by a hacked Nintendo game cartridge was an example of the incorporation of a hacker’s ethic and computer programming into an impactful new-media installation.

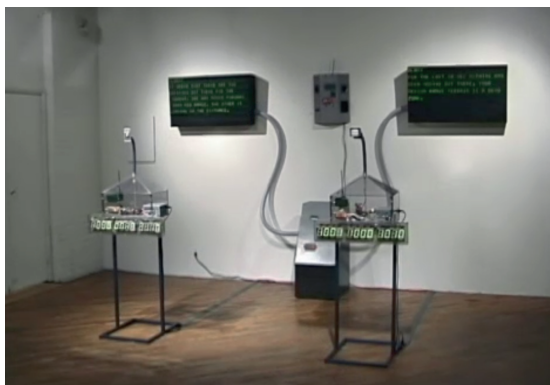


fig 1. Jessica Fields, *Semiotic Investigations of Cybernetic Behaviour*, 2003
approx. 10' x 15' x 10'. installation with custom electronics, steel.

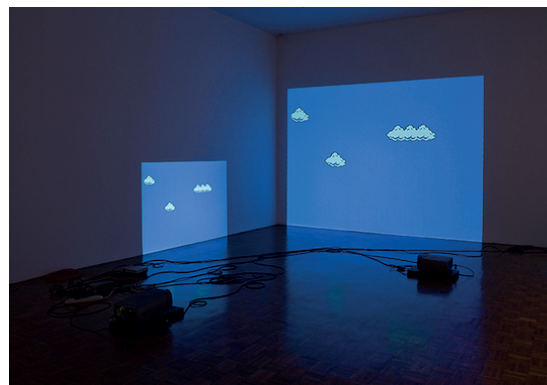


fig 2. Cory Arcangel, *Super Mario Clouds v2k3*, 2003
approx 15' x 20' x 10'. video installation with hacked Nintendo cartridge.

I was inspired both by the ideas in these works and by the model proposed by the Langlois Foundation of collaboration between engineers and artists and so I started to offer myself as a technical collaborator to artists. I worked in this vein for Vanessa

Yanow - a Montreal-based glassblower and sculptor - designing for her an animated light component for her sculpture *Lux Operans*, 2009 (figure 3). I worked also for Kyle Beal, designing (along with Wes Hatch) the logic and control system for Kyle's sculpture *smokn n public a comms breakdwn so 2 spk*, 2009 (figure 4). From these contacts and collaborations naturally arose other opportunities - to create and exhibit works under my own aegis.



fig 3. Vanessa Yanow, *Lux Operans*, 2009
18" x 20" x 20". copper tube, fabric, blown glass, custom electronics.



fig 4. Kyle Beal, *smokn n public a comms breakdwn so 2 spk*, 2009
30" x 30" x 40". mixed materials, electronics, 2 fog machines.

My practice initially focused on the creation of interactive works - primarily sound art - works that exploited the new possibilities inaugurated by the explosion of cheap digital technologies and the DIY communities that sprung up around them and helped carry them forward.

Phone Call, 2009, the first work that I exhibited, was a rotary telephone linked with some custom electronic circuitry and software. This technology, which I designed, used speech-detection, recording and playback to allow users to carry on a kind of conversation simultaneously with past and future users of the phone.⁴ A later work, *Questions* (figure 5), also 2009, used the same rotary phone as a support, in a site-specific sound installation in the abandoned Wellington Tunnel in Montreal. Participants were invited to pick up the telephone and to talk into it (to ask a question, perhaps). By means

⁴ *Phone Call* was shown at the members exhibition of Yanow's Long Haul / Corrid'art artist studio space in Montreal. The opportunity was a kind thank you on her part for my earlier help with *Lux Operans*.

of hidden speakers, the visitor's own voice was amplified and distorted, booming fearfully back from deep in the tunnel.



fig 5. Adam Brown, *Phone Call*, 2009
10" x 7" x 7" (plus hidden elements).
installation with telephone, computer,
custom electronics and software.



fig 6. Adam Brown,
Pythagoras Unchained, 2013
25 pieces of 2' x 2' x 1" each.
painted plywood and steel bar.

The fun of this work for me was in watching the interactions of participants. There was a palpable glee and enthusiasm as people explored the parameters of the system and the possibilities (limited as they were) for creative expression implied by it. This interest in providing experiences of, or opportunities for, creative play was a chief motivation of my work at the time, conditioned perhaps by my delight at finding my own agency for creative action.

I revisited this theme later, in my third (summer) semester at the University of Ottawa, with my "interactive sculpture" *Pythagoras Unchained*, 2013 (figure 6).⁵ Participants were encouraged to connect, disassemble and recompose a geometric sculpture made up of colourful wooden polygons (triangles and pentagons). The idea was for participants to experience creating their own sculptural compositions (there were a surprising number of interpretations: shelters, butterfly wings, abstracted snakes and other geometric forms).

Ultimately, though, I have to question whether this kind of work is really creating space for true participation. The rules of the game are so rigid, so determined, that the play space has more in common with a video game, say, than with Paul Butler's *Collage Parties* (figure 7), ongoing since 1998, in which the artist supplies glue, scissors, and his

⁵ Exhibited at Figment, New York, 2013.

own obsessively-collected collage materials, inviting participants simply to make art. (Judging from the documentation, Butler's *Parties* are often-wild explosions of collective creativity.)



fig 7. Paul Butler, *Collage Party*, 1998-ongoing variable length. participatory event.



fig 8. *Infinite Space Kaleidoscope*, 2011 approx 10' x 10' x 11'. pine, plywood, reflective mylar, mirror, custom electronics, speakers.

Infinite Space Kaleidoscope, 2011 (figure 8), is a work that I completed soon before I began the MFA program at the University of Ottawa.⁶ *Kaleidoscope* was a small (about 11 feet high), pyramidal pavillion, with animated light responding to music (an abstract experimental piece composed by Alexander Moskos). The interior of the pyramid was completely mirrored, creating an irregular kaleidoscope in which the viewer was immersed. This work signaled a shift for me away from the interactivity of devices towards an interest in architectural-scale sites for interaction, and with experiential and sculptural dimensions of geometric forms. In short, I see it as marking a shift from work that foregrounded technology and technical problem solving towards a more embodied and sculptural way of working.

⁶ *Kaleidoscope* was exhibited at the Red Bird Gallery as part of Montreal's 2011 Nuit Blanche.

2. MATHEMATICAL OBJECTS

A pleasure and also a frustration in the making of technology-based art (work using custom electronics or software, for example) is the technical thinking and problem solving involved. My process tends to be fairly linear: first I think of an idea, research the technologies involved, design and lay out a circuit, etch the circuit board, drill and populate it, write software, test, etc. I enjoy the mastery and rigour required to carry out this process, but beginning the MFA program, I felt that I was somewhat missing the point - I was thinking like a designer, an engineer, not an artist. Or, if I was thinking of the particular problematic of the artwork per se, it was mainly in the conceptual phase - separated by a long period of technical labour from the result.

