What would it be like to create a work of art using only one tool?
THE TOOL AT HAND
A Chipstone Object Lab Experiment

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Chipstone Foundation
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Introduction

ETHAN W. LASSER

_The Tool at Hand_ puts the skill and creativity of some of the most talented names in the contemporary art world to the test.

Organized by the Milwaukee Art Museum in collaboration with the Chipstone Foundation and curated by Ethan W. Lasser (then Curator of the Chipstone Foundation and now the Margaret S. Winthrop Associate Curator of American Art at Harvard Art Museums), _The Tool at Hand_ brings together artworks resulting from an unusual and slightly eccentric experiment. In the spring of 2011, the Chipstone Foundation invited 16 contemporary artists to participate in the Object Lab, the foundation’s progressive and experimental arm, to make a work of art with one tool alone. The resulting exhibition features a variety of creative and witty artworks, presented together with images of the tools used to craft them and a short explanatory video produced by each artist.

_The Tool at Hand_ features artists in varying stages of their careers who hail from both the U.S. and the U.K. Working in a variety of materials, including paint, metal, wood, glass, fiber, and clay, the artists range from those who work with non-traditional tools to those whose skill with traditional tools is in a class by itself. The former category includes makers like Liz Collins, whose performative work with the knitting machine has gained international attention, and Mark Lindquist, the renowned woodturner who developed a technique for coupling the chainsaw and the lathe in the 1980s. The latter category includes master tool users like the
Ranging from the ancient to the high tech, the artists’ choice of tools was as diverse as their modes of expression.

enamellist, Helen Carnac; the silversmiths David Clarke, Ndidi Ekubia and Lisa Gralnick; and the sculptor and woodworker Gord Peteran, whose recent work was featured in an exhibition that toured nine venues in the U.S. *The Tool at Hand* also presents work by three emerging makers, Chad Curtis, Michael Eden, and Tavs Jorgensen, who exploit the potential of new tools like the 3D printer and the CNC milling machine.

Ranging from the ancient to the high tech, the artists’ choice of tools was as diverse as their modes of expression. Silversmith Ndidi Ekubia used a hammer, and woodworker David Gates employed a saw, while ceramist Caroline Slotte used a box cutter, and Hongtao Zhou used his hands to melt wax for *Burniture*, a sculpted chair designed to melt from overuse.

For a group of artists who are accustomed to working with considerable tool kits, this commission presented an inspiring and thought-provoking challenge. The resulting exhibition showcases the wonder of the process of making and, at the same time, sparks an important conversation about the nature of skill, production, and tool use today.

*The Tool at Hand* will travel to museums across the United States, with destinations including The Philadelphia Art Alliance, the Houston Center for Contemporary Craft and the Museum of Contemporary Craft in Portland, Oregon.
Introduction.
In this essay I propose that we think of language as a tool. Ludwig Wittgenstein wrote that words have discrete functions, similar to a box of different tools. Extending this analogy I ask that we attend to talk-in-practice with the same detail afforded to some accounts of crafts-person’s tools. After sketching the canonical tension between language and craft, I present some reasons why we find it difficult to describe making things. But equally, argue that those reasons afford a conceptual wedge that can reveal a fuller understanding of craft making.

Some words to start with.
We are at the Chipstone Foundation above the shore of Lake Michigan at Fox Point, Wisconsin on a bright, warm spring day. Almost all of the participating artists in The Tool at Hand exhibition and half as many art-historians are gathered around a large table. The air is full of the sound of talk and the smell of coffee and we are surrounded by, and sitting upon, objects from the Chipstone collection. We had been brought together by the exhibition’s curator, Ethan Lasser, for a two-day think-tank to explore avenues of thinking arising from working on the project. This was one of several sessions organised for the weekend, and as its theme, each of the participants had been asked to encapsulate their relationship to tools with just one word. The ‘one word’ stipulation perhaps reflecting the artists’ brief for the project, of using just one tool. The words we returned as our answers were: resistance, redaction, knowledge,
The idea that making things, and writing or talking about making things, are at odds has become something of a folk-truth. 

regulation(s), intervention, intuitive, evolution, extension, memory, complexity, friend, interference, remediate, dysfunctional, motivation. Now, the actual words themselves, although providing for a lively and fascinating discussion, are of lesser importance to the argument that follows. What I take as a starting point in this discussion of language as a tool is the form of those words: of the fifteen words spoken twelve were nouns, two adjectives, and just one a verb.

Craft and language, the canonical view.
The idea that making things, and writing or talking about making things, are at odds has become something of a folk-truth. Discussing this, in his book The Craftsman, Richard Sennett reminds us of the historicism of this view, invoking Denis Diderot’s comment made while compiling his encyclopedia; “among a thousand, one will be lucky to find a dozen who are capable of explaining the tools or machinery they use with any clarity”. (Sennett 2008, p. 94). Sennett is himself playing out the line argued most consistently by Peter Dormer that craft knowledge is tacit, or unsayable, declaring; “what can only be shown cannot be written about”, warning that anyone who thought otherwise would “distort the integrity of the very subject they profess to respect.” (Dormer 1997, p. 230).
In positioning craft knowledge so absolutely within the binary of propositional knowledge and tacit knowledge, craft can become decoupled from language, thus, I suggest, disabling the potential of accounts of or from its own practices. Instead, craft has been interpreted from other perspectives such as art history and material culture, which whilst instructive, are often subject to those perspectives’ agendas, therefore pre-determining what might be considered compelling in any analysis. Thus an art historian can make the claim that an “object that ticks all the craft boxes...may not present an interesting case for theoretical discourse”. (Adamson 2007, p. 167). But as Etienne Wenger writes, “there is a big difference between a lesson that is about the practice, but takes part outside of it, and explanations and stories that are part of the practice and take part within it” (Wenger 1998, p. 100). Adamson’s “object” has become dis-located from the “…current of activity to which it properly and originally belongs”. (Ingold 2000, p. 347).

The canonical position: that it is close to impossible to use words to transmit skill-knowledge simply tells us what language cannot do: it is difficult to turn making into words. Language does, of course, as in practically all lived practices, play a part in the craftsperson’s everyday world. We should instead be asking what language can do. Drawing upon studies in linguistics I now suggest why describing the doing of craft is problematic, and why it is difficult to describe skill-knowledge. However, the reasons for this difficulty provide the space for a conceptual wedge. And I argue that that conceptual wedge is to adopt an ethnographic approach to studying the uses of language-in-practice.
When subjects watched videotape of spoken interaction with portions of the sound beeped-over they found it more difficult to infer the verbs that were beeped than the nouns that were similarly beeped.

**Language-in-practice and the trouble with verbs.**

To step back for a moment, and to consider what Diderot would have liked to have had explained, the work of craft might be described thus: ‘the processual transformation of material(s) using tools, machines and apparatus’. So, even at a basic level, to describe that work, we would need to have naming words for the tools and materials, *nouns*; and knowledge of words describing what we do with those things, *verbs*. If we want to simply name and make taxonomic representations of the world, then nouns will do most of the work. If we want to go further, to describe what we *do* in the world, and communicate being in the world, engaged in all its relational complexity we need more than the labels that nouns offer us.

