

CUT TWICE

Experiments in Kinetic, Interactive Sculpture

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ABSTRACT

This thesis support paper is an exploration of the process, creative influences and philosophical framework surrounding the creation of the body of work contained in the art exhibition “Cut Twice” (Gales Gallery, May 4-9, 2015). Alongside a narrative describing the making of a large pile of kinetic lumber, two main areas of consideration are discussed; firstly, the desire of the artist to create sculpture that is interactive, framed in part as an extension of a career in the community arts, and secondly, an inquiry into a radical materialism that sees all matter as entangled intra-activity through the lenses of Jane Bennett’s eco-political *Vibrant Matter* and Karen Barad’s *Agential Realism*. How might an expanded sense of the aliveness of matter (in this case off-cuts and discarded lumber from construction sites) change our relationship to waste and possibly to each other? If matter is a “doing”, not a thing, can interactive, kinetic sculpture express this material vibrancy and enhance an art viewer’s awareness of their relationship to matter?

DEDICATION

The thesis paper and exhibition “Cut Twice” are dedicated to my family, Antonio, Lucy and Milo for putting up with my absences, vagaries and flights of fancy; to my parents, Jim and Merylie, upon whom I so often lean; my brother and Joel just because he exists as my brother, and to my sister Sara Jean Houston who we so suddenly and recently lost.

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INTRODUCTION

PREAMBLE: Exhibition Description



Illustration 1: *Cut Twice*.

Location: Gales Gallery, May 4-9, 2015.

As you enter Gales Gallery through the door in the south-west corner, you see examples of experimental work made during my time in the MFA program; *Fuzzy Bodies* consists of eleven pieces made by welding bronze to discarded pipe (see Illustration 3).

The centre of the room is dominated by *Cut Twice*, the pile of jointed 2x4's (see Illustration 1). Approximately 130 will have begun the week stacked in a compact block. Throughout the exhibition, I will move the 2x4 pieces off the stack to begin to create installations, placing the pieces in configurations that I have practiced ahead of time, that emerge from the "fables" in Chapter Five, or that suggest themselves to me in the moment. During the week I will hold a public workshop inviting others to join me in building with the pieces.

The final piece will be draped on pegs on the wall. *Ongoing* is a continuously linked chain of 2x4 lumber that hangs on the wall, the ends left open for the potential addition of more segments. It is approximately 30'/16m long.



Illustration 2: *Cut Twice* and *Ongoing* (background) installation view.

Additional Location: Gladstone Hotel, April 22-26, 2015

Gladstone's *Grow Op 2015* is "a four day exhibition celebrating innovative ideas and conceptual responses to landscape, gardens, art and place making under the theme: culture of landscape". The iteration of *Cut Twice* at *Grow Op* will be smaller and more specific to the architecture of the hotel. The pieces slump and lean around trim and radiators, conforming to corners in the hallway, tracing the pattern in the carpet. In this installation, the ever-changing urban landscape comes inside a heritage building. Our sense of the conflict between change and preservation, the contrast between contemporary lumber and heritage wood floors heightens our awareness of the pieces as entities seeming to be shaped by this particular cultural site.

CUT TWICE

Experiments in Interactive, Kinetic Sculpture

CHAPTER ONE:

Section A: Flex

I travel to York University as I have for ten years, through the eerie industrial landscape of the city's edge, the TTC bus route contorting almost weekly to accommodate the latest phase of building. The University, like the city, exists in a constant frenzy of demolition, in-filling, up-filling. The department of Visual Art and Art History sits across from a construction site, a hole in the earth full of massive equipment and surrounded by hording; the long-overdue subway station that will connect the campus to the rest of the city. The new is always asking us to contort around it. As workers and students we exercise flexibility to the extreme, satisfying the endless demands of capital; to do more with less, to improve, to build our personal brand, to be available. We flex until we find that something has fractured; stress, depression and anxiety rise around us with the buildings that go up year after year.

My thesis project, culminating in April 2015, uses the detritus of construction, new and discarded lumber that I have animated with joints to improve their flexibility to fit, crammed into the spaces given to them. The wood can contort, lean, slump into the parameters of a space like bodies jammed into a TTC bus at rush hour; like off-cuts in a bin. The lumber is worked like a wooden toy and seems both humorous/playful while simultaneously revealing the degree to which it has been dissected and reattached, a dead thing subjected to an act of slightly sadistic re-animation. How absurd is it to ask a 2x4 to be flexible, to conform when its purpose was intended for rigidity and framing? In the gallery, echoing the path we've travelled through the city, we will be surrounded by materials of construction and perhaps be nudged to look again and note the space through which we travel, the sense of frenzied activity, and in noticing be removed for a moment, allowing space for the contemplation that art asks of us.

The feminist physicist Karen Barad tells us that matter is not a 'thing' but a 'doing'; that substance, like meaning, is an intra-active becoming. In other words, neither meaning nor matter is fixed, rather each is created as we sense, share and negotiate our engagement in the world together. My sculpture seeks to engage the audience as co-creators in 'doing' the art, in moving and being physically engaged with the work. This way I hope to make visible on the macro level the inter- and intra-action of matter that is always happening on the scale of the micro, because what physics teaches us is that we are not separate, that animate and inanimate is a false binary that sets humans up as exploiters in a flawed relationship with matter.

Jane Bennett's proposition in *Vibrant Matter; A Political Ecology of Things*, that all matter might have propensities of its own is described in political terms. She insists that the absolute separation of "dull matter (it, things) and vibrant life (us, beings)...encourage[s] us to ignore the vitality of matter and the lively powers of material formations" (p.vii). The book begins by asking what would happen if we acted as if matter were an actant (a source of action) rather than inert object. She called it a "thing" as opposed to an "object" to emphasize that matter, even a small pile of refuse she encounters one morning in the gutter, has "Thing-Power: the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle." (p6). Bennett distinguishes *things* with agency from *objects* that exist in a subject-object relationship as perceived by a sentient mind. When she says that "to live, humans need to interpret the world as objects", and that "a life is a field of flows and intensities" she is insisting that a sense of matter-as-fixed is a property of human perceptual capacity, not a property of matter itself (p58). Barad's agential realism is closely associated with New Materialism. In an interview in *New Materialism: Interviews & Cartographies*, she says "the entanglement of matter and meaning calls into question [the] set of dualisms that places nature on one side and culture on the other. And which separates off matters of fact from matters of concern... for me, ethics is not a concern we add to the questions of matter, but rather is the very nature of what it means to matter." (Dolphijn, 2012) I have endeavoured to bring this idea of the agency of matter and the entanglement of nature/culture into dialogue with my interactive, kinetic

sculpture, specifically the idea that matter is animate and expressive of life force, and that the recognition of this truth might have political implications.