Beginning the MFA program, then, I resolved to leave technology aside and to explore other forms. For the first semester of my studies in Ottawa, I presented *Possible Solids*, 2012 (figure 9), for the final critique. *Solids* was a collection of small-scale sculptural experiments exploring manually executed, generative geometric forms. These sculptural objects were “generative” in the sense of being defined by algorithms incorporating chance. The objects were cut and folded from paper, following an algorithm that gave constraints on the pattern of cuts and folds - marked with compass and straightedge - leaving room for variation, but ensuring each pattern (called a “net” in geometry) would fold into a solid form. The application of the generative algorithms can



fig 9. Adam Brown, *Possible Solids*, 2012
4' x 3' x 4'. installation with drafting table,
drafting implements, drawing on paper, paper
sculptural elements

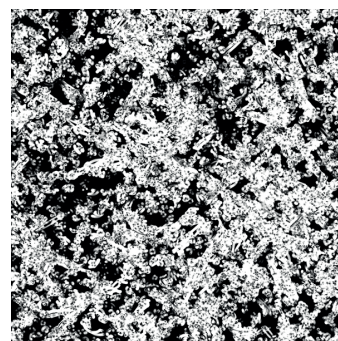


fig 10. Casy Reas,
Process 8 (Image 1), 2006
28" x 28". digital print.

produce a multitude of possible forms. Generative images and objects, of course, are a major trope in digital media art - artists sometimes invoking, rhetorically, a collaboration with or an authorship belonging to the machine. (Casy Reas, author of *Processing*, a programming language for visual arts, 2001-ongoing, is a pioneer in the field - see figure 10.) In the case of *Solids*, I returned to the manually executed roots of this generative, algorithmic discourse - recalling, for instance, John Cage's aleatoric process for scoring music using throws of dice and casts of the I Ching.

For the critique,⁷ the paper forms were displayed along with a graphic representation of the algorithm that produced them. The objects were installed on a drafting table - asserting the primacy of the process by which the forms were produced over the particular objects themselves (which were largely the result of chance and thus somewhat arbitrary in their final form). I understood this as a practice of research-as-art, a mode put to great effect by Terence Gower in his 2010 video and installation, *New Utopias* (figure 11).⁸



fig 11. Terence Gower, *New Utopias*, 2010
17 minutes. hd video

⁷ At the same critique I also exhibited *Crossing the Ottawa*, 2012, a video-documented performance, which will be discussed in a later chapter of this paper.

⁸ Gower assumes for this work the role of a cultural historian, donnish and erudite, lecturing on the very different notions of utopia evinced in selected 1960s and 70s films and stage concerts. It is not lost on the viewer, incidentally, that while the staging of Gower's video evokes the utopic populism of the Walt Disney educational videos of the 1950s, Gower's project of ironic, aesthetic and scholarly reflection on the utopias of the 20th century is very of the now. Perhaps Gower suggests that his own postmodern stance has something in it of the will to utopia - a drive to seek a (non-existent) vantage from which culture can be observed.

Solids was not well-received by the jury. One jury member even questioned whether it was art at all. Myself, I was troubled by this question, because I didn't see clear limits on what could be considered art. A grid of numbers, a glowing rabbit, a communal dinner, a walking tour, a closed gallery, a handmade match, flipped car, book of instructions or tree house, a shared beer or an unphotographed kiss⁹ - if these objects or events are considered art, then what is not? It seems that no attempt to define the parameters of art could possibly survive the onslaught of potential counterexamples. At the same time, however, I recognize that an observer of contemporary art would not find, for example, the climactic pyrotechnics of the 2004 Burning Man (figure 12) to be "art" in quite the same way as Cerith Wyn Evans' fireworks sign *Aquí todo parece* (figure 13) at the Museo Tamayo in the same year.



fig 12. Burning Man, 2004
approx. 50' high. wood, pyrotechnics,
various.



fig 13. Cerith Wyn Evans, *Aquí todo parece*, 2004
approx. 8' x 5'. ephemeral sculpture in wood and
fireworks.

Wanting to establish my practice more definitely within the discourse of contemporary art, I revisited these geometric and algorithmic forms with the installation *Folding Forms*, 2013 (figures 14-18), presented at my second semester final critique

⁹ Hanne Darboven, *Kommentierte Darstellung der Quersummenkonstruktionen...*, 1968-77; Eduardo Kac, *GFP Bunny*, GFP Bunny; Rirkrit Tirivaniija, *Untitled (Free)*, 1992; Janet Cardiff, *The Missing Voice*, 1999; Robert Barry, *Closed Gallery*, 1968; Zoë Sheehan Saldaña, *Strike Anywhere*, 2007-8; Voina, *Palace Coup*, 2010; Yoko Ono, *Grapefruit*, 1965; Pawel Althamer, *Tree House*, 2001; Tom Marioni, *Drinking Beer with Friends is the Highest form of Art*, 1970-ongoing; and Tino Sehgal, *Kiss*, 2007, respectively.

(spring 2013). My goals were to enter into a richer dialog with the history of art, to achieve a more considered relationship to my materials and to find greater conceptual resolution.



fig 14. Adam Brown, *Folding Forms*, 2013
 2' x 2' x 2'. steel sculpture.
 4' x 4' x 4'. steel sculpture
 10' x 10' x 5' steel sculpture.
 12' x 10'. drawing in string and yarn.
 4' x 3'. drawing in chalk on chalkboard.



fig 15. Adam Brown, *Folding Forms*, 2013

Folding Forms develops the simple premise of a series of shapes (equilateral triangles, squares, pentagons, etc.) connected together, edge to edge, with a specific angle between each face. The shapes, then, fold into space, establishing a three-dimensional volume. This volume is complex in space, but is very simply coded - it is completely determined by the selection of which shape follows which and on which edges they are connected.¹⁰

I explored these forms both with custom software (figure 17) and with wire-frame steel sculpture (figures 14 and 15). After first writing computer code to model and render these possible mathematical objects, my intention was to use that software to design forms - possibilities produced by the algorithm - and then to execute them in steel.¹¹ I quickly realized, though, that these “materials” (steel and software), even when addressing the same kinds of forms and geometric concerns, each have their own distinct potentialities.

¹⁰ This is analogous to the way in which a DNA sequence specifies a protein. Triplets of DNA base pairs specify amino acids. Protein synthesis involves joining these amino acids one after the other, their mutual electrostatic attraction and repulsion determining the final three-dimensional protein conformation.

¹¹ I chose to use steel in part to avoid the impression of incompleteness or provisionality left by the paper forms in *Possible Solids*.

The software forms wanted to expand and extend. Soon I was rendering whole landscapes of folding polygons, randomly generated sequences 100,000 shapes long - 64 variations of which I printed in a hardcover book (figure 16), as one element in the installation.



fig 16. Adam Brown, *Folding Forms (Book I)*, 2013
12" x 12". digital print hardcover.



fig 17. Adam Brown, *dna_sculpture*, 2013
40 KB. custom software.

The metal sculptures, on the other hand, seemed much more interesting in short sequences. I produced three, at a variety of scales: a knee-high, tightly-wound ball; a waist-height figure and a five foot high dome. These sculptures developed according to an entirely different logic, intuitive rather than random, and in relation to my body in space rather than an image on the screen. This was an important discovery for me - the tangible effect of my embodied relationship with process and materials in the outcome of the work. Another discovery was the shelter-like form of the large sculpture, pointed out to me by Daniel Jolliffe, my then-thesis advisor. I have found that the drive to build shelters - abodes perhaps - has been an important motivation in my later work.

The installation, along with the book and three sculptures, also consisted of a drawing in string and yarn of the shadow of the largest sculpture - a literal projection of its three-dimensional form onto the walls and ceiling of the exhibition space, drawing attention to the process by which virtual objects are rendered to the screen in computer graphics, perspective painting or photography.

The final element was a blackboard on which the underlying code sequence of edges and connections for each sculpture was drawn. The ontological stance I wanted to

indicate with the installation is that the true objects under consideration are the mathematical abstractions described by the algorithm - an infinite realm of all possible forms. Each of the three elements - sculpture, code and projection (figure 18) - stand in relation to one another like the object, text and image of Joseph Kosuth's *One and Three Chairs*, 1965 (figure 19). They also stand in relation to the abstract, Platonic (we could even say "transcendent") mathematical forms which are only seen in the mind's eye - further complicating the question of which representation is primary.



fig 18. Adam Brown, *Folding Forms*, 2013



fig 19. Joseph Kosuth,
One and Three Chairs, 1965
32" x 15" x 21". chair.
36" x 24". photographic panel.
24" x 24". text panel.