Research in language acquisition shows that we learn nouns and verbs in different ways and we employ them with varying competence and effectiveness in practice. Gentner (1981) summarises some of the outcomes of these differences. Nouns tend to be learnt before verbs. Verbs are less sharply defined than nouns, they have more possible meanings than nouns, and
are less easily remembered than nouns. In practice, this means that the meanings of verbs can be contested, a lack of a clear definition can lead to conflicts of meaning or communicative fractures. Tomasello (2003, p. 47) states that “nouns are more conceptually autonomous whereas verbs are more conceptually dependent.” Although much research on language acquisition attends to children, Gillette et al’s (1999) study of adults demonstrates a practical continuation. When subjects watched videotape of spoken interaction with portions of the sound beeped-over they found it more difficult to infer the verbs that were beeped than the nouns that were similarly beeped.

To return to the scene at Chipstone, almost all of the fifteen words stood for concepts that could have been represented as nouns or verbs. Most concepts do; we have ways of naming concepts and ways of describing taking part in them. For example knowledge is a bounded, quantifiable product, something, perhaps that can be pointed to or identified. But knowing is experiencing, being in the moment(s) of lived-engagement with something learned. In striving to communicate with each other effectively we had nearly all used the noun-form of a concept, rather than describing an engagement or process. This aversion to verbs reflects Gentner’s assertion that verbs are more problematic in use. This of course has serious implications for any communicative task aiming to describe activities, processes, doing, and experience.

Gentner’s position on the differences in verb and noun acquisition posits something of an ontological and epistemological dyad. “In everyday linguistics, I suspect that we think of nouns as pointers to objects...that the conceptual structures corresponding to nouns are largely given by the world and can be counted on to function as coherent wholes”. (Gentner 1981, p. 176). He is suggesting that nouns operate as some kind of ontological framework, and positioning verbs as an epistemological resource learnt through engaging with the world. Verb acquisition requires “…understand(ing) the cultural patterns for lexicalising relationships”. (My emphasis).
This emphasis on understanding cultural patterns implies that verbs are learnt through lived-practice and interaction. By taking part in social life a shared fabric of meaning and understanding is gradually established between people.

**An example.**

In my own field, studio furniture, there are hundreds of tools that have been designed and evolved, allowing us to work with wood. All of them have names; some of those names vary. For example, depending on where you are from, or who you are talking with, there is a particular plane called a rebate, rabbet, or fillister. The differences are largely regionally ascribable, but once we link a name to an object's form and its use-function, it gets fixed in our mind. The difficulties start when we try to describe what we do with that plane. Saying that we plane the edge of a board to reduce its thickness locally in a regulated manner, says what we do, but only up to a point: it prescribes an aim or goal. But it doesn't go very far in saying how we go about that in terms of action, posture, tempo, force, rhythm, direction, or grip: in describing us, the plane, and the wood acting in concert. To make an analogy, we can fix a bird as a gull, a robin, or a buzzard. But we would likely debate whether it was soaring, gliding, swooping, diving, rolling, or just plain flying. After some debate we might agree terms, locally, between us, through our communicative interaction.

**The right thing, at the right time, in the right place.**

Tools are often treated with interest and reverence when discussing crafts. At another of the think-tank sessions, workers from the Kohler manufacturing plant led a fascinating discussion on the peculiarities, evolution, and specialness of their toolkits. The tools were spoken of as being very particular, having meaning amongst individuals and groups: essential to practice and absolutely enmeshed in practices. They are of the workplace, emplaced, doing just the right thing at the right time in the right place. If we are to think of language as a tool we must
think of it similarly, doing just the right thing at the right time, in the right place. Specificity is applicable to language use too. There are tacitly recognised, socially produced meanings of word use; this reflects our ways of knowing (in) the world being culturally located. As Alain Coulon writes: “sense of talk is always local and that generalisation about the meaning of a word is impossible.” (Coulon, p. 20).

Conclusion.

Language and craft practice are not antithetical. The canonical adoption of Dormer’s stance relies on the assumption that the whole of craft knowledge is predicated on practical skill knowledge. However, language-in-practice is rarely used to these ends, (see Mackovy 2010, Gates 2013). Dormer’s more pertinent contention is that craft knowledge is local. To understand what language is used for, and thus to deepen our understanding of craft practice we must listen closely, orient to an ethnographic approach and take account of language in practice. Dormer’s examples are drawn from engineers and scientists working together, solving problems together. They would not, I imagine, have done this in silence. How their experience(s) and knowing is made meaningful, communicated and distributed is surely done with our most locally peculiar, yet portable tool—language.
BIBLIOGRAPHY


We simultaneously idealize a maker’s expertise in working with tools and the democratization of the toolbox. Doesn’t every toolbox hold the promise of autonomy and self-determination? The “Tool at Hand” is a phrase that implies the human propensity for tool use is itself a universal right, that there is no one right tool (no “one best way,” to contradict early twentieth-century “scientific management”). The exhibition can be read as proof of the democratization of access to historical technologies and craft traditions. While once historically guarded by guilds and protected as national assets, these practices are now devalued and deregulated. Yet, it has another resonance. While we are prone to think of virtuosic tool use in relation to specialization of a medium, most things worth making require more than one ingredient and more than one implement to help form or cook them.

It is important to recognize that most tools are conceived as parts of larger families of technologies. Tools are cogs whose teeth intermesh with other gears. Historians usually cluster utensils by chronology, regional preference, application, and complexity, as if these distinctions told a story in and of themselves. There is more to it than that. For an obsolete antique implement the museum or gallery may become zones of promiscuous material mingling. Threaded fasteners and dimensional lumber are necessarily units of larger systems. Like the proverbial apple and orange, tools such as the screw and the stud are unrelated (unless these implements slip into the ear as homonyms of earthly contact). So no tool is autonomous or
disembodied from the whole, from the body politic, even ones that have the capacity to seem idyllic, innocuous, at first glance.

Numerous interstitial tools live in obscurity and many more live on purely in the realm of metaphor. For instance, marvel at a muscular arm holding a hammer outstretched from a museum wall; the wood carving appears to be a beautiful symbol of strength (fig. 1). Soon after its origins are known, the nineteenth-century limb, a surrealist fragment from a twenty-first century perspective, becomes embodied in class struggle, emblematic of mechanics’ identity formation. Made to hang outside a shop and encourage the sale of work clothes, it is a tool with deceptive emotional capabilities that cannot be retrieved today without numerous instruments of our own, from empathy to speculation. Basic methods of classification as well as typical museum presentation can inhibit such relationships. The identical image on baking soda packaging might or might not engage us on the same visceral, emotional or social levels. A tool’s function may be hidden in plain sight.