SECTION B: Community Sculpture

I have been drawn to manually-activated kinetic sculpture for several years, appreciating the way interaction adds a new dimension to the work. It began with a motivation to make sculpture in a studio practice that still maintained a connection to my professional community-based work. At first, the interaction of "participants", as opposed to "audience" felt like a necessary validation of the piece; I felt that I was leaving the real world of human and political interaction if I made pieces to sit on pedestals in a white cube. I have tended to agree with Claes Oldenburg when he said "I am for an art that does something other than sit on its ass in a museum." (Senie, p50)

In "Shopclass as Soulcraft" Mathew Crawford advocates that we not lose the ability to make or to fix things. He says that manual competence is a stance that we can take toward the material world, and that the ongoing, tenacious presence of that which we have built can give us a sense of our objective existence in the world – an existence not founded solely on the self, but one that can be tested by others as they interact with the results of our labour. The resulting sense of agency is something I've long desired to share and so I've worked in community settings, like SKETCH, the art initiative for homeless youth in downtown Toronto, facilitating arts-based workshops or teaching others facilitation skills so that they can pass on the joys of making to their communities.

SKETCH's work involves building relationships over a span of years, ensuring that the youth involved have or are building the capacity to shape and eventually direct the organization. Many young artists desiring participation in some greater community-based process hoped they could simply insert themselves into SKETCH, into the community space that was so carefully built. We resisted this desire for the sake of the youth who were beginning to see themselves as the artists, for whom the parachuting in of an outside artist (usually someone with a fine arts degree) might hinder their process of self-discovery. I believe that this resistance differentiates the work of SKETCH from the "relational aesthetics" projects

Claire Bishop describes in her writing. I share Bishop's discomfort with many relational aesthetics projects but I believe these are not the same as community art or what she calls "Social Practice". For the eight years I worked at SKETCH, the most awkward interactions I had were with artists who wanted to come in to do a project of their own, seeking to participate in a trend that promised that the art world could offer something more than wrangling their work into a commercial gallery system. The work Bishop refers to is broadly anti-capitalist but uses the mechanism of neo-capitalism (volunteer labour, the uncritical adoption of new media, etc.) to accomplish its tasks, with the "art star" (and star critic) placing their names in the forefront of the work. (Bishop, 2011) SKETCH's work does not exist as a project that can be described in these terms.

"Service Media," is a recently coined term for a newer trend in community engaged art projects. In the book *Service Media; Is it "public art" or art in public space?*, Stuart Keeler differentiates between various movements saying: "Service Media is a more engaging and collaborative form of art in public space. It assumes a porousness between audience and landscape, between personal and private, even raising questions centered on what is and what is not art" (p2). Unlike my current work, Service Media tends not to focus on an art object as the location of a shared experience, or rather not on an object we would necessarily recognize as art; rather the focus is on moments of community building and interpersonal encounter that may or may not involve any art-making or art object (note, as Harriet F. Senie has in the reviews on the first two pages of the book, that the word 'art' has been removed from the equation). Examples include using shared cars to pick up toxic waste for residents or giving away reclaimed paint. The emphasis is on service over individual expression. As in Relational Aesthetics, art is 'made' through modelling a way of living together and, even in the absence of an art object, the fact that artists are endeavoring to connect with audiences is what makes it art (pg15). Where there may be overlap between Service Media and my work is in my hope that the interaction with the pieces, especially if it involves group work, will create a moment of awareness about the entangled social and material interaction that are already present. I hope that this experience will be carried out of the gallery and that it

will serve as a kind of "conceptual platform imbued with a social exchange" (p3). However, the art object I have made is the agent, the central figure and instigator of the exchange.

I would like to also state an allegiance to Joseph Beuys and the movement he called "Social Sculpture". Beuys intended for the social component to be as much the sculpture as the art object created, for the organizing of democratic committees to be integral to the realization of work. Ideally, in the process of making the sculpture together, social and political change are being accomplished.

Within my drive to make interactive work is a desire to distance myself from the position of community worker and to assert my own identity as an artist in a place where I could act without the fear that my process might hinder that of others; to make sculpture that I had completed and then offered for contemplation. In contrast to many other artists, I had an excess of community participation to contend with when entering a more conventional studio practice. In order to explore my own work, I wanted to make things that were not dependent on process and that read as sculpture. In a concrete, physical sense, I wanted to feel the weight of sculpture in my own muscles, and to test my presence against its resistance.

SECTION C: Windfall

The first piece I made for this project was a swing set with a rusted steel contraption hanging from it that could be manipulated by pulleys. It had the look of scales, and squeaked and undulated when the ropes were pulled. The problem with it was that most people were not interested in pulling on the ropes. The sharp, rusted steel was too fraught with potential danger or violence to instill the confidence necessary to encourage interaction. More recently I made a monkey bar set from which fallen branches are hung, animated with ball and socket joints and pulley systems. Here is the artist statement composed for the Gladstone Hotel's *Grow Op 2014*, a weekend-long event that brought planners, architects and artists together to look at the intersection of landscape and place in an urban environment:

Windfall takes fallen tree branches, the very ones that fell during December's ice storm on my children's favorite playground and attempts to re-animate them as a sort of kinetic prosthetic for a broken relationship with nature, risk and outdoor play. The idea was inspired in part by work in

community development with children who broke the branches from the very fragile young trees in a new million-dollar park next to their housing project. Their neighbours' response was to characterize the children as destructive and lacking in respect. Children play with branches everywhere that people live with trees and these children were just trying to have some fun in a park that did not meet their needs for more challenging play. But is it possible they also are acting out anger and even trauma around the position of poverty they live in? Could they be angry at the ineffable fragility of an urban sapling that inspires us to care for it while they go wanting in an affluent city, in a rapidly gentrifying neighbourhood? This animated, kinetic sculpture invites people to play and to consider what it means to live in a close urban setting in which our reliance on each other and on nature can seem like a distant myth, a great burden or a tangled bond more often than a nurturing link or supportive net.