The jury having responded favorably to this installation, I felt that I was redeemed somewhat, and was emboldened to experiment with other kinds of practice - to depart from explorations of mathematics-inspired concepts and to work towards a more engaged, more "political" way of art making.

3. POLITICS AND PERFORMANCE

I assume an expansive definition of “politics” - roughly the whole domain of the intersubjective, which is to say the realm of language, power and exchange that regulate relations between subjects and the very conditions for existence in society. I’m guided in my understanding of the political by Jacques Rancière, a French philosopher. In *Aesthetics and Its Discontents*, Rancière sets out many of his key aesthetic and political terms and concepts. Within, he elaborates his idea of the intrinsically political nature of art, which, according to Rancière’s schema, is political not by its content but rather by virtue of the artwork’s embeddedness in the governing *partage du sensible*. The *sensible* in this case refers to the aesthetic order which determines the operations of the senses themselves: structuring the possibilities of the visible and non-visible, the sayable and unsayable (Sayers). “Human beings,” observes Rancière, “are tied together by a sensory fabric, a certain distribution of the sensible, which defines their way of being together; and politics is about the transformation of the sensory fabric” (56).

The *partage du sensible* is established as a social consensus. The *partage* (sharing) governs the possibilities of speech, of what type of enunciation can be understood even as discourse rather than as mere noise, and so limits the very capacity of the oppressed to speak and be heard. The political order, then, by its very nature orders the aesthetic. Conversely, an artwork, in functioning aesthetically, is already in the sphere of the political - whether it operates through the dominant *partage du sensible* or in opposition to it.

Rancière, considering “political” art, distinguishes between three modes of engagement: critical or activist art; unmediated, participatory art; and art that reconfigures the *partage du sensible*. It is only the latter that Rancière finds respects the status of art in the contemporary world.

The ‘aesthetic regime’ of art, in Rancière’s view, corresponding essentially to modernity, is founded on a rupture between representation and effect, form and ethics. So, without turning back to an earlier, pre-modern, mode of art making, ethics cannot be

represented. This is the failure, says Rancière, of critical art: that critical art believes, despite all evidence, that it is enough to simply bring the truth to light. In fact, these truths - about power, capitalism, war - are already recognized. Critical art is only teaching us what we already know.

Responding to this failure of mediated art, “many contemporary artists draw the conclusion that no mediation is required; that the work can be the direct presentation of another form of community in which artists are directly fashioning new social bonds” (*Emancipated Spectator* 76). This is the art and theatre stemming from the critique of the spectacle - the goal of such art is to erase the distinction between creator and audience. This critique of the spectacle, however, becomes itself spectacle, and the mediation typical of the aesthetic regime reasserts itself.

Rancière proposes a third way which “escapes the dilemma of representation mediation and ethical immediacy” (*Spectator* 63), by which one affects a change in the very possibility of sensation and speech in the *partage de la sensible*, an intervention at the level of aesthetic form rather than content.

Aesthetic experience has a political effect to the extent that the loss of destination it presupposes disrupts the way in which bodies fit their functions and destinations. What it produces is not rhetorical persuasion about what must be done. Nor is it the framing of the collective body. It is a multiplication of connections and disconnections that reframe the relation between bodies, the world they live in and the way in which they are ‘equipped’ to adapt to it. (*Spectator* 72)

In thinking about the possibility of addressing this Rancièran notion of “politics” in my practice, the work of the American artist William Pope.L was both exemplary for me and formative.¹²

Homelessness and the right to occupy public space are major concerns in William Pope.L’s work, as well as race, and the art world itself. Pope.L uses performance (as well as other mediums) to challenge race along with the identity and power relationships between, essentially, the haves and have-nots - or in Pope.L’s terms, the

¹² There is a great deal of openness and imprecision in Rancière’s notion of political art, which perhaps has contributed to the astonishing range of art practices and works which are claimed to fulfill it.

‘vertical’ and the ‘horizontal’ (as in prone). In his 1991 *Tompkins Square Crawl* (figure 20), Pope.L crawled - on his belly, wearing a wool suit and a carrying a potted flower - through that neighbourhood, which had then recently undergone a particularly violent cycle of gentrification.



fig 20. William Pope.L, *Tompkins Square Crawl*, 1991
2 min. video documentation of performance.

We are not to understand, however, that Pope.L is valorizing horizontality, nor that he is simply commemorating the suffering of the dispossessed. Rather, says independent curator Nato Thompson, “The engagement with these modes of orientation takes the form of a theatrical undermining of the false boundary between the vertical and the horizontal as concepts” (*The Interventionists* 75). For the critic Darby English, Pope.L’s works attempt to “enliven the conflicts and contradictions embedded in those seemingly ordinary relations between persons, spaces and objects that yield up our categories and forms of cultural knowledge” (256).

Pope.L’s example of a risky and embodied performance in politicized public space helped me to find a way forward with a project - *Crossing the Ottawa*, 2012 (figure 21) - that I consider to have been a break-through for the form of my practice (towards performative “actions” or events) as well as its content (towards issues of public space, DIY culture and friendship).

An occasional recreational boater, I chanced on the idea of a light-weight, portable, foldable boat - one that I could easily carry by foot or bike. I threw myself into researching plans for portable boats, eventually settling on a model designed by Ken

Simpson, a retired aerospace engineer living in Alabama.¹³ Simpson's plan, in an open-source gesture typical of today's web-based maker and DIY culture, was published online, free to download and build (figure 22).



fig 21. Adam Brown, *Crossing the Ottawa*, 2013
9 min. video documentation of performance.

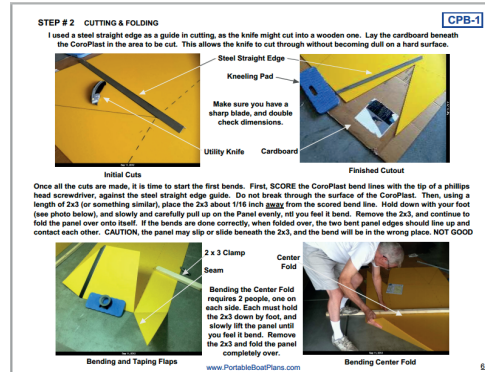


fig 22. Ken Simpson,
CPB-1 Assembly Plans, 2012
14 pages. pdf document.

Although I was excited to build my own copy of the boat, it wasn't clear to me how this object could be activated as an art work. Pope.L's crawl, however, suggested an avenue. I staged (and video-documented) an attempted crossing of the Ottawa river. My laboured venture onto the Ottawa river was an attempt to grapple with my particular situation - a settler on stolen land, in but adrift upon the currents of institutional power, a native of Ontario but a long-time resident of Quebec. Venturing onto the river in this seemingly placid and neutral site, I'm actually at the geographic nexus of key power centers: Parliament Hill, the Embassy of the United States, the National Gallery of Canada, the Museum of Civilizations (now "Canadian Museum of History") and the federal-bureaucratic Portage complex. These buildings are all arrayed around the body of water where I staged my crossing - a broadening of the river at the mouth of which lies Victoria Island, where Chief Theresa Spence staged her six-week hunger strike in 2012-2013. These institutions function together in a complex web to regulate the Canadian landscape and population. My fragile and inadequate craft reinforces the precarious nature of subjecthood in the modern state, while the ramified and historically

¹³ Simpson's website <http://www.portableboatplans.com> documents dozens of novel or bizarre small craft that he has designed.

fraught activity of boating evokes voyages of exploration or migration, native histories as well as the leisure pursuits of the middle class.

It's important that this work was staged in public - an adventurous rethinking, in effect, of the seemingly neutral and placid place between provinces and power centers. It is the spirit of adventure, I think, comically self-defeating and modest though it may be, that promises to open new possibilities for ways of being, of moving through and understanding space.