Most fine art museums and art history textbooks mention tools to illustrate vernacular architectural methods. Few authors emphasize tools as visually worthy of prolonged visual analysis. George Kubler’s magisterial *Shape of Time* (1964) proclaimed that tools are not merely artifacts but worthy of study as significant works of art. Kubler sought to marshal an “egalitarian doctrine of the arts.” Despite this fascinating premise, the *Shape of Time* does not expand our

Fig. 1 Henry Higginson, Arm and Hammer Trade Sign. Paint and Wood. 34.5 x 34 x 23 in. Gift of Harry W. Smith, 1954. Collection of the Newark Museum 54.173
understanding of how the quotidian tool might gain artistic distinction. Kubler claims that craft rules sustain repetition. Well-worn ruts damn the craft toolkit to predictability; silversmiths have their set methods of raising a bowl and potters their own specific rhythms. To challenge this premise, Kubler notes that Attic red-figure pottery was displaced by black-figure. He argues that this change in craft practice was mainly brought on by rupture, either a lateral shift in the hierarchy or population of divided labor, patronage, or a drift in exemplary models. Even though tools and craft practices are key here, this is not democracy in action. It is the rare event of technological hybridity that occurs despite human predilection for routine.

Artists, curators and the general public still get caught up in age-old arguments over whether some skills are truly “craft-like” or mere labor. Histories that privilege craft usually suggest that the profusion of power tools, such everyday things as the screw gun or circular saw, undermines virtuosic construction. Whether the humanizing touch can be satisfactorily identified in ordinary manufacture—such as balloon framing—and to what degree are subjective questions. Most artists, let alone the general public, have no idea that the turn-of-the-century industrial arts museum heralded such skilled “manufactory craftsmanship” more loudly than Duchamp averred the anonymity of such artifacts. Toilets still had distinct profiles due to their manual finish in 1915. Each press-molder could identify his handiwork despite sharing plaster molds with twenty other men.

The Tool at Hand illuminates the gulf between the misuse and abuse of tools as well as their idealization.
Henry Chapman Mercer’s “Tools of the Nation Maker” begun in 1897 in Doylestown, Pennsylvania, was a pioneering museum project. The preservation of the Pennsylvanian German stoveplates and butter molds was intended to communicate the constituent features of the pre-industrial democratic nation state. Yet, the conservation of these tools from the middle of the industrial revolution has ambiguous meanings. Mercer’s palatial concrete museum lays out trades and their respective tools encyclopedically, but also higgledy-piggledy. He hung the stoveplates in a massive cluster, not as singular aesthetic compositions. In fact, the iron Biblical scenes are hung vertically off the wall on hinges and can be flipped through as if a collection of posters. Browsing through the dozens of cast iron plates is humbling manual labor itself. Does the accumulation tell us that sandcasting and molten iron liberated artistic invention or that mechanization increasingly limited choice and originality? Either narrative is possible.

Beginning in 1909, and as late as 1928, exhibitions of hardware in the Newark Museum showcased door handles and all sorts of brass fittings, mostly goods made by local manufacturers for whom the hand (manu) of their employees was still essential to their identity. Firms that straddled the sphere of “goods ornamental and useful”, which made beautiful doorknobs or tasteful knockers, were being celebrated as proof of the resilience of good handicraft and careful design in the age of mass-production. Or, were these aesthetically superior goods highlighted so that they could be purchased by the masses whose standard of living in the United States was rising? There is no doubt that tools were on display as tools, and as promising endeavors, but to what end? Why?

Will the next social revolution turn on the orbit of an app or a lowly screwdriver? What if our tools get the best of us, or reintroduce the best of us, by releasing a vital seed into one of our species’ ossified professional strategies? Perhaps this image of the cyborg evolving out of
machines sounds derivative of Ridley Scott’s *Bladerunner*, but if this futurism were rooted in an antiquarian flywheel or a wooden windmill it might seem like a less grandiose and untelevised possibility. There is hopefulness in thinking that the museum preservation of our wealth of inherited tools might somehow serve as a convection cell for change. Some corpse-like machines might speed innovation in an unexpected way, if we only valued these historical implements as functional.

Alternately, the next expansion in the American high-tech toolkit might take place in yet another wave of counter-cultural communes. Although rural utopian settlements of the nineteenth century are often regarded as a rejection of the industrial order, it was hardly so simple; they were seedbeds of some of the most ingenious mechanical contrivances. By 1852, Shakers had a patent to make chair feet with brass tilts that would not mar floors when sitters leaned back on the rear legs. Oneida developed superlative bear traps and farther out in the hinterlands the Mormons improved firearms when John Browning invented the repeat rifle. Born of utopian efforts to retool the social covenant, these inventions did not rupture the flow of individualist and capitalist American enterprise.

While it is hard to imagine that the next step in civilization might be a *devolution* from an over-reliance on complex tools, in the world of fine art deskilling has been the tendency. *The Tool at Hand* illuminates the gulf between the misuse and abuse of tools as well as their idealization. For instance, Beth Lipman’s *Gift Ball* (2011), a mass of silicon caulk, suggests both a lack of control and the failure of a tool to cooperate in the act of form giving. The adhesive is mysterious and removed from its origins in the tube, so much so that visitors constantly touched it to assuage their curiosity. David Gates shows us that a saw can be used to shave spokes and split lumber, even though these purposeful misapplications are frustrating struggles.
The Tool at Hand argues that tools are as good to think with as they are to use.

By going beyond the deadening mothball effect of museum vitrification, by listening to makers and seeing them in action via the accompanying videos hosted on the web, The Tool at Hand argues that tools are as good to think with as they are to use. The pluralism that exists in practices at the intersection of design, craft, and art resembles a honeycomb of rigid enclaves more often than dynamic permeable membranes, as Kubler rightly pointed out. This extra-medium perspective, far from the mindset of professional associations or collectors’ parameters, makes the exhibition a significant tonic to the typical de-contextualized museum display. The final democratization of tools will not occur until more cross-pollination can be engineered. Future curators and artists must shoulder this challenge of tillage and unnatural selection.

ENDNOTES


Remember back, if you can, to the time before you mastered a particular technique—perhaps riding a bike, driving a car, cutting vegetables or handling garden shears. Remember how, in the period before mastery, everything was somehow chaotic and overwhelming and how it now appears simply intuitive. Imagine trying to tell someone how to pick up that bike and ride. What set of instructions would you write down? Which different steps would you identify and how would you explain them? How successful or unsuccessful would your instructions be? We all know the difficulties surrounding such directions. We have all experienced them—whether it is a cookery recipe, an operative manual or a flat-pack furniture construction leaflet. Yet the failure of words in explaining a specific task or process is not new, as this essay goes on to explore.

Historically, authors of recipes, instruction manuals and technical treatises have used a variety of methods when trying to describe a particular practice. When words have failed, authors have suggested learning by trying the technique yourself or watching someone else perform the action. These recipes and treatises, this essay argues, are not just instructions. The words they use and the metaphors they create to describe particular techniques often contain evidence of the author’s relationship to, and understanding of, tools. *The Tool at Hand* exhibition contributes to this larger effort to understand tools by encouraging a group of
The Tool at Hand exhibition contributes to [a] larger effort to understand tools by encouraging a group of artists to analyse and describe their relationships with them.

artists to analyse and describe their relationships with them. In doing so it offers you, the audience, a means by which to consider technique.