In practice, this sculpture was much more approachable than the earlier rusted steel piece and I learned during the *Grow Op* event that interactive work needs to be friendly in a way that invites people in, again echoing the sense of autonomy of matter from Bennett in which the propensity of the "stuff" of the object is acting on us (the aggressive affect of rusted steel) even as we are acting on it. In contrast the *Windfall* playground structure, painted as it was with primary colours and modelled directly after the structure in my local playground, immediately signaled "play". While the steel ball and socket joints dissecting the branches disrupted the playful aspect and inserted a reading of almost Frankenstein-like re-animation, the overall affect of wooden pulleys and the suggestion of puppetry drew the audience in; whenever someone asked if it was OK to touch the piece, it was with the string already in hand as if the body's willingness to play preceded the rational mind's analysis of appropriate art viewing behaviour.



Illustration 3: Audience interacting with *Windfall* at *Grow Op* 2014.

This brings me back to the question of whether literal movement is necessary for interaction to happen. Clearly, no, it is not. Claire Bishop lays out the question in terms of democracy. The creation of a contrived encounter (contrived by the artist in which the audience/participants have certain roles) is less democratic in her view than a process whereby the artist has maintained autonomy, not asking the audience to complete the work but to be involved as deep thinkers. (2004, p75) That said, I will continue to assert certain benefits, based on observations made when my work was installed at the Gladstone Hotel's *Grow Op* event, of having people play with it:

- they spent a significant amount of time engaging with it while they figured out what to pull on and how to make it move;
- they talked to each other not only about what the work is 'about' but also about how it was made, the quality and metaphorical affect of its movement, and how they could play with it together;
- they took what they learned the first time and returned to show others what they discovered;
- it allowed for interaction of people of all ages from small children to older adults in the way that was appropriate to them (with the option not to touch it also available).

All of this adds up to a significant amount of interaction on personal, communal and physical levels that I would consider to be democratic in terms of Bishop's definition.

I hope that what my interactive sculpture offered was both a "thing" that could be viewed as sculpture, and a "doing" experience that brought people into deeper thinking about the branches; what they were doing in that situation, what it means to manipulate the branches like puppets, and how this all connects to physical spaces in the city (like playgrounds), where people and trees interact. I hope that rather than Bishop's binary of active (thinking) vs. interactive (doing), my work can contain both.

This also brings to mind the description in Rosalind Krauss's seminal work on sculpture from 1981, *Passages In Modern Sculpture*. Krauss outlines minimalist sculpture's rejection of the internal, private and metaphorical use of material in modernist work in favour of an "externality of meaning" where the material is being asked to stand for something else (1981, p266). In using tree branches as themselves, I believe they can both stand for themselves and as a signifier for a relationship between human and tree. In setting the branches in a particular and somewhat strange context, by giving them an uncanny movement that references a human joint more so than any natural tree branch movement, I can emphasize what Bennett is encouraging us to see, that matter consists of "vivid entities not entirely reducible to the contexts in which human subjects set them".

The curator and critic Axel Jablonski, putting a different cultural framework around Bennett's "matter as actants" immediately responded to my work as containing an animist sensibility, voicing a sense of wonder and "magic", to quote Jan Vanwoert from *Sculpture Unlimited* (Grubinger et al).

Vanwoert writes: "If (after minimal and installation art) we understand sculpture as the art of making

things articulate and transform relations within an environment, it would seem that sculpture has a great potential as a medium through which to translate the practical relational knowledge of magic into the reality of contemporary society.” (p86) Magic is a term I will use to express a moment in which a relationship is suddenly transformed, and it describes a desire I have for these kinetic pieces of lumber; that engaging with them will lead to a sudden awareness of the life within the wood. Animism is an interesting, albeit anthropological frame, through which to see sculpture, and it is echoed in Vanwoert's writing about the immanence of relations we have with things as forces in creating culture (Grubinger, p84), as well as in Peter Schwenger's *The Tears of Things* where he names the gaze as the location "between" where the "stubborn materiality" of the thing "looks back" at us (p49).

My work needs urgently to further explore the relationships between people of different "communities" endeavoring to live together in Toronto, and between people and matter in a way that encourages a more conscious engagement in the project of living together. In my work, sculpture manifests itself as a combination of tactile "things" and intersubjective "relationships" which are enacted in sites that are both tangible and intangible, but are always vitally material.

SECTION D: Fuzzy Bodies

I have also asked myself throughout this research if literal participation is necessary to express movement in my work, or if it's also possible that providing people with a fun and playful encounter is hindering their taking agency in imagining the ways in which movement *could* happen. Perhaps leaving the work in the moment of possibility before literal interaction would create more of a kind of conceptual movement, an immanent potential for the viewer to contemplate. Studio experiments with wood and metal emerged from this exploration, primarily in the form of a welding project with the working title *Fuzzy Bodies*. If metal has agency, expressed in the way it behaves according to its crystalline molecular structure, can I work with it in a way that is conscious of that agency? As Jane Bennett tells us, artisans have always responded to the properties of metals; the way they form to a mould when melted, withstand force, glisten when polished. But I wondered whether I could work with bronze in an unconventional way

by melting it and letting the metal decide how it would form – self-sculpting the shapes of small blobs according to internal expressions of metal-ness, and without the traditional tools and bronze-working methodologies of the foundry. Metal’s “quivering” molecular structure gives it “fuzzy borders”, a flow of intensities in constant movement which allows metal to take on so many forms useful to us. “There is no point of stillness”, Bennett says (p57) and this is the energy I was endeavouring to work into the twisted, discarded pipes of the *Fuzzy Bodies* series. By responding to the way the bronze and steel melted together, the size of blob that was able to stay together long enough to cool and fix to the steel, I was engaged in a process-based back and forth with the metal that was not predicated on a predetermined aesthetic resolution.



Illustration 4: *Fuzzy Body #1*, detail.

CHAPTER TWO: That Old Saw; Thoughts on Measuring and Cutting

"I see", said the blind carpenter, as he picked up his hammer and saw.

(Old English anti-proverb)

I was working alongside Roch Smith, artist and York wood shop technician, when we both realized that in our haste we had cut something the wrong length for a project. We briefly commiserated over this lesson learnt yet again, the old woodworking maxim to “measure twice, cut once”. I self-deprecatingly quipped without too much thought at the time but for the pleasure at a well-timed joke: “I could call all my work cut twice”. This line has since come to hold resonance for me as I work and wrestle with this particular project. The obvious intention behind that bit of wisdom, that old saw, is to caution the worker to plan carefully, double check measurements and avoid wasteful mistakes. This has never been my way. I am impatient, impulsive, hasty. I balance these character faults by overthinking my actions. I find this is a great way for me to sit paralyzed, accomplishing nothing for most of the time available to a project, then in a panic to jump in to make a quick cut so that I can’t go back; creating conditions under which I am propelled forward to fumble my way to a resolution (or not). I realize that I also accomplish things, but sometimes I wonder if it is in spite of my efforts rather than because of them. Anyway, I’m not a big planner.