In staging my crossing, I was responding also to the Canadian First Nations artist Greg Hill's *Portaging Rideau, Paddling the Ottawa to Kanata*, 2009 (figure 23), in which he carried a canoe (handmade of laminated cereal boxes) along the ancient portage route from the Rideau river to the Ottawa - a route now buried under the concrete sidewalks, malls and roadways of the tourist and commercial center of the capital - before canoeing upriver to Kanata. With this gesture, he acknowledged the displaced people and stolen territory at the heart of Ottawa, and the present empty consumerism that is for many First Nations people the bitter legacy of Canada's colonialism and primordial genocide.



fig 23. Greg Hill, *Portaging Rideau, Paddling the Ottawa to Kanata*, 2009
3:27 min. video documentation of performance.

Another aspect of the work that only struck me in retrospect, on editing the video documentation of *Crossing the Ottawa*, was the participation of my friend Meredith Snyder, who acted as videographer. At the close of the event, as I struggled back to the near shore, defeated by strong currents in my attempted crossing, Meredith and I had a

candid and spontaneous postmortem. Our speech was marked with a touching relief at my safe return and was inflected by the shared experiences and small-city origins constitutive of our identities.

The UK-based artist and art theorist Celine Condorelli writes that there is an emancipatory dimension [to friendship]... which can be a force that propels us forward. I think there is a collective aspect to this empowerment, which is the congruence between friendship and solidarity: the knowledge of engaging in a common project, of contributing to building the world, which is also how friendship leads to politics. (71)

So friendship is a support for art and politics, it is “productive and cooperative, a pragmatic form of subjects organizing themselves” (73). A sensitivity to this political dimension of friendship - the role it plays in structuring our being-together in the world - has remained an important theme in my work.



fig 24. Adam Brown, *Garden*, 2009
2:52 min. split-screen video.

Another video work which applies a methodology of laboured performance is *Garden*, 2013 (figure 24). During the summer of 2013, I cultivated the property of my rented home (a communal living situation in old Hull - Gatineau, Quebec) to encourage the native plant species to flourish. The “lawn” when I moved in was hard-packed mud, strewn with garbage, but with a little raking and encouragement, the indigenous plants quickly came to flourish - making the yard an overgrown jungle of tall, flowering reeds

and creeping ground covers. I was inspired in this by my friend Sara Finley and her community organization Les Amis du Champ des Possibles, who have worked towards promoting biodiversity in a vacant lot in Montreal's Mile End. Their ethic is of minimum interference with nature and of maximum openness to different uses.

My own garden was a perfect spot for a picnic, an oasis of privacy, albeit only meters from busy Boulevard des Allumettières. I documented the rich plant and insect life in this garden and then, when the city served me notice to clear the weeds, I documented the process of removal. This was a painstaking effort using an old hand scythe, but also an opportunity to reflect on the vitality of the life I was removing and the peace I had enjoyed there.

Again, like in *Crossing, Garden* documented the repurposing or reimagining of space. In this case a rethinking of the convention of "lawn" as a site of visibility, regulation and control - where the will of the community to homogeneity and order is enforced. The garden, though, was not a rejection of my own community - Old Hull - but rather a testament to its freedom and idiosyncrasy. Ultimately, it seems that it is only in this sort of marginal, working-class neighbourhood that one has the liberty for the kinds of experiments - imaginings of a life otherwise - that I am interested in pursuing.

4. DESIGN AND DIY

An important reference for my work, as I've alluded to above, is the (usually-online) culture of DIY, along with the open source and design ethics that often accompany it. The DIY culture, as I see it (also known as the "maker movement") is a ramified complex of cultural and personality affiliations: obsessive geeks, drop-outs, anti-capitalist punks, survivalists, would-be inventors, tinkerers, artists and material culture theorists. They are brought together by an enthusiasm for the hand-made or bespoke as against the mass-produced, as well as an ethic of open-source - of sharing, borrowing and collaborating on ideas and designs. The rhetoric of DIY is of empowering individuals by allowing them to reclaim the means of producing their own goods, enacting their own creative agency rather than merely being passive consumers.

Joar Nango, a Norwegian Sámi artist, investigated DIY in a resolutely (and refreshingly) off-line context. With his 2010 photo series *Indigenuity* (figure 25), Nango toured communities in the north of Sweden, Norway and Finland populated by Sámi (an economically and politically marginalized indigenous people of that region) and documented the improvised solutions that these people, resourceful as the poor must always be, created in response to the exigencies of their lives. Nango's project is a welcome departure from the clean aesthetic of design culture on the web - exemplified by blogs like *design boom* - which often privileges concept over materialization, producing sometimes a cognitive dissonance with regard to the frequently-invoked promise of environmental or social justice change.



fig 25. Joar Nango, *Indigenuity*, 2010
photo prints, approx. 4" x 3" each.

Instead of design, Nango foregrounds improvisation, and in place of concept, action. By documenting the everyday practical constructions of ordinary people, eking out a life in a harsh natural and economic climate, Nango is proposing their creations as art. This is a demystification of the exalted figure of the “the artist” - a demystification with which I would like to align myself.¹⁴

I take this rough-and-ready, improvised aesthetic as my departure for the 2013 *Pallet Cabin* (figure 26) project, an interrelated series of events and artifacts: a pavillion built of shipping pallets, photo-documentation of my occupation of that structure, a manual illustrating the cabin’s construction, and a performative labour of transporting the cabin to Ottawa by bicycle. For this project I built, in my backyard, a structure approximating a shed or cabin from found materials (primarily wooden shipping pallets). Creative reuse of mass-produced materials is a hallmark of DIY culture. Shipping pallets, in this case, are a symbol of globalization - they embody the anonymity and fungibility of goods under capitalism and are as well a proxy for the international flow of capital that accompanies trade. Recycling the pallets into a structure approximating a dwelling, then, is not a subversion of the market, but does point towards a kind of life at the margins of (though not without) capitalism. After the post-colonial theorist bell hooks¹⁵, I see that the margin is

a site of radical possibility, a space of resistance... a central location for the production of a counter hegemonic discourse that is not just found in words but in habits of being and the way one lives... a site one stays in, clings to even, because it nourishes one’s capacity to resist. It offers the possibility of radical perspectives from which to see and create, to imagine alternatives, new worlds. (341)

¹⁴ There is an important question, however, of appropriation in Nango’s work. In a Marxian analysis, we might observe that, circulating the documentation of these objects in art institutions, Nango is effectively appropriating the labour of his subjects - and that the cultural capital produced in the exhibition of the work accrues to Nango alone.

Stephen Wright’s analysis is that social practices like Nango’s risk replicating the alienating structure of capitalism. As in the general economy, we have “on one hand those who hold the symbolic capital (the artists), and on the other, those whose labour (such as it is) are used to foster the accumulation of more capital” (535). Wright’s rather purist prescription is that artists must engage in collaborations through which they surrender any claim to being autonomous authors.

¹⁵ Hooks, of course, is writing from the position of a marginalized and colonized person of colour. I don’t invoke “the margin” to claim marginality, which would be dishonest, but simply to recognize it as a wellspring of creativity.

By way of activating the pallet structure as an artwork, I staged a series of photographs of a performative completion of the pavillion: hanging a light-bulb and hammock and then settling in to read a book as the evening wore into night. The structure, although functional as a space for contemplation and escape from my sometimes busy and too-social home life, was compromised in certain respects. There was no roof, to start with, and the slatted walls were open to wind and light. The structure was neither truly private nor public, an uneasy and provisional shelter through exposure.



fig 26. Adam Brown, *Pallet Cabin*, 2013
11" x 8". digital prints.

I also produced a pamphlet of step-by-step instructions on building such a structure, describing the passage from garbage pallets to finished pavillion (figure 27). By providing instructions (available online or in a free booklet where the *Pallet Cabin* documentation is exhibited), I'm inviting others to reproduce the structure or one like it. This is a demystification of the artist as bearer of a special subjectivity - an alignment with the democratic and inclusive ideals that established the very conditions under which I myself could be granted access to institutions as an "artist".