From 1400 onwards, European craft practitioners (and those who were not) began writing about technique. The invention of printing in the 1460s, allowed publishers to further disseminate such texts. In England, towards the end of the seventeenth century, as the 1662 Licensing Act lapsed and controls loosened, the print trade grew rapidly. From this point on English people enjoyed a range of new printed materials. Amongst the newspapers, pamphlets, trade cards and advertisements were treatise, specifically designed to inform individuals about skilled techniques.

In the early eighteenth century, encyclopaedias further populated this genre. Authors hoped to provide patrons with information on a range of topics and tool use increasingly became situated within a wider framework of knowledge. Ephraim Chambers’ 1728 Cyclopaedia, which is widely recognised as the first modern encyclopaedia, offered audiences information on subjects as diverse as pottery production and Newtonian philosophy. Through reading the articles included in such encyclopaedia, individuals experienced a particular way of thinking about tool use. In describing pottery production for example, Chambers described how once at the wheel, with clay at hand, the potter ‘turns the Wheel round, till it has got the proper
Velocity; when wetting his Hands in the Water, he bores the Cavity of the Vessel, continuing to widen it from the middle; and thus turns it into Form’.¹ Not a potter himself, Chambers simply listed different stages of the process with little reference to detail or nuance. He described how the potter turned the wheel until it has reached proper velocity, but remained silent on what that velocity was and how it might be achieved and recognised. In the first half of the eighteenth century authors gave little attention to what might have been missing from such a description.

Such gaps went unnoticed by an audience largely indifferent to the practical application of the knowledge contained within these texts. Nominally targeted at those who were active in industry, authors also aimed these texts at those who had the money to buy them but had little inclination to act upon the details contained within them. In his *A New and Complete Dictionary of Trade and Commerce* (1766) Thomas Mortimer was keen to stipulate that the dictionary was aimed not at the ‘Rich and Affluent alone’ but also at ‘Tradesmen, Manufacturers, and Mechanics’, for perusal in their ‘leisure hours’. In order that this audience might be met the publication was sold ‘in periodical Numbers, at an easy price’ so ‘that persons of every station might be enabled to purchase a work’.² Other writers aimed their dictionaries explicitly at affluent audiences. For instance, Malachy Postlethwayt’s pitch to ‘landed gentlemen’ perhaps illustrates more accurately for whom these authors wrote.³ Dictionaries, encyclopaedias, technical manuals and treatises on the arts and manufactures were desirable possessions, which aestheticized rather than expanded knowledge about tool use.⁴
This exhibition offers you a very particular ‘how-to’—‘how-to’ begin to think about tool use.

By the mid-eighteenth century certain writers began to recognise the limitations of their written descriptions of particular techniques. Writing about the practices of trade and commerce in the 1750s for instance, Richard Rolt openly acknowledged the challenges of understanding processes simply by reading about them. In a period of manufacturing change, when access to useful knowledge about managing and manipulating natural resources was at a premium, Rolt underlined a central problem. He claimed that ‘Of every artificial commodity the manner in which it is made is in some measure described, though it must be remembered, that manual operations are scarce to be conveyed by any words to him that has not seen them.’ Rolt felt that it was impossible for someone to understand manufacturing processes without seeing the actions take place.

In the last three centuries those difficulties have not disappeared. Whether trying to teach someone how to use a particular tool, or just explaining an individual’s own tool use—twentieth- and twenty-first-century writers, practitioners and artists have struggled to sum
up the how and the what. An example of this can be found in any cookery book. As sociologist Richard Sennett describes it, the problem exists because as a reader ‘you can see what you have to do but are given no strategies as to how to actually go about doing it’. Sennett finds an exception to this problem in the cookery books written by Julia Child. Certainly the written and visual instructions on cutting included in Mastering the Art of French Cooking, anticipate each part of the action. Child, Bertholle and Beck describe how when slicing round objects the cook needs to cut ‘straight down, at a right angle to board, with a quick stroke of the knife blade, pushing the potato slice away from the potato as you hit the board.’ The instructions enable the learner to recognise what they are experiencing and how they should react. They describe the multiple gestures that through practice will merge into one action. Nevertheless, despite such a detailed account of cutting, cookery writers continue to write and describe suggesting that the technique (or rather a description of the technique) can never be complete but rather continues to evolve.

Why then is it so difficult to describe tool use? Why is showing others how to use particular tools so complex? Once a particular technique is learned it becomes innate, impossible to make explicit. Tool use is at the centre of that difficulty as the ideas, knowledge and muscle memory, which make up technique often work in tandem with tools. Highly skilled practitioners wield tools seemingly effortlessly. Working with tools we have all handled—the contractor’s disposable saw, the paper knife—David Gates and Caroline Slotte fluently demonstrate their hard-won agility. Nevertheless, skilled work and interrogating skilled work is anything but easy. In viewing the pieces and their accompanying videos in The Tool at Hand exhibition, it is important to remember the historic difficulty societies and individuals have experienced in trying to articulate their understanding of tool use. Obviously, these pieces and videos are not an attempt at how-to. They do not attempt to teach but they do wrestle with a similar problem—the difficulties of trying to describe and talk about tool use and relationships to
tools. In her video, Ndidi Ekubia uses the term ‘rhythm’ to explore both the psychological and physical state required to enact her practice and her relationship to tools. David Clarke underlines the importance of irreverently using tools in order to explore their boundaries. It is important to listen closely to the descriptions and comments that the artists offer. Mark the language they use and the metaphors they employ. Note their pauses and the silences within their descriptions. Look closely at the pieces themselves. This exhibition offers you a very particular ‘how-to’—‘how-to’ begin to think about tool use.

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ENDNOTES


As part of *The Tool at Hand* think tank, the Chipstone Foundation invited three former Kohler Company factory workers to discuss their use of tools in the factory setting. An interesting conversation focused on tools, tool making, tool knowledge as well as the difference between the crafting process in a studio setting and an industrial setting, ensued between the Kohler craftsmen and *The Tool at Hand* artists.

**Factory and Studio: A Dialogue**

ETHAN LASSER: What is your most important tool?

KEN: For me, in the pottery, the whole tool box that they give you isn’t worth ten bucks. It’s a metal rib, or what they call a pallet in the factory, a plastic rib and a peg and that’s it. Other than that it’s water and sponges.

EZRA SHALES: Could you say that another tool is material knowledge? The tool is learning the clay?
KEN: The tool is, yeah, I would say that is huge because it changes so dramatically with the time of the year. The higher the humidity level, the hotter the temperature, the faster the clay sets up. For us, we have to cast everything right away in the morning, whatever you are going to make. And then you assemble it through the course of the day and it only gets harder to work with as the day progresses. But I guess the one tool on hand that would be the most important for me would be the ribbed pallet.

ETHAN LASSER: Can you describe the rib?