Cut Twice can be read as a reference to the indirect route I took to arriving here to do my Master’s thesis at the age of 40. Embracing the second cut is to reclaim all the various paths I’ve travelled (yoga teacher, art program manager, community development worker, illustrator, literacy worker); all the projects I’ve started and not (yet) finished and to pile them up so that I can stand on top of them to see further. Call it vantage point. Or just call it age.

When I install the kinetic 2x4’s end to end I cannot tell where one begins and the other ends; in this way the segments become one segment. The pieces become one piece magnified through repetition. I was picking them up after an installation for a photo shoot and sorting them into different lengths for transportation, starting with all the mid-sized pieces that were of a similar length to the dolly I was using.

I found that several times when I thought I had picked up all the pieces of that length, another one would appear. The ends were absorbed in my field of vision, all the cuts blending one into another; from a distance they became one until the act of searching seemed to make them multiply before me.

In a similar way I now see 2x4's wherever I go, becoming hyper aware of collapsing fences, construction sites and piles left out for garbage pickup. The attention I am paying to this particular form materializes them by bringing them into my consciousness. Of course one can do this with anything. Once you start looking for yellow cars they start appearing everywhere you go. But isn't this a kind of magic? By becoming aware of a thing it begins to exist within your consciousness where it didn't before. Karen Barad says in "Posthumanist Performativity" (2003) that ideas are not just ideational, they are material, physical arrangements (pg820). Could this be a glimpse into what she means? For Barad, agency is a relationship, not an object or a thing an entity has — agency exists only in relationships between states of matter. I came to Barad's agential realism through an exploration of the ways in which art could be seen to be always moving, always becoming; something that I work to build into my interactive sculpture but that is arguably always embedded in reality. Barad's writing on agential realism is important to me as a scientific underpinning to Jane Bennett's political writing about Vibrant Matter (although Barad states clearly that her theory is as political as it is scientific). In Barad's words:

Matter, like meaning, is not an individually articulated or static entity. Matter is not little bits of nature, or a blank slate, surface, or site passively awaiting signification; nor is it an uncontested ground for scientific, feminist, or Marxist theories. Matter is not a support, location, referent, or source of sustainability for discourse. Matter is not immutable or passive. It does not require the mark of an external force like culture or history to complete it. Matter is always already an ongoing historicity. On an agential realist account, matter does not refer to a fixed substance; rather, matter is substance in its intra-active becoming- not a thing, but a doing, a congealing of agency. Matter is a stabilizing and destabilizing process of iterative intra-activity. (pp821-22)

When we talk about art we talk about work. A work, work as a noun, an object to be held whether in a hand or in the mind of the subject. But contained within the noun is the verb, certainly. I cannot hear "work" without projecting thoughts about how the "work" was made, the labour involved as well as the next nested layer related to what work the art is "doing" now that it's been made; so we know in an intuitive way that being and doing are nested states of matter. Barad writes "matter is not a thing but a

doing” (2003, p822). Art too is something that we do in our minds and in our bodies, making a thing into art in part by the way we categorize the use value it holds for us; categories that are malleable and changeable through time. In a clumsy way, making interactive, kinetic sculpture is about exploring why I am drawn to complex ideas about physics, matter and quantum mechanics despite my limited ability to understand the details. I am not a physicist, have never studied science beyond a high school level. My interest in physics is deeply entangled with my wonder at the seemingly magical way the universe has unfolded; it’s about seeking a way into the magic, not to explain it away. This body of work is an attempt to play on a very macro level with the idea that matter is not fixed and that the movement and un-fixed nature of matter on a quantum level can teach us something about our interconnectedness as organisms and as members of a community.

CHAPTER THREE: Methodology

Section A: Garbage, That Old Nonsense

Finish each day and be done with it. You have done what you could. Some blunders and absurdities no doubt crept in; forget them as soon as you can. Tomorrow is a new day. You shall begin it serenely and with too high a spirit to be encumbered with your old nonsense.—Ralph Waldo Emerson (Cabot, p489)

What if our old nonsense, our waste, our failed projects, the fallen walls badly built, were to get up and follow us about? In fact, that is what happens whether we can see it or not. Pollution creeps from the dump into the groundwater; medications travel from bodily excretions through the sewer system to be absorbed by fish in the Great Lakes; pesticides foment in our breast milk. But does my use of the off-cut support, excuse or even romanticize the processes of the production of waste?

I am very much concerned with environmental degradation, but using industrial waste is still participation in the cycle of consumption. Making art from garbage is a kind of continuation of the consumption of matter, seamlessly enmeshing and implicating my art practice in the system. It is so deeply human to be in dissonance in this way, to say one thing and do another. I began by simply noticing and gathering waste that appeared around me, moved on to searching it out in the alleys, then to soliciting it on the internet through Craigslist and Kijiji, researching the municipal dump (citizens are not permitted to take construction waste from municipal depots) and finally just buying more new 2x4's to keep the pile growing to the size I envision it needing to be for the gallery installation. This irony does not escape me.

There is a difference between using one single found object that carries the texture of long use, and using a large amount of industrial material. The first approach calls us to an awakened awareness of the thing that includes all of its use and the affective resonance of having been held by many hands. This sensing of use and history is more attached to the surface because it is the surface texture of marks created by use that draws our interest. I would suggest that this is a more romantic approach that asks us to personalize our relationship with the single found thing, imagining a life story for it and becoming emotionally attached to it. The second option, the large pile of industrial ready-mades, brings more attention to the raw materials at play, the brightness of the wood that the 2x4's are cut from, the form of

the lumber itself, and more intensely focuses attention on what may come, what can be made. The first is an object, now used and broken, that becomes a 'thing'. The newly purchased, ready-made lumber cut into kinetic things is less broken and more created. It maintains its identification as building material even as it becomes 'art'. In minimalist terms, referencing Rosalind Krauss, using industrial materials as themselves resists the appearance of manipulation, emphasizing the shared or public meaning over a sense of a private, expressive use that privileges the artist's state of mind over the audience's experience (p262).

My installation uses both of these approaches in a way that explores the hinge joint as it appears in different applications; the bulk of them in 2x4's and some in individual found pieces of lumber chosen for the texture or patina of use they so strongly carry. So two different but entangled considerations of the material and of the form of the hinge joint come into play in the decision to combine used and new lumber; the found and textured things that carry a history of human use with them into the installation, and the open possibility of freshly milled lumber that reduces the sense of the processes that made it in favour of focusing on the possibility the pieces hold for future construction.