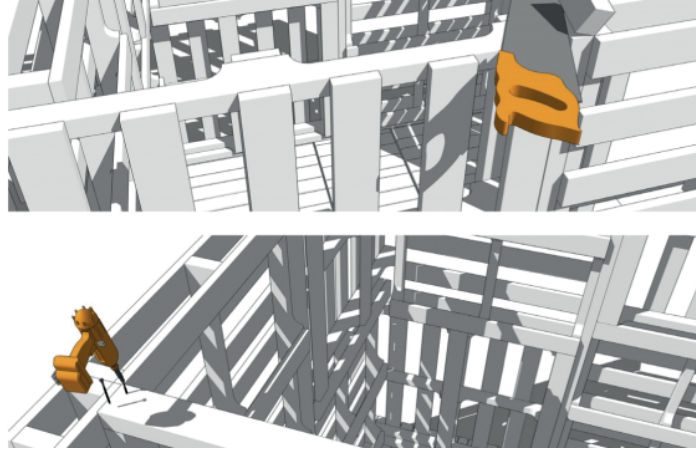


fig 27. Adam Brown, *Pallet Cabin Manual*, 2013
5.5" x 8". pamphlet on newsprint (detail).

Proposing to exhibit the pallet structure as an artwork at Nuit Blanche Ottawa-Gatineau 2013, I chose to stage its transportation to its exhibition site in Ottawa from my home in Hull as a performance. Motivated by a desire to be at least in good faith with my environmental and social justice commitments - and in keeping with the project's DIY aesthetic - I built a special bicycle cart for hauling pallets and hauled the dismantled structure across the river, four pallets at a time. (Transporting the entire pavillion took five loads and about eight hours.)

Claiming a space for this artwork in the city, in traffic, negotiating the flow of cars and buses, I considered this passage to be a creative (and again, adventurous) enunciation of alternative possibilities - for transport and for life in the city, for zero-budget architecture and for building a space of one's own.



fig 28. Adam Brown, *Pallet Rush*, 2013
2:37 min. video documentation of performance.

After the excitement of the transportation, documented in *Pallet Rush*, 2013 (figure 28), (thanks to David Kaarsemaker - my friend and a fearless biking videographer) the installation at the Ottawa Arts Court for Nuit Blanche was a kind of denouement. The structure, with its hammock hanging somewhat limply in the rain, didn't in my view have a lot of energy as a site of activation or participation. As the jury for the fall 2013 (semester four) critique pointed out, engaging with an audience and allowing space for public or community participation would be a major challenge as I move towards the final thesis exhibition.

5. SOCIAL PRACTICE

Looking to expand the dimension of social engagement, of participation and public activation in my work, I have lately been re-visiting the idea of relational or social practices.

Nicolas Bourriaud, a curator and historian of art, coined the term ‘relational aesthetics’ to describe shared concerns amongst certain artists (Rirkrit Tirivanija, Liam Gillick and others) whom he curated in the 1990’s. He proposes that those artists are united by a certain concern for the social relationships produced in the staging of their work - that the form and significance of the work, in fact, consists of such relationships. Bourriaud suggests that critics, in order to understand these works, now must turn their attention away from the objects and materiality of installation and towards the human interaction and social context which the works produce and within which the works unfold.

The relational form that Bourriaud describes is certainly not a new phenomenon. Claire Bishop, an English art critic, writes that what she had previously called a “social turn” should be “positioned more accurately as a return to the social, part of an ongoing history of attempts to rethink art collectively” in three key periods: “the historic avant-garde in Europe circa 1917, and the so-called ‘neo’ avant-garde leading to 1968” as well as “the conspicuous resurgence of participatory art in the 1990s” (*Hells* 3).

More pointedly, Bishop argues that Bourriaud proposes the very structure of relational works to be emancipatory:

The interactivity of relational art is therefore [supposed to be] superior to optical contemplation of an object, which is assumed to be passive and disengaged, because the work of art is a ‘social form’ capable of producing positive human relationships. As a consequence, the work is automatically political in implication and emancipatory in effect. (“Antagonism” 62)

Bishop points out in “Antagonism and Relational Aesthetics”, however, that this doesn’t take into consideration the political content of the relations that are produced. For example, Bishop takes Tirivanija’s 1992 *Untitled (Free)* (figure 29), in which he served

free curry to visitors at the 303 Gallery in New York City, to task for creating an exclusionary and spectacular community - a cozy circle of art world insiders, enjoying the comfort and intimacy of each other's company.



fig 29. Rirkrit Tiravanija, *Untitled (Free)*, 1992
participatory event and installation.

With my project *Solstice Temple*, 2013 (figure 30), I tried to shift the method used in *Pallet Cabin* of seeking activation through performance towards instead creating activation through engagement and participation. *Temple* was a temporary pavillion for celebrating the winter solstice. With a wood stove and shelter from the wind, this was a gathering place for a group of friends - a place to observe the passage of the season, to mark the longest night of the winter and to be hopeful for the return of the sun.



fig 30. Adam Brown, *Solstice Temple*, 2013
9' x 9' x 4'. snow pavillion.
2' x 1.5' x 4'. wood stove with steel paint can, galvanized duct, wood.
3 hr. participatory event.

The participants for *Temple* were all friends, most of them fellow artists. A cozy circle to be sure, perhaps even open to charges of elitism. However, the work doesn't stake itself on a claim to democracy or to public engagement. Rather, the event was resolutely founded on friendship, on the function of friendship as a support for art. I want to assert the potency of this relation: of friends coming together in a spirit of adventure, of courage in the face of a harsh Ottawa winter, and of camaraderie, the practice of which is fundamental to art-making as I experience it and indeed to life itself.

CONCLUSION

Looking back on the course of my MFA, I see that it is punctuated by important developments - moments of growth, breakthroughs - in my practice. First, was finding an embodied way of working - a process and connection to materials. Working in sculpture and installation allowed me to begin to address the problematics of art-making. Next was my use of performance as a vehicle to activate artifacts, structures or sites. This performative mode allowed me to both situate my work within the political and to address it. Furthermore, this shift provided a framework within which I could address my interest in design, in shelter and in DIY culture. Now, I'm working towards a new moment of growth. Building to my thesis exhibition, I'm trying to develop social activation - activation through participation and engagement of a public or group of collaborators.

Thinking about this latest effort, I'm considering Thomas Hirschhorn, an artist that I find (as does Bishop) to be exemplary as an example of a democratic and radical social practice. Hirschhorn speaks of wanting to undermine the “superiority of the single image” (93) – to create a viewing situation in which there is no distance, no hierarchy and no singular viewpoint or relationship. He wants, most importantly, to create artworks that exclude no one and that are a space for dialogue and meeting, friendship and interaction.



figure 31. Thomas Hirschhorn, *Gramsci Monument*, 2013
large-scale outdoor installation. plywood, tape, books, banners,
numerous scheduled events.

Hirshhorn's recent installation in the South Bronx, *Gramsci Monument*, 2013 (figure 31), is a demonstration of his energy and commitment to a truly participatory and possibility-creating art. The site, Forest Houses projects, is an hour by train and a world away from the Chelsea gallery district. The *Monument* was a sprawling treehouse-like complex, built from the simple materials that are typical of Hirschhorn's practice: rough lumber, hand-lettered paper, and many, many miles of brown packing tape. The structure as a whole functioned as a kind of community center - there is a free cafe, an internet access point, a radio studio, a children's art school and a library devoted to writings by and about Antonio Gramsci, an early 20th century Italian leftist intellectual and philosopher. Each day the *Monument* hosted a lecture, showed films, held discussions and produced a newspaper. The *Monument* was entirely staffed, moreover by residents of the projects.