KEN: A rib is just a very thin 16th of an inch hunk of sheet metal. It literally bends when you flex it in your hand. You use your thumb and your fingers to bend it. You use it to literally shape and sculpt the clay. And even though it comes out of a mold, you have this toilet that was produced by this hunk of plaster basically. When it is all assembled and it comes out, it has to be reshaped and every man reshapes their own toilet their way with both hands.

VAL: You brought some really good points because when I was a caster it was $10 worth of tools. And now I work in Product Development and we built our department on the tools we need at hand. We have over 50 different power tools. We’ve got a chop saw, three different types of band saws, and four different drill presses, and then we have our hand tools. Well over 300 hand tools and everything has a specific purpose. And when Ethan first e-mailed me on what the whole project should be about, one tool, I went to the gentlemen in my department, we have over 400 years of experience in my department, and asked them what is the one tool that you could use that would help you get your job done. And over 85% of them responded it would be the pallet, which again is a little piece of metal. You can bend it, you can contour or curve, you can take it to a file and create a new contour, a new radius, and everyone agreed that would be the tool.
MICHAEL EDEN: I’ve been a potter for 20 odd years and I’ve had the same WOODEN rib all that time.

KATE SMITH: I’m wondering if you ever share tools in the factory.

VAL: I can answer that. In my department of 22 people you do not use other people’s tools. You don’t know how much it took to make that tool. So it is all hands on and it does become something that you cherish because it’s how you get your job done. You want to be better than the rest. You want to have a quality that stands out to the people who look down on you. So these tools are how you get to that point.

MICHAEL EDEN: I always looked for that rib because it was the best rib. It has aged really nicely and worked the best of any rib I’ve had.

KEN: And that is huge. I know guys who were extremely protective of their rib. I was like you. I got one and it had the right amount of rust on it on it, it flexed right. Because Kohler wouldn’t get the same ribs every time so some would be stiffer than others and you’d go through 50 ribs in one day and then it’s like this is it.

GLENN ADAMSON: Can you talk a little bit about tool making and how often that happens?

GREGORY: I make things to make my job easier and do it quicker. It’s really fun for me. I’m a lefty and a lot of the things that I make are geared toward my left-handedness. Like grinding. I grind a lot and because I’m left handed, all of my shirts have holes in them. So I made myself a special apron covering them up.
KEN: For me it was piece work so it was all about money. The piece itself didn’t have a whole lot of value because you know that it is not yours. It’s not your creation. You know you try to do the best that you can do with it, but there are so many variables beyond your control in a factory setting. You know, you try to do the best you can. But if you can make an extra piece a day that’s why you’re there, to make money. That’s an extra 18 or 19 dollars. So you can create tools to save time because you have a finite amount of time when you work in a factory floor.

DAVID GATES: How much of that knowledge is shared amongst the workforce and how much of your kind of innovation and cleverness is taken on or appropriated by the company?

KEN: It’s kept pretty tightly held. Now that knowledge is being lost because industry income is shrinking so dramatically. I just talked to somebody earlier. The average age on the floor of the factory is 57, 55 years old. I mean, all of the young people are gone. They are all laid off. You’ve got 20 years seniority still working so it’s not going to be passed down. All this knowledge, shop knowledge, floor knowledge, will eventually be gone.

VAL: Like you said, we don’t have the young workforce coming in who gets to carry on this tradition. I know when I first became a caster, you were a tight bunch. You didn’t want to share any of your secrets. They were the money makers and I wanted to bring this income into my family. They didn’t want to share that with us new guys because all of a sudden we may be bumping them off the floor. You don’t see that anymore. Everything has truly changed. We have a lot more automation in a lot of our departments where it’s just a product that is in front of you for three minutes and it moves on. That takes away from that feeling of craftsmanship and that feeling that I actually did something that is beautiful and I am not the only one who is going to see it that way.
TAVS JORGENSEN: Is there a real sense of pride at the factory, given people’s skill?

KEN: Very few guys really think about it. They’re there. It’s a job. They don’t think about the skill that they have, and the fact that they are very talented in that they work with this every day. It’s just what they do. It’s what they do for a living. I mean, some of the guys are family farmers. They have these small family dairy farms and this is just what they do to make that flow.

ETHAN LASSER: Ken, you opened by saying that you had recently moved from factory to studio. Can you say a bit more about this? What’s different and what’s the same about these two environments?

KEN: When I learned to blow glass coming from the factory, I didn’t have this reverence. It was just another process.

GREGORY: The difference is the time clock. The time clock is kind of a haunting thing. I think Kohler is all about the time clock. You’ve got to be at your station at this time. Going into the factory as a technician for even the job I have now, I make a lot of art on my lunchtime. I live for that time. That half hour that I have time to make something at work, okay it’s like now I have to get back to my job.
DAVID GATES: I think this kind of binary, this has been kind of tacitly established between industry style production and studio style production again through saying this morning there’s a lot more slippery space in between. But studio craft is not this area of, “Oh, it is just so lovely to make things.”. It’s a job and work most of the time. You get up and you get to the studio at half past eight and you work until 6 or 7 o’clock. And you make things because of deadline, and you have to pay the mortgage and eat. So there are undoubtedly moments of huge satisfaction with very similar problem solving: how to make something more efficiently, how to do something in a kind of more appropriate and beautiful sort of way. It’s kind of problem solving, mate. But I probably spend twenty times longer over a spindle monitor machine than I ever do making dovetails. But there is undoubtedly these kind of moments within that kind of absolute pleasure of having achieved something by working directly with the material.

BETH LIPMAN: I think one of the differences I see between industrial application of tools, or the crafting process in the industry and working in process as a maker, is that what I witnessed was that most factory associates are pretty divorced from everything except what they’re doing. So you’re an absolute expert caster, no one can hold the torch to you for that. You have absolutely no idea how to glaze something expertly. So the difference that I see for artists is that you have to figure out how to problem solve every single step, from the genesis of the idea to the end result. So if you work at Kohler for ten years or fifteen years, and maybe you change your job three or four times, that still might not give you all aspects of what you are making. So you can only take ownership over what you are doing to a certain extent.
The Challenge

Below is the transcription of the video created by Nicola Probert that was sent to the artists.

Make a work of art with one tool.

Send the work of art to the Milwaukee Art Museum for an exhibition.

Send a film documenting this process and your experience.

When you make this work you might want to consider the following questions:

Why did you choose this tool?

Where did this tool come from?

Are you using it for the task for which it was intended?

How do you know when the tool is working correctly?
Do you listen to your tools?

What senses do you use to perceive your tools in the act of making?

Does the tool become an extension of your body—something almost invisible?

Or on the contrary, is it an agent—a thing that sometimes seems to have a will and force of its own?

Do tools help fuel your creative process?

Do you ever find them to be limitations?

Do you feel an attachment to this tool?

Is that an attachment to the tool or to someone or something with whom the tool is associated?

Do you ever loan your tools?

Have you ever left a tool behind?
I am interested in marks, the things that have been left behind...

Helen Carnac

ARTIST STATEMENT  I wanted to record something from my studio environment and so I chose my rolling mill to make prints/imprints of other tools and objects that I keep there.