Many of the 2x4 scraps I've used are brand new, cut-off ends that look clean and fresh, if rather short. No one but I can tell which of the "new" ones were found and which were purchased so perhaps I can let go of the more rigid parameters I initially set for myself and just focus on the way they behave together as kinetic pieces of wood. In an art practice, staying too dogmatically attached to rules is a kind of encumbrance, more of that old nonsense.

Section B: The Search

The end justifies the means. But what if there never is an end? All we have is means.
—LeGuin, The Lathe Of Heaven

I regularly search the streets and alleyways around my neighbourhood looking for discarded lumber. I've wondered if the search satisfies my restlessness, or whether it causes the restless scattering of my thoughts. My search for material constitutes the first of the challenges to the myth of the solitary artist's life. It takes me out of the studio and requires discussion and negotiation; it is the beginning of the

long path of interaction that my process takes me along. I ask people, "Do you need that 2x4?" I explain why I need it. I answer questions about what it means; people usually want to know "what is it about" and each time I hear myself telling some slightly altered version of the official artist's statement. I make sculpture that is kinetic and interactive, I tell them. It's like a toy, I might say. See, I say, showing a picture on my phone, it's an installation that changes wherever it's installed. I can invite the audience in to work with me, to move it and change it, it's interactive! Well, even at this stage, by choosing to work with material that makes me dependent on the work of others, my practice is interactive.

Lately, as winter creates scarcity, the pieces I find attach themselves to me. I wonder if I should keep them whole, whether cutting a particular piece of wood will ruin its individual beauty. In cutting it will I make it indistinguishable from the rest and rob it of its history? Each found piece has its story which I can choose to romanticize as an individual thing or to invite into the community of other things. Take the two I got from the dumpster near my kids' bus stop as examples. We've been watching this house, a big three story brick Victorian sitting empty for the past two years. The weeds grew on the yard, taller than the children, until one day last spring they were cut and shortly thereafter a dumpster appeared. It is the slowest renovation I have ever seen. The decadence of a house sitting empty on a street that is desirable, housing prices pushing the one million dollar mark. We all note it, imagine ourselves occupying it, wonder who has pockets deep enough to float an entire house for so long.

Months had passed with the dumpster filling so gradually I could almost chart its depth against the lengthening of my son's ankles as they emerged from the bottom of his pants, centimeter by centimeter. Then it suddenly filled and on top were two nail-riddled two by four scraps, each about 3 ½ feet long, two of the sorriest scroungings in my collection. Nails, concrete, splinters, each detail an index of the construction process. 2x4 scraps are often used temporarily as supports, wedges, railings, levers or braces, then pulled out, leaving the finished work behind; a means to an end. These two were particularly well-used, really too badly used to be useful even to me if I'm honest but I'm feeling desperate at the moment, feeling a shortage of waste available for exploitation. I climbed up in the early winter rain and greedily snagged them out from under pink insulation wisps and shattered lathe pried out of hundred-

year-old walls. I carried them on the subway and bus, noting the people who moved away from me in the crowds. Who can blame them? A 2x4 with nails jutting out is not a pretty sight on the subway. Several people joked about the mob, about whose head was going to be on the receiving end of the weapon I carried. So easily construction materials, like tools, can be turned into weapons. There is violence nearby in any crowded place.

When I'm carrying the 2x4 scraps in public I'm made aware of other people's relationship to the object; this thing that is ubiquitous, overlooked unless it's out of place on the subway or in the hallway of my kid's school or in my doctor's office. Each of us has a relationship with the 2x4 that pre-exists the encounter in my art. That is true of all wood in sculpture to a degree, but in this instance the wood is not sculpted into a representation of another thing; it remains a piece of lumber, albeit an altered one. The 2x4 itself is a unit of construction, so utterly common that it is readily available for me to find lying about, and also for people to project their own meaning onto.

Of course it is not a 2x4 at all, but measures 1.5"x3.5" generally, or sometimes 1 3/8" x 2 3/8". When a tree is cut up, particularly the general-purpose SPF (undifferentiated spruce/poplar/fir), it tends to still be wet, and over the course of drying it shrinks. Manufacturers also get more out of their lumber by reducing the size even this little bit. There is a conservation as well as a business argument to be made for building with less wood. The sharp corners are cut off giving the "2-by" series (2x4, 2x6 etc.) rounded edges for safety in handling; less splintering and injury as hundreds are passed from hand to hand on a building site. So various natural, cultural and engineering forces come into play in shaping a piece of lumber: the way wood splinters, the way a human hand grips, the weight wood of different dimensions can carry, the size and shape of rooms humans design, the price of lumber on the market. The lumber in turn shapes the spaces we live in, which shape us and our lives and relationships which constitutes culture, which shapes the lumber... here again is a glimpse into the inseparability of thought and matter, Barad's "intra-active becoming" which sees all the threads of matter as deeply entangled.

Section C: The Cut

When I find discarded 2x4's that are 8 feet long, it's quite exciting; usually the pieces I find are much shorter scraps and off-cuts. The length inspires me to do more with it, to celebrate the possibility of a more sinuous and undulating piece with many smaller segments. I sometimes use a systematic approach to determine the length of each segment, measuring it and dividing it up in some logical way, starting with a small section and having each grow a prescribed amount (a one-inch increase each time for example). I sometimes use the dimensions of the lumber, the first segment is the width, the second is the width plus the depth, then increasing by the depth (approximately 1 1/2") each time. A few times I have used the dimensions of my body, a hand width or length, or the distance from wrist to elbow. But eventually each of these distinctions are lost as they pile in with the rest and I would be as hard-pressed as anyone else to say which was which.

I have a template for drawing out the joint that I cut from a scrap of cardboard near the beginning of the process. I keep using the same one over and over and was thrown off when I thought I'd lost it at one point. Almost every joint of the project was planned out and traced from that same bit of card. In the course of the repetition of labour, each small, jointed segment resembling the rest, my emotional attachment is stronger to the cardboard template than to any individual piece of wood. When I'm working on a project that requires this kind of repetition I do get attached to certain tools — these tools are extensions of my doing the work. I also have one drill bit that has made most of the hundreds of holes I've drilled. It has a bit of red paint on it and although it belongs to the studio here at York, and is getting a bit dull, I keep it stashed where I can find it every time. So while I'm temporarily attached to the tools that allow me to make the project, in cutting so many of the same joint over and over I find I am freed from the weight of attachment I might have to one singular sculpture. This repetition, each segment like a breath in a meditation practice breeds non-attachment. No single one of these roughly made segments is notable, none would be much missed individually. I appreciate the way that this project as practice, as a doing, resists treating the found pieces on the level of fetish, and this sense of the constant becoming of

the work is what I hope to bring into the gallery by changing the arrangements day to day and by inviting others to sometimes move the pieces around.