This work is a model for me of the capacity of art to create spaces of activation, of creativity, participation and discussion. A space for meeting, a space for thinking, a space that by its very existence agitates for and pushes us towards a society more in good faith with its debt to the Other or oppressed. I will keep this example in mind as I work towards my thesis exhibition.

BIBLIOGRAPHY

- Bishop, Claire. "Antagonism and Relational Aesthetics." *October* 110 (2004): 51-79.
- Bishop, Claire. *Artificial Hells*. London: Verso, 2012.
- Bourriaud, Nicolas. *Relational Aesthetics*. Dijon-Quetigny: Les presses du réel, 2002.
- Buchloh, Benjamin H. D. "An Interview with Thomas Hirschhorn.", 2005.
- Condorelli, Céline & Hartle, Johan Frederik. "Too Close to See: Notes on Friendship." *Self-Organized*. Open Editions, 2013.
- English, Darby. *How to See a Work of Art in Total Darkness*. Cambridge, MA: MIT Press, 2007.
- Hebert, Stine & Karlsen, Anne Szefer. "Foreword." *Self-Organized*. Open Editions, 2013.
- hooks, bell. "marginality as site of resistance." *Out there: marginalization and contemporary cultures*. Cambridge, MA: MIT Press, 1990.
- Nirenberg, Ricardo & Nirenberg, David. "Badiou's Number: A Critique of Mathematics as Ontology." *Critical Inquiry* 57 (Summer 2011): 583-614.
- Rancière, Jacques. *Aesthetics and Its Discontents*. Trans. Steven Corcoran. Cambridge: polity, 2009.
- Rancière, Jacques. "Aesthetic Separation, Aesthetic Community." *The Emancipated Spectator*. Trans. Gregory Elliott. London: Verso, 2009.
- Sayers, Sean. "Review: Jacques Rancière (2004) *The Politics of Aesthetics*." *Culture Machine*. Open Humanities Press. Web. 20 Dec. 2012.
- Sholette, Gregory and Thompson, Nato, Eds. *The Interventionists*. Cambridge, MA: MIT Press, 2004.
- Stecker, Robert. "What is Art?" *Aesthetics and the Philosophy of Art*. Plymouth, UK: Rowman and Littlefield, 2010.

Stallman, Richard. "The Free Software Definition." *Free Software, Free Society: Selected Essays of Richard M. Stallman*. Boston, MA: Free Software Foundation, 2010.

Wilson, Martha. "William Pope.L." *Bomb* 55. Spring 1996: 50-55.

Wright, Stephen. "The Delicate Essence of Artistic Collaboration." *Third Text* 18.6 (2004): 533-45.

APPENDIX A: ARTIST STATEMENT

For my MFA final thesis show, I will be installing a pavillion - the Friendship Library - on the Arts Court grounds. As well, inside the Ottawa Art Gallery's Firestone room, I am presenting documentation and artifacts from a series of do-it-yourself projects and actions which I undertook during the course of my MFA thesis. Taken together, these objects and events highlight the various strategies I use to create activation, as well as the common aesthetic and political concerns that inform my work. In particular, I want to foreground a concern with political dimensions of friendship and adventure, the empowering potential of do-it-yourself culture and a repeated examination of mobility and transportation as personal and social constraints.

Crossing the Ottawa, 2012

An occasional recreational boater, I chanced on free online plans for a light-weight, portable, foldable boat - one that I could easily carry by foot or bike. Building one such boat, I then staged (and video-documented) an attempted crossing of the Ottawa river. Venturing onto the river in this seemingly placid and neutral site, I placed myself at the geographic nexus of key power centers: political and cultural headquarters, as well as Victoria Island, where Chief Theresa Spence staged her six-week hunger strike in 2012-2013. These institutions function together in a complex web to regulate the Canadian landscape and population.

This work is an adventurous rethinking, in effect, of the seemingly neutral and placid place between provinces and power centers. It is the spirit of adventure, I think, comically self-defeating and modest though it may be, that promises to open new possibilities for ways of being, of moving through and understanding space.

Pallet Cabin, 2013

For the Pallet Cabin project I built, in my backyard, a structure approximating a shed or cabin from found materials (primarily wooden shipping pallets). Shipping pallets are a symbol of globalization - they embody the anonymity and fungibility of goods under capitalism and are as well a proxy for the international flow of capital that accompanies trade. Recycling the pallets into a structure approximating a dwelling points towards a kind of life at the margins of capitalism.

Proposing to exhibit the pallet structure as an artwork at Nuit Blanche Ottawa-Gatineau 2013, I chose to stage its transportation to its exhibition site in Ottawa from my home in Hull as a performance. In keeping with the project's do-it-yourself spirit, I built a

special bicycle cart for hauling pallets and hauled the dismantled structure across the river, over the course of an afternoon and evening.

Claiming a space for this artwork in the city, in traffic, negotiating the flow of cars and buses, I considered this passage to be a creative (and again, adventurous) enunciation of alternative possibilities - for transport and for life in the city, for zero-budget architecture and for building a space of one's own.

Garden, 2013

During the summer of 2013, I cultivated the property of my rented home to encourage the native plant species to flourish. The "lawn" when I moved in was hard-packed mud, strewn with garbage, but with a little raking and encouragement, the indigenous plants quickly came to flourish - making the yard an overgrown jungle of tall, flowering reeds and creeping ground covers. My own garden was a perfect spot for a picnic, an oasis of privacy, albeit only meters from busy Boulevard des Allumettières. I documented the rich plant and insect life in this garden and then, when the city served me notice to clear the weeds, I documented the process of removal. This was a painstaking effort using an old hand scythe, but also an opportunity to reflect on the vitality of the life I was removing and the peace I had enjoyed there.

Harvesting some of the tallest plants from the garden, I've dried and cleaned their stalks and have made a number of kites. The kite is at once an aesthetic and functional object, both an exploration of the material possibilities of the harvested reeds and also an optimistic promise of future fun. Kites are vehicles of the imagination - manifestations of the drive to transcendence and escape, bodies with which we can project ourselves into the sky.

Repair Exhaust Leak, 2014

The most recent work I present at the Firestone, *Repair Exhaust Leak*, is a schematic diary, in the guise of a diy guide or process flowchart, of a repair I executed on a used truck - one of a number of fixes the truck required before being registered and plated. Beyond its thematic connection to my perennial concern with transportation and mobility, in this case I'm not so interested in the vehicle itself, but rather in examining the process of my engagement with it - both the labour embedded in the task and the detailed embodied and practical knowledge required to carry it out. Examining the specialized vocabulary of auto repair, I'm also recognizing this distinctly working class activity and framing it with the visual language of the knowledge economy - the contemporary paradigm for skilled labour within which non-repeatable, non-scalable and manual skill are often devalued.

Friendship Library, 2014

Outside the gallery, I am building a pavilion: a public reading room containing the collection of a collaboratively sourced library. I've asked friends, colleagues and community members to loan me books to be included in this temporary collection. Each of these books reflect in some way on the theme of friendship, and testify by their diversity to the breadth and importance of that concept.

Friendship is a force that propels us forward - that binds us in a common project, that creates possibilities of adventure and space for new ways of living. Friendship is a support for art-making and is a political moment, an opening of imagination and a spur to personal growth. By assembling this diverse collection, the library will testify to the ramified nature of 'friendship' as a social, literary and political structure. The library will be a space for studying or discussing the ideas that are juxtaposed and brought forth by the individual contributions - or simply a place for reading and relaxation. During the period of the exhibition, I will be present at the pavillion, both researching the collection and continuing to grow it.