I think it is interesting that you ask if the tool has personality. I don’t really think that it has a personality—but it does have presence. At my studio, when you enter, you immediately see it sitting there—it really has a presence and it kind of overlooks everything I am doing. I feel it watching me.

This tool has its history. The rolling mill is part of an amazing cache of tools I bought from a retired silversmith who worked in London. Post-WWII he had bought a lot of scrap; lost and found metal objects like cutlery and coins from London ‘sewer hunters’, and fixed and polished
them before putting them back into circulation. I’m really interested in his tools because they carry something of him—of how and where he worked.

For this project, I gathered some objects from around my studio and recorded them by pushing them through the rolling mill and taking their imprints on paper. There is no ink here. I used different types of paper—heat resistant and light-sensitive papers to pick up the marks. The marks have all been made the same way—but they look different—some of them look photographic, some like drawings and others like prints. I made about 200 imprints and then spent a great deal of time sorting and assessing which ones worked together. Finally, I put them into archive boxes and named each set according to how they seemed to represent something of the original object.

This tool has such a repertoire for something that is ostensibly designed to thin-down metal. It can do so many things.

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**ARTIST VIDEO DIALOGUE**

I am interested in marks, the things that have been left behind, the slow changes in our surroundings and the evidence of human presence. Images and thoughts drawn together in the studio... What is a tool? Making tools from things found while walking... How can you use just one tool? To make marks or reveal something? A record made of the small things. Things from walks, things from the studio. A print, an impression, rolled and moved on.
TOOL
Rolling Mill

TYPE
Hand Tool

FUNCTION
Transform Material
Helen Carnac

*Found, Recorded, Relayed*, 2011

For me, it feels natural moving my work out of the classic silversmithing environment and into the kitchen...

David Clarke

**ARTIST STATEMENT**  
*The Tool at Hand* questions how we make something and what we make it with.

We question the material. However, do we take a moment to think about the tool?

What are the alternatives to the traditional way? We are usually shown how to make something. We copy that technique, then perfect that technique and become an expert, a master craftsman! I am not interested in becoming an expert at all. What interests me is building in the element of risk, the wonderful notion of play, and wait for the unexpected!
My name is David Clarke, I am a silversmith, and my tool for this project will be the Cannon A134D/U Domestic Cooker.

For me, it feels natural moving my work out of the classic silversmithing environment and into the kitchen, and to see what the possibilities are through creative thinking, and also the possibility of making some mistakes.

With using the cooker, what’s fantastic is I have to give up a lot of the responsibility. The only control that I have with this tool is that I switch it on, put it on gas mark 9, and I lite it. That’s as much control as I have. What this element of risk allows me to do, however, is to allow a freedom of flexibility and experimentation come into the equation. I lose some control, but what I gain is what I’d say is a new visual language for silversmithing.

I actually think now it’s essential that classic silversmithing tools are disrespected, used irreverently, and mistreated, so that new work can appear from a dying discipline. I thoroughly enjoy taking the small risk of playing within silversmithing, to then respond to the results to challenging the boundaries of this discipline.

What interests me is building in the element of risk...
TOOL
Cannon A134D/U Domestic Cooker

TYPE
Kitchen Tool

FUNCTION
Transform Material
David Clarke

*Dead on Arrival*, 2011

Sterling Silver and Lead in a velvet case. 2 spoons each 5 x 3 x 1 in.
I started using a knitting machine once I realized that hand knitting was limiting my production.

My approach to machine knitting is to push this tool to its limits and ask it to do what it is not conventionally designed to do.

I must do it carefully or I hurt the machine.

I often use it as a sort of sewing machine, and an embellishment and tailoring tool, fusing materials to the knit surfaces during the process of making.

I like the idea of employing force to a delicate piece of equipment, teetering at the edge of breaking it.

My senses of sound, sight, and touch are perpetually vigilant when I knit.

I am very interested in the dance one does with a machine.
The creative possibilities this tool offers me keep me engaged with and dedicated to it.

I have discovered a material alchemy in the knitting process that I have not found elsewhere: thus is drives me forward in an enchanted, devotional trance.

My tool’s limitations are what inspire me to invent and ask it to do the unconventional.

Limitations generate problem solving and thinking within parameters.

Being confined is strangely liberating.

My tool’s limitations are what inspire me to invent and ask it to do the unconventional.
I am very interested in the dance one does with a machine.

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<td>TYPE</td>
<td>Machine</td>
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<td>FUNCTION</td>
<td>Connect Material</td>
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Liz Collins

Relentless, 2011

Silk organza with knit mohair, silk, lurex and wool. 96 x 96 in.
Something I really struggled with throughout the whole project is the question of where the tool resides. Any number of tools have been implemented in my work from the computer to the CNC machine. For me the idea of folding a tool upon a tool is really interesting.

But ultimately, for this project, I defined my tool as data. After the Earthquake in Japan, a group of people took it upon themselves to fabricate Geiger counters to measure radiation levels. They returned the information they collected to the public via the internet because the government was not disclosing any of this information. These 24 templates represent 24 hours of data collected from 8 different sites.

The templates can be used to turn a three-dimensional object in clay or plaster. Their function is to make data material. They can turn numeric information into a physical object with weight and a particular scale. There is something about being able to hold and touch that creates a reality that is different from an abstract idea you can’t touch or see without another tool, the Geiger counter.

Chad Curtis

For me the idea of folding a tool upon a tool is really interesting.
I think that there is a potential that resides in this tool in the same way that potential resides in a hammer. It is the choice of how one engages and chooses to activate it that determines what the tool does to the world.

**ARTIST VIDEO DIALOGUE**

Possessing a strong desire to make things since I was a child, I have worked with tools my entire life, and have often gained great insight about myself through the tactile act of using a tool, and the choices that come with that use. This project reflects that desire in many ways; but the specific tool I chose to investigate for this project is data—a far more abstract approach than a traditional tool.

I am fascinated with data and its ability to represent information about the world as ideas that come from very real things—often things we can touch and hold and effect our daily lives. I’m also interested in the sense of detachment data can produce. For example, it is very different to read about statistics of homelessness than to be homeless.

Following the March, 2011 earthquake in Japan, an independent website called Safecast.org was formed to provide information about the radiation levels at various locations throughout Japan gathered by volunteers and citizens. Safecast is a global project working to empower people with data, primarily by mapping radiation levels and building a sensor network, enabling people to contribute and freely use the data collected.
I recorded this live data from 8 sites in Japan, over the course of a 24-hour period, and use the radiation levels from each hour to determine the radius of 8 spheres in a virtual object represented in 3D modeling software. From these 24 virtual objects, I created a series of templates as tools to make this data physically tangible, by shaping plaster turned on a lathe. The resulting objects, similar to a graph, can be touched and held and take on a physical nature that data often loses—turning a series of abstract sensor readings into an object with mass and volume, and an undeniable physical presence.

I chose to allow the final artwork to remain as a set of tools, a tool that has the potential to make real information that has consequences on millions of lives. Providing the tool rather than the object, it is the user of the tool that is left with decision to give physical form to the data, and to acknowledge its presence.