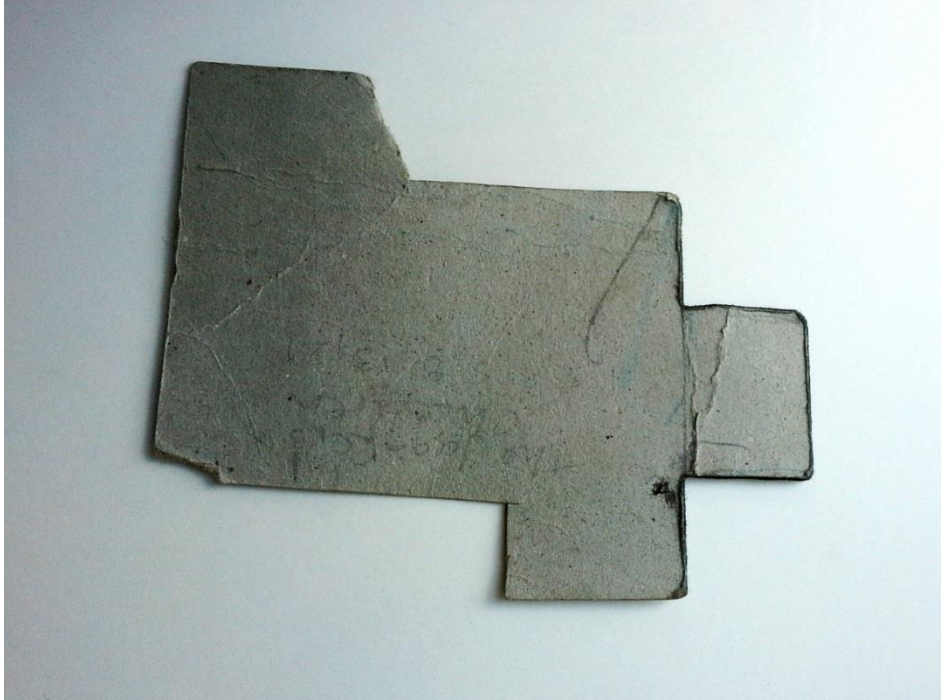


Illustration 5: Cardboard template for joints.

I use a jigsaw to cut out the four right angles of the joint. It's important to me to keep the 2x4 in as close to its full length as possible, which is why I don't cut them up on a chop saw and work the joints in after. I'm trying to leave it in the form in which I encountered it. The sections are numbered and fit together like a puzzle. I drill a hole through each pair before cleaning up the rough jigsaw cut on the band saw. Once the pieces are cut, drilled and tidied up, I round the joint on the band sander so that they have the freedom to move, and I remove most of the splinters in anticipation of future handling. Finally, the segments are assembled with a dowel through the holes, and they join the growing pile in the studio.

I've been thinking about the way the material I work with might impose its autonomy in some way. Perhaps it is a mere folly, an anthropocentric ruse I'm engaged in to think that the wood is anything more than a piece of construction material that will be shaped according to my design. A piece of lumber

is a particular kind of wood in a sculptural sense. It is not wood in its raw form. It has been shaped with a purpose, ideal for framing, designed according to engineering specifications to meet building code standards which vary around the world. In Germany, the standard framing lumber dimension is measured in centimeters: 5cm x 10cm for example, so it has the 2:1 ratio that a nominal 2x4 would once have had.

A 2x4 generally stays the same, simply lengthened or shortened. They are usually covered unpainted or stained, sealed inside a wall that has taken its shape from these imposed dimensions; the width of the 2x4 plus the thickness of the sheetrock on either side. But despite its role in setting those dimensions, it then becomes invisible, an armature sheathed or skinned over, enclosed, entombed. In an old, brick Toronto house like mine they are usually fir, old growth, not this twisty SPF we use now. True 2x4's, they are the namesake of the diminutive "nominal" descendants I work with. The ratio is different, the corners are sharp, they smell like grit, stale air sitting 100 years. When they were cut, half of Toronto was still forest. They weren't 'old growth', they were just the available lumber.

Section D: Me and My Plank; Reflections on working at a larger scale

It's log, it's log, it's big, it's heavy, it's wood. It's log, it's log, it's better than bad it's good!
The Log Song, Ren and Stimpy, c1991.

I am a small adult. When the York AMPD Facilities Coordinator, Patrick Legris, visited me in my studio I showed him the work and asked if he knew of any sources of used wood on campus. An hour later he arrived in the freight elevator with two large, well-used pieces of lumber— one a rough and dusty 10 foot long 2x10 (true dimensions 9 ½ x 1 5/8”), the other a chipboard “I” beam with a channel, 8 feet long. A 2x10 is a very different entity from the typical 2x4 I find lying around. Often on a construction site they can be seen holding up the walls of a pit as the foundation is being dug. They can be reused again and again as the platform surface on scaffolding, where workers stand, or as frames for pouring concrete, but eventually they crack and are discarded. These big, heavy pieces are awkward for me to lift given my size, even if I am reasonably strong and healthy. I fumble a bit with large pieces, finding the right balance, and while I don't mind my own lack of elegance, I prefer not to be seen to be small. I was

glad that when I did lift this plank up onto a shelf at about my shoulder height, no one was around to witness, to offer help, and I could wrestle it into place without embarrassment.

I spent a few days with the plank, wondering what to do with it, whether because it was different from the other pieces if that meant I should treat it differently— did it demand an entirely different form of joint from the 2x4's? Or would the same joint in wood of a different dimension constitute enough of a difference? In his book *Puppet, An essay on uncanny life*, Kenneth Gross quotes Vladimir Nabokov as saying "there is, it would seem, in the dimensional scale of the world a kind of delicate meeting place between imagination and knowledge, a point, arrived at by diminishing large things and enlarging small ones, that is intrinsically artistic." (p45) In this body of work I have not played with scale, diminishing or enlarging representations of things, but have treated the lumber as an industrial ready-made which stands for itself at a ratio of 1:1 (as well as for other, metaphorical things). But considering the consistency of the repeated hinge joint at the specific size I've been cutting, this larger one looks to me like a scaled-up, larger than life version of a jointed 2x4. If the 2x4's are, metaphorically, a commonplace unit made flexible to the degree of absurdity, made to bend where bending ought not truly to be desirable, then this 2x10 is the overgrown mutant, dream-state or nightmare version, the distorted shadow cast by the low light of the setting sun.