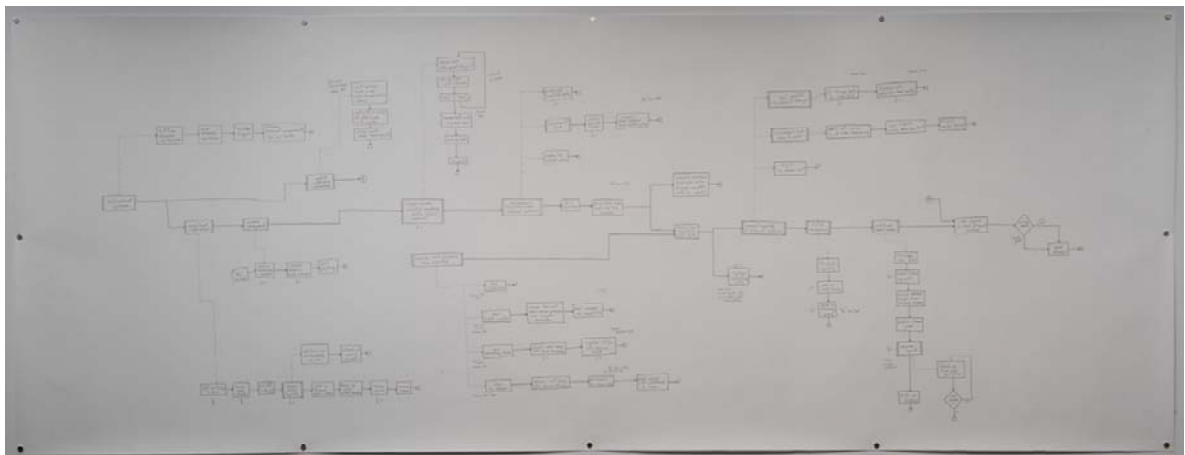
The pavillion, like Pallet Cabin, is made of found materials. The strength and attraction of these materials is not only the inventiveness and making-do to which they testify, but also the richness of their material history - witnessing and bearing the trace of the history of the labour which was worked on them.

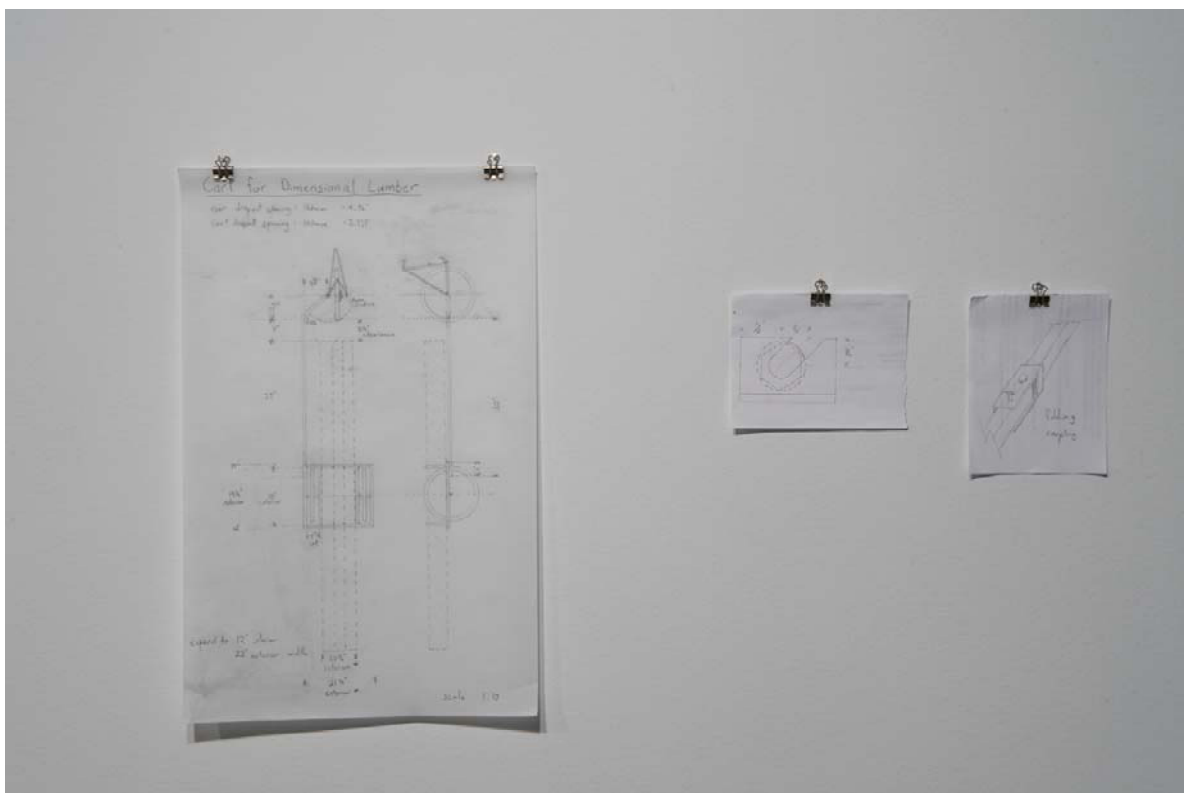
APPENDIX B: EXHIBITION DOCUMENTATION

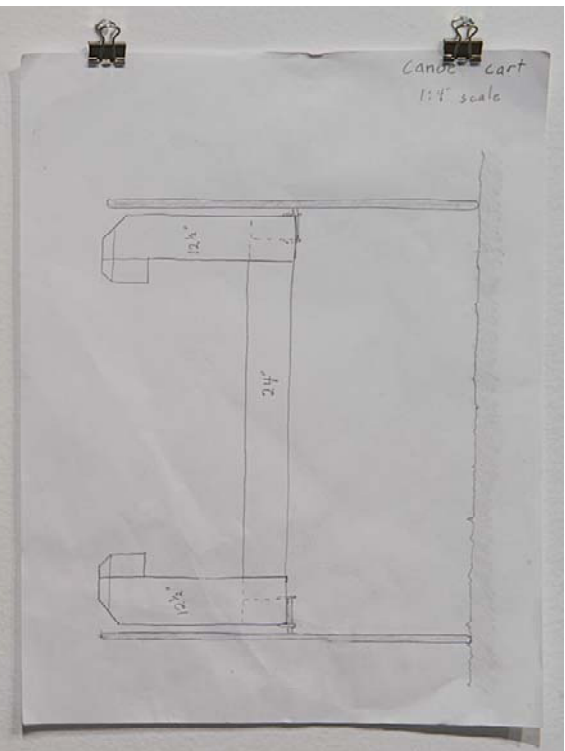
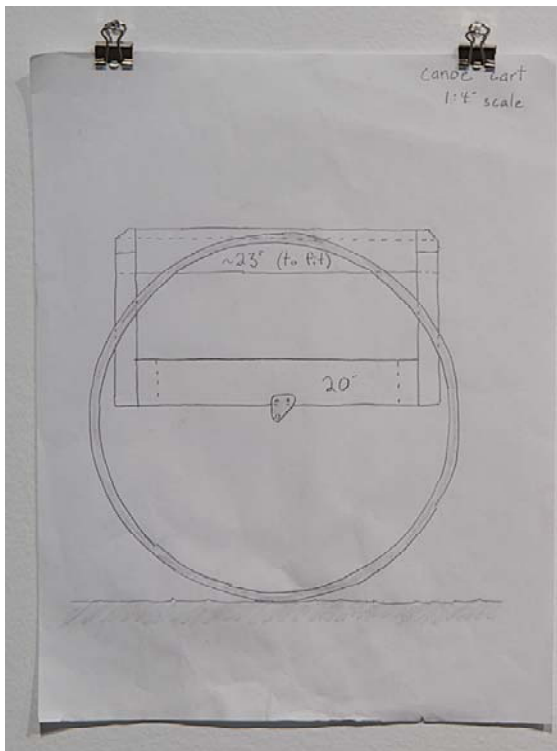