I chose to allow the final artwork to remain as a set of tools...
Chad Curtis

*Untitled*, 2011

Plaster. 12 small sculptures each 3 in. diameter x 13 in. long

**TOOL**

*Data*

**TYPE**

*Custom Tool*

**FUNCTION**

*Transform Material*
ARTIST STATEMENT  Designed in California, assembled in China, my tool is a MacBook pro. There must be millions of them around the world. The Mac book is actually a tool box, rather than a single tool. The machine is powerful, sleek, inviting and very seductive. It’s cool to the touch to start, but warms up as you engage with it. Working with it can be engaging, but sometimes very frustrating. When it is going well, it is easy to enter a state of flow. I become oblivious to my body, unaware of my hand movements—totally engrossed in the emerging object on the screen. It is akin to working on the potter’s wheel.

But what am I actually doing on the laptop? Am I drawing or making? The software I use is called Rhino 3D and it allows me to convert the lines and curves I create into a 3D model. I can rotate and inspect my creation in great detail. But I am only creating a virtual object, which is then produced for me on a 3D printing machine—through additive layer manufacturing. I create the information that is necessary to build the piece. This information is sliced into thousands of layers and each layer is laid down as a powder that is sintered with a laser, and incrementally built up over a period of about 10 hours.

I don’t think I could do this without my previous experience as a studio potter. I have to transpose the object into the real world. That, to me, can only be based on my previous experience. I don’t think I could do this without my previous experience.

Michael Eden

It’s a digital Swiss-Army knife.
ARTIST VIDEO DIALOGUE

The artworks I create are made by additive manufacturing, also known as 3D printing. To make them, I have to make a virtual version that contains all the digital information needed to build it. The Macbook Pro is the tool I use to create that information. I choose this way of working because it allows me to produce complex objects impossible to produce in any other way. My Macbook is an attractive object encased in precise stainless steel and capable of a wide range of tasks. It not only allows me to create these objects, it allows me to develop the ideas that underpin my work. It can also play music!

It’s a digital Swiss-Army knife. I keep it clean, and I don’t like anybody to touch the screen. I store it in a protective case when I’m not using it. Thought it looks like any other Macbook, I have made it my own by loading software and information that is essential for making my pieces. I use software originally designed for engineers; but I think in a different way than engineers, I not only have to learn how to use this software, but to make it do things my way, and that’s not always easy. I could use other software, but that would involve spending a considerable amount of time to learn how to use it.
I tend to spend long hours working with it. Some pieces take many weeks to create. It requires a lot of concentration, thinking round the problem, finding ways to create what is in my mind. I’m not really aware of how my hand is controlling the mouse, as I’m concentrating on the screen, watching the effects of my actions planning the next move.

Unlike the tools I used when throwing pots, this tool evolves, as new software versions with improved or more intuitive functionality are available to download. I then have to learn about those changes. I imagine this tool will continue to evolve until there is no need to use a keyboard, and the successor to the mouse will give physical feedback. Will the experience then be the same with these virtual tools, as with actual tools?

It requires a lot of concentration, thinking round the problem, finding ways to create what is in my mind.
Michael Eden

Maelstrom VII, 2011

Nylon with mineral coating.
8.25 x 5.25 x 15.75 in.
After a while channeling my thoughts, it is like breathing or meditation. I get lost in the making cycle.

Ndidi Ekubia

**ARTIST STATEMENT**  My tool is the hammer which was once owned by the renowned silversmith Louis Osman FRIBA. I use this tool to push and pull the material until the desired shape is formed. ¶ The sound and the rhythm are most important to the making process under control. Years of practice repeating the same ritual: two hits on air one on steel, two on air one on steel. After a while channeling my thoughts, it is like breathing or meditation. I get lost in the making cycle. ¶ The hammer is old, worn, has probably been used to aid the making of so many objects, a part of history. —Ndidi Ekubia

Imagination is the beginning of creation. You imagine what you desire, you will what you imagine and at last you create what you will. —George Bernard Shaw
Close your eyes and empty your mind.

In your hands a blank silver sheet awaiting your command.

Cleanse it and fill it with the wonder of childhood, flavours, aromas, the natural splendor of your surroundings, the words of fondly remembered conversations.

Let the thoughts flow through you. Take hold.

Reignite your inner rhythm. Be in control.

Allow the energy to flow. And breathe.

Listen to your heart beat. Begin the collision.

A mesmerising dance of tools taking metal to its limit. Pulsating.

Each strike an expression. Punctuating.

Each strike exposing an emotional response. Penetrating.

Each strike a unique blend of order and chaos. Personalised.

Feel your creation take shape. Bending to your will.

Two bodies evolving as one with each climatic stroke.

Rich sensual forms born of imagination.

Two lovers entwined.

The breeze rippling over sunkissed waters.

Open your eyes. Feel the warmth fill you and behold the wonder of creation.

—Written by Steve Judge
ARTIST VIDEO DIALOGUE  

A hiding place, where I clear my mind and focus. Gather my energy, breath, enjoy. Pushing doubts away, using my senses—the sound, the touch. The warm wood. Feel the weight. It feels like a glove. I’ve got to find my rhythm. A constant thud throughout my body. Where did it come from? What is its history? How many objects has it shaped? I know it. I understand it. I trust it. We become one.

It absorbs my motion. The flow takes over. Years of practice, sweat and tears. A struggle from beginning to end. Adjusting my posture. Reassessing the structure, the strength. Every hit counts, and overlaps.

Harmony makes perfection. No limits in my mind. The satisfaction is full and real. You can touch and feel it.

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TOOL
Hammer

TYPE
Hand Tool

FUNCTION
Transform Material

---

Harmony makes perfection.
Ndidi Ekubia

*Connection Vase*, 2011

Sterling Silver. 5 x 5 x 7.25 in.
ARTIST STATEMENT  
I decided that I would be really literal about this challenge. I just pared down my toolbox to one brush. It made it a little harder. This brush was not a risky brush. Technically painting with one brush is not that different. You can screw around with the bristles in many ways.

Really, the tool is painting, with all its trappings pared down. I think of painting as a tool. I describe it as a tool that I wield against the global flow of images in our culture. I am using the methodology of painting to slow down and intervene and subvert this flow, which I see as problematic in that it involves so many things being lost.

Today, the decorative arts and painting are not that different. Painting is so much a part of everything else that is being hand made and everything that is handmade is an underdog to our dominant cultural ecology.

I describe it as a tool that I wield against the global flow of images in our culture.
One of my inclinations as an artist is to pull media images from their usual contexts, like television and the internet, and re-stage them in paint. It’s like the media narrative is begging to be toyed with, and painting is my way of dealing with glossy images of disturbing or unbelievable things.

Painting demands really focused engagement, and I like the way it asks that people take the time to look and reflect. When it comes down to producing the painting, I have a ritual. I make a strong cup of tea, and I spend a certain amount of time standing, looking, thinking—and not moving. There is focus and direction, and then, a lot of movement occurs as I make contact with the surface. It’s a little like baseball. An intense state that is both physical and mental, yet there is a mysterious component I can only describe as meditative.