Illustration 6: *A Delicate Meeting Place.*

The rolling of the 2x10 piece happened by kismet. By making the inset of the joint deeper, slightly more than the thickness of the plank itself, the mechanics of the joint allow it to fold 90 degrees each time. The corresponding increase of the length of each segment is also about equal to its thickness, which leads to a nesting of the material, each segment held closely by its neighbours in a pleasingly compact, square ‘roll’, with its own kind of geometric logic that I can plot out mathematically to show that after the first, smallest unit, each subsequent set of two units are equal to the previous unit, plus the thickness of the plank. So if the plank is 2” thick and the first unit is 4”, segments two and three will equal 6”, four and five will equal 8”, six and seven will equal 10”, etc. (or thereabouts depending on how stringent I was with the measuring tape). And now when I lift its estimated forty-five to fifty pounds (an estimate based on my muscle memory of the weight of my son, who at age nine is a fairly scrawny fifty pounds and I sense to be of similar weight to the plank), I am able to hug it easily in to my core and to transport it with some dignity around the shop. Suddenly an ungainly length is made compact to suit my body and at Nabokov’s “delicate meeting point” where scale is reversed, with that bit of proportional magic, I have grown bigger and stronger and more capable of holding the work in balance in my arms.

Chapter 4: Encountering Allegiances

During the experimental iteration of the project at the 2nd Year MFA Graduate group show *Encounters* at Artscape/Youngplace, I invited a group of children (my son's after school activity group, ages 7-9 years) to join me in coming up with possible installations of the pieces. In working with the children, I began to see allegiances between my work and the work of sculptors I admire; allegiances that emerge and recede as the pieces are moved. It is in working with the pieces and with others that the next phase of the project that is *Cut Twice* will emerge.

The children and I began with a discussion about waste and life. I told them that I had found many of these pieces of wood in the garbage and that I thought about the fact that they were all trees at one time. I imagined what it would look like if we could see that they were still full of life, so I inserted movable joints into each one. The children were curious about how each piece was made, they shared their views on consumption and pollution and then joined me in handling them and considering how we could build with them. Their first project was to make a maze on the floor and to move through it, laying the 2x4's on their sides end-to-end, negotiating how they would be connected. A few of the girls built a walled area that they said was a prison, in which they then confined themselves. Then each had a turn being wrapped within the pieces in a sort of custom pillar or cocoon that formed to the shape and size of their body. They were able to help build it around themselves up to the height of their chests, their friends and I finishing it for them.

What strikes me most about these wrap-around, private spaces is the way they take the 2x4, a rigid framing material, and turn it into a responsive, intimate, almost sensuous building material that allows the body within to be held or hugged by a single, continuous wall. I was reminded of a moth cocoon, the kind that wrap themselves in twigs and bits of leaves, using what is around them and camouflaging themselves in their environment. The children, wrapped in the cocoon of lumber can now blend into the construction sites of the city, hidden in plain sight.



Illustration 7: Child wrapped in jointed lumber at *Encounters*, February 2015.

In this configuration, I imagine a sort of Louise Bourgeois *Personage*-like form emerges. The standing tower is figurative and when I reconstruct it without the body inside it stands empty but with the empty space within insisting on the fact of that body. Bourgeois' work with assemblage and found materials is an inspiration in my work. While formally very different from Bourgeois' sculpted wooden *Personages*, there is a sense that the standing forms made with the hinged 2x4's also suggest "an affinity between the architectural and the human" (Morris, p11).

Another configuration sees many of the pieces used to make a larger room, a round space big enough to sit inside that I first envisioned as a private meditation space; a room within a room. The hinged wood allows for the construction of a round wall, a wall that suggests a more responsive or nurturing architecture than a right angled room. Some are reminiscent of Ursula Von Rydingsvard's large

organic wooden forms; it is the mark of the flexibility and transmutability a body of work like *Cut Twice* that affiliations and references to the work of many sculptors are available.



Illustration 8: Maya Lin's *Flow* at the Dayton Art Institute, 2012

Maya Lin's works *2x4 Landscape* (2006) and *Flow* (2012) both make use of the 2x4 to express a minimalist, undulating landscape. Working from a desire to bring landscape and architecture into conversation with one another, Lin created these landscapes out of thousands of pieces of 2x4's bundled vertically into a solid but still fluid form. Similar to *Flow* and *2x4 Landscape*, *Cut Twice* uses a single architectural material repeated again and again, allowing the material to express itself in an almost sensual way – in this case allowing the colour and grain of the wood, the smell of untreated softwood, and the form of the 2x4 to be as significant as the overall form in the gallery.

Emily Hermant's use of lumber-as-lumber offers great inspiration. *Spatial Drawings* (2012-14) make use of steam bent hardwood to describe elegant lines through space. Hermant describes her sculpture eloquently in terms of gendered labour, particularly textile work, and I feel an allegiance with her desire to treat wood as if it were as malleable as fabric or thread:

“I treat these planks as a kind of three-dimensional thread whose curves and twists create ‘drawings’ in three-dimensional space. The transformation of a hard, structural material into something soft and malleable plays against our understanding of how hardwood is supposed to or is meant to perform. In the pieces, the unexpected torsion and soft, undulating lines in space counter the hard lines, edges, and geometric shapes that one might associate with wood planks” (Artslant, 2013).



Illustration 9: Emily Hermant's *Spatial Drawings*, Evanston Art Center, IL, 2013.