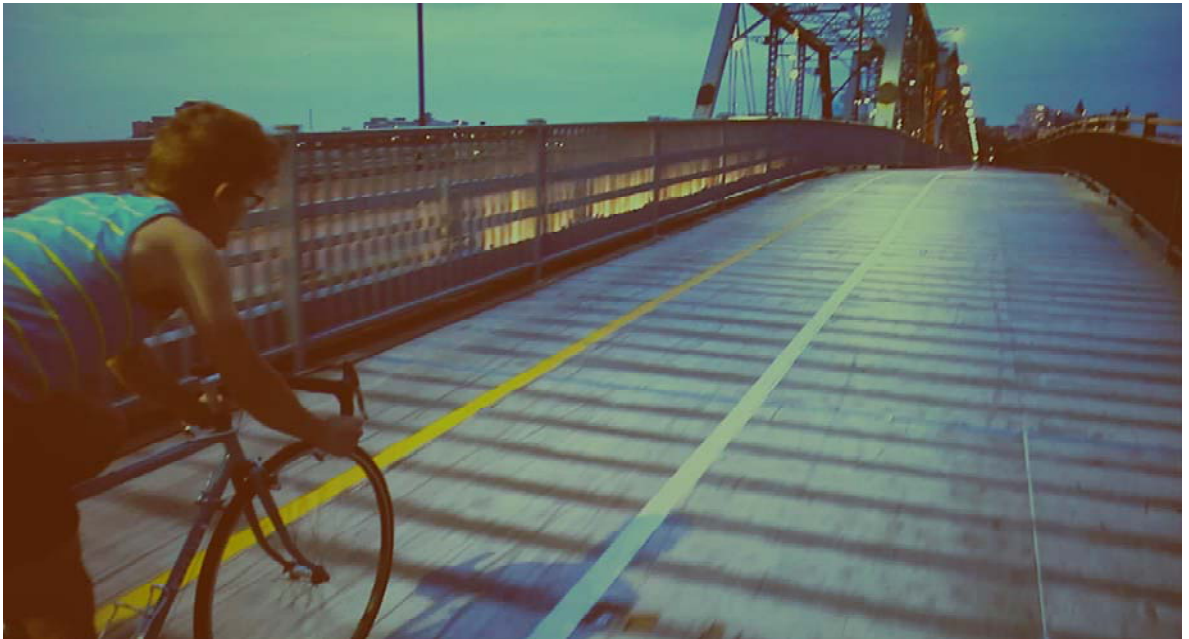


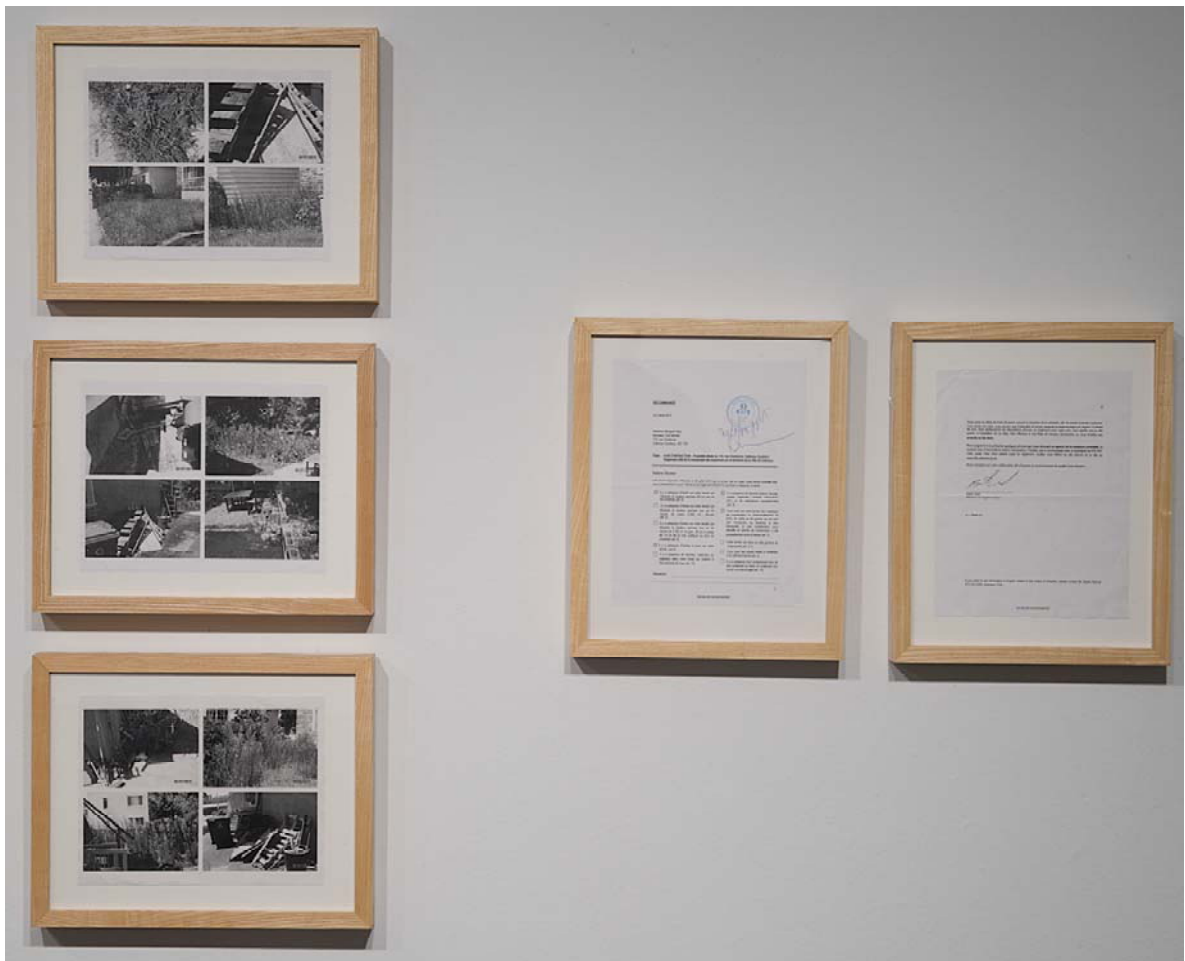


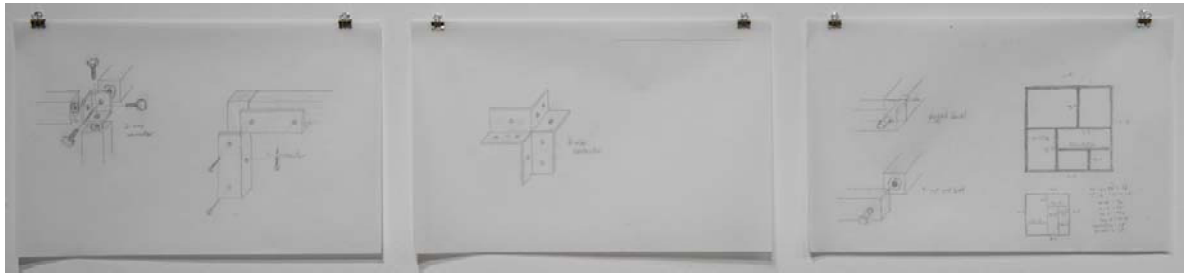














Adam Brown

Going places

It's a small, quiet, brown, glass-walled room, with a door that is slightly ajar. The room is empty, except for a small table and a chair. The room is a perfect example of a minimalist space. The room is a perfect example of a minimalist space. The room is a perfect example of a minimalist space.

Adam Brown

Oh, va tan

It's a small, quiet, brown, glass-walled room, with a door that is slightly ajar. The room is empty, except for a small table and a chair. The room is a perfect example of a minimalist space. The room is a perfect example of a minimalist space. The room is a perfect example of a minimalist space.

© 2014 Adam Brown. All rights reserved. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

© 2014 Adam Brown. All rights reserved. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.



