Puppetry was a significant influence on me early in my experiments with interactive work. In 1992, in the summer before starting university for the first time, I worked for the *The Whole Loaf Theatre*, David Anderson's puppet theatre company (since renamed *Clay and Paper Theatre*). We used puppets on various scales, from hand puppets, to life sized mask-work, to 18 foot tall monsters worn with backpack rigs, operated by up to 3 puppeteers at a time. Puppetry was influential in the initial desire to connect things with joints, and the *Windfall* branches with ball and socket joints came out of studying marionette construction. In 2011, I made a set of plywood boxes with small puppets inside, puppets that could only be seen by one person at a time, and I titled this work “Private Puppet Show”, asking each person who interacted with it to be alone with the creative act of manipulating the puppet; to be both performer and audience. Shortly before making the swing-set piece, “Arbitrary Hanging Form”, I saw a video of Royale-

de-Luxe, the street theatre company from Nantes, France, who create giant crane-operated marionettes that are the size of buildings. The rope and pulley systems they use inspired me to make my own pulley wheels, to make something that required strength and determination to move. Kenneth Gross writes about the desire to make an inanimate thing move; “our curious will to make the object into an actor, something capable of gesture and voice. What strikes me here is the need for a made thing to tell a story, to become a vehicle for a voice, an impulse of character – something very old, and very early. The thing acquires a life.” (p1) While I don’t specifically see these jointed pieces of lumber as puppets, there is a way in which adding a joint and creating a kind of movement in wood is puppet-like. The uncanny sense we have that they are moving or crawling away is created by what Gross calls madness; “the intelligence or soul of an inanimate object” that is brought to life through movement. And like a puppet, a collection of jointed wood can but used to tell various tales.

Chapter Five: Fables for a Gallery Installation

(after Kenneth Gross, "Fables for a Puppet Theatre", Chapter 6 of *Puppet; An essay on uncanny life.*)

Twin hermits, in their vow to forsake all human company, sit back to back in conjoined cells. Only if they both lean with the same amount of force against the shared wall will their sanctuary stand.

A room is turned inside out gradually, the walls curling like a piece of birch bark as if a spring of tension has been released— curl leads to counter curl.

A forest is bent by a strong wind, year after year until all of the trees curve forever together to the west.

A world of small, rigid beings links themselves together head to foot so that in unity they can finally touch their toes.

A woman wishes for so long to be held that the very walls around her wrap themselves in to hold her in their splintery embrace.

After a very long renovation project, the off-cuts of lumber have grown so attached to the workers that they follow them home through the streets.

At the end of a tough day of construction, the uprights take a nap, basking in the grass in a fragrant field.

A theory becomes so flexible that it collapses under its own weight.

A cocoon, relieved of its responsibility as protector, builds its own wings and flies away.

A letter is written with words that refuse to stay still on the page, meaning is constructed/unravelling/piled in letters that twist themselves into nonsense.

Two people struggle to build the same thing and never realize they are working from entirely different sets of blueprints.

"...with every fibre of my being", answers the fir tree to the little cone.

One day a woman awakes to find that all of her curling hair, ever the dual crown and bane of her vanity, has left to form an autonomous colony on another street, a few blocks away.

A child spends an afternoon observing the way his feet become disconnected from the continuity of his shins when submerged in a shallow, clear stream. Seeing the light bend a line that was straight, he realizes that straight lines are only a story we tell to convince ourselves that we can stand upright in bodies that won't stay fixed.

A church was built on the rocky coast of the Atlantic Ocean from the timbers of the ship that brought the founding settlers across the pounding seas. "Remember" says the floor "the rolling of the waves."

When authorities try to erect a fence to stop children from sliding down a snow-covered hill, the fence itself refuses to cooperate, curling up and rolling away.

One side of a fence decides to meet the other.

“Come, my fellows,” said the Commander to his crew. “We must go through the spiraling black hole.”
“Hurray! I obey your command,” said the mechanic. “Getting ready,” said the driver, “let’s go!”

Blades of grass sway in a gentle wind, their roots always holding hands with their brethren.

The planks of a raft disagree on the best method of construction and so they storm away from each other in the waves forgetting in their pique all about the lives they were meant to save.

Conclusion; Matter as Doing, Sculpture as Doing.

During the course of my studio-based research I have worked to bring together threads and thoughts about my role in community, my place professionally in the community art world and an interest in science that I feel describes a political engagement with the material world through an ecological sensibility. It began with the urge to make things move and a desire for the joy of holding a thing that I've made in my hands. As I have engaged in deep thinking I have also kept my hands and body moving in connection with the material of both wood and metal; the tools, dust, grime, sap, grain, fumes, slag, splinter and shine of what is often called a materials-based practice, which is to say that I've made things, not images of things. But an image or even the idea of a thing is a thing too, so truly, all art practice is material.

This project took Karen Barad's assertion that matter is not a thing but doing and projected it onto sculpture; sculpture as a doing, a doing together. The sculpture constructs the audience, the audience constructs the sculpture. It is my hope that bringing people and the kinetic 2x4's together in the gallery will stimulate an encounter between bodies; the bodies of the people and of the body of work in a way that will encourage a more sensitive awareness of wood specifically and of matter generally as persistent and vital. Bodies are never only human, as our bodies are entangled with all the surrounding matter of the universe; bodies exist only in phenomena and the bodies of things around us have agency too. I make things move is to make explicit the fact that they are all always moving; that matter is not dependent on my making it kinetic but that the pieces are to act like a pointer or prosthetic to indicate the autonomy of matter and the agency inherent in making things and making things move together.

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Appendix A: Script for an Interactive Workshop, *Grow Op 2015*

For Small children: What do you see? Do you like to make art? Let's look at the wood, can you see the hinges? This is where they move. We can make things with them, but first I want to show you how to use them safely. Do you know where your fingers are? Do you see how the wood turns? When you move them, to keep your fingers safe, you need to hold it on top like this. Okay? Who can think of something you could do with the wood? Would you like to try? Let's start.

After: What did you do? What did it remind you of? I hope you keep making things, thank you for helping make this sculpture!

For older children: Do you guys learn about the environment in school? Tell me some of the thing you've learned. What about garbage and recycling? Have you seen things decomposing back into the soil, like food rotting or old tree trunks? That is part of what I was thinking about when I made this work, about how the thing we make or use continue to exist even after we're done with them. I found these pieces of lumber when other people were throwing them out and wanted to reuse them to make my art. I also like making art projects that involve other people, working to make things together. Would you like to try making something together with the wood? I have an installation in mind that we can do together (describe a project idea eg:. Creating a woven floor, or building the tallest towers we can etc.)

After: How did the wood work for you? Did it do what you expected? Did anyone come up with an idea for how to install them? How could you imagine using it if you had even more? Thank you for participating in the art installation.

For adults: This work involves a deep consideration of how matter is in a constant state of becoming. The physicist Karen Barad says that matter is not a thing, it's a doing. I took that statement and applied it to my work, asking could sculpture be a doing too, and a doing together? I've treated the project as a thought experiment that asks whether putting joints in ostensibly inert matter could highlight what is always true; that matter is alive and unfixed, despite our inability to perceive life in something like used lumber, an object we may see as having completed its useful life. Does anyone have an idea for an installation? Please feel free to touch and move them and we can keep talking about the themes as we work.