Once I start, I then execute the painting in one go. The tool I chose for this project is a medium-bristle brush with a long handle; one my favorites that I always use. I knew it was versatile enough to give me numerous kinds of brushy strokes, small points, and wide slots; and that I would be able to hold drippy blots of color and paint medium so that I could manipulate them easily, and with speed. This is a brush I can wield in a graphic fashion almost like a pen, even when it’s loaded with wet paint.
The medium-bristle brush turns out to be the right choice. It allows for a certain amount of ‘happy accident’, but not too much. It’s familiar like a glove. I know it, and it fits my hand. I can bend it to my mood. The important thing about this brush is that it acts as an extension of what goes on in my head. Stuff that I’m not necessarily conscious of, and I can just work without thinking about it.

Resulting painting—*Pink Bomb*—merges the explosive landscape of disasters theme I’ve been working on for many years, with tropes such as abstraction, op-art, and pop-art. Like other works in this series, it contributes to a painterly metaphor for contraction and expansion of all kinds. The current economic climate, for example; but also biological, geological, cosmic, and astronomical explosiveness. Flowery panting, and fiery ordnance, all rolled into single images.

This brush was not a risky brush.
Joy Garnett

*Pink Bomb*, 2011

Oil on canvas. 54 x 60 in.
From the outset, I was interested in the “at hand” in “The Tool at Hand”. I went into the studios and I looked in the tool cupboard and I consciously decided to try and avoid the last few hundred years of cabinetmaking history, when cabinetmakers evolved very, very specialist tools to do one thing particularly well, specialization to the point where most studio furniture makers would probably have a couple different types of planes, different types of chisels and half a dozen saws. For me, the tool at hand might just be down the hardware store at the end of our street, the tool under the sink, in our cupboards for fixing things up or for the average person who just wants to go out and fix something at home.

I bought a saw and decided to evolve it into something that would have different sets of things it could do. I reground several edges onto the saw so it would carry out the set of alliterated processes of slotting, scraping, shearing and sawing. It’s kind of a linguistic play that all of these words to do with slicing begin with ‘s’. I made this one tool that can be reground to offer a number of affordances. In the video, you can see it being used something like a crappy draw knife, a bad cabinet scraper and an even worse chisel. And quite the saw.

In the saw, I see character or presence. This tool developed this quite aggressive character that comes through in some of the surfaces of the piece. I had to fight with the tool. It wasn’t difficult, but there was a much more kind of active, aggressive thing going on between me, the tool, and the wood than normal. And I think some of this process comes out in the surface and structure.
One of the things I realized about my own body memory and my own interaction with tools in the workshop is that we have a kind of choreography with our tools. We have a way that we put them down or pick them up or set them aside when we go make a cup of tea. And I forever found myself mishandling this tool. I kept letting it run through my hands. Holding it by the wrong ends... there was one particular day in the workshop where my hands were cut to ribbons because I had been picking up the saw wrong. I’d been picking it up as if it was a shape I was used to, a panel saw, but it wasn’t. It was this new thing with sharp and dangling edges, and so it made me very aware of how I handle a tool when I am not using it, when I am setting it aside or putting it down somewhere.

ARTIST VIDEO DIALOGUE

To make a thing with just one tool. I work as a studio furniture maker. I suspect my tool chest is relatively modest by some standards, busy by others. I often think about how many or few tools I use to do most of the work. What is essential and do I really use so many in a normal working day?

Thinking about the precise function of a specially evolved plane for example, it does a very exact thing—one thing. There is very little that might be made with something so specialized beyond a slightly widened rebate.
In one sense the tool at hand is something ubiquitous, quotidian. Pliers, adjustable spanner, claw hammer. A reduced toolkit was behind the thinking that led to an ongoing body of work called *In Our Houses*. By working quickly with oddments and off-cuts. A way of relieving the sequential risk-accrual of cabinet-making processes. Limited options. Material and tool have more voice.

For my tool I chose the contractor’s disposable saw. I reground and honed its edges to split, scrape, shave, and shear. I chose to stretch the idea by working on one piece of wood. The plank at hand. So is this more than one tool, a multi-tool? And where did the tool-use start? A rough-sawn board comes to me, from the mill, the truck, the chainsaw? Is a pencil a tool?

In the end it struck me that in running with how the material reacted, the tool and the wood somehow become more interactional with my hand and eye than the regular strictures of studio furniture-making may allow. It is often said that the surface, the beauty of the wood has been revealed, but has it been controlled, mastered, regulated and fixed via the tool. This isn’t an answer, but as with much that is worthwhile, it raises yet more questions.
David Gates

*Saw, Slice, Split, Scrape, Shave*, 2011

Wood. 24 x 16 x 52 in.
When Ethan first approached me about being a part of *The Tool At Hand* exhibition at the Art Museum, I thought it was an interesting and challenging idea. I decided that I would make paintings of my tools—but they’re not just tools, they’re specialized. They’re not the tools you’d find at your local hardware store, or in the toolbox of your local armchair handyman. These are the tools of a metalsmith, and more importantly, my tools of my practice. Most of these tools are at least 30 years old—I bought them new—and they now have a lifetime of being used by me. They not only have the wearmarks of my hands, and the sweat of my hands; but my hands also have the marks of them on them.

I wanted to paint these tools in a very specific kind of way. The idea was to paint them in a realistic way that would suggest the intimacy I have with them: that these are not just things that I look at from afar, but things that I understand completely in all subtleties. I understand their dimensionality, their surface, their color. I attempted to get a kind of realism in the paintings, but I also wanted there to be a kind of sweetness and sentimentality to the paintings, that suggested the deep affection I have for these objects.

Lisa Gralnick

The paintings have a kind of sweetness to them.
Most of these tools are at least 30 years old—I bought them new—and they now have a lifetime of being used by me.

The paintings have a kind of sweetness to them. They suggest the closeness with which I hold these objects. I hope it suggests the fact these tools have lived through multiple studios and bodies of work, and long days of frustration in the studio, and other long days of ecstatic victory in the studio. Ultimately, I see the paintings as being as close to a series of paintings that would represent an autobiography, as anything else I could possibly paint would be. My life for 30 years has been about work—that’s what I do—and these tools are the evidence of that life.
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<td>TYPE</td>
<td>Hand Tool</td>
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<td>FUNCTION</td>
<td>Apply Material</td>
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Lisa Gralnick

*Untitled*, 2011

Gouache on paper. 13 works each 11 x 14 in.
It’s a process that destroys some of the tools being used.

Tavs Jorgensen

**ARTIST STATEMENT**

My tool is a reconfigurable pin mold—a single device that can be used to make an infinite variety of shapes.

This type of mold has been described as a universal tool or even as an “ideal tool”. I have created my own tooling device based on this concept to create a series of glass bowls. The tool is constructed from a number of pins and a set of perforated plates which lock the pins in place. Flat glass disks are placed on top of the pins and heated in a kiln to create various bowl shapes.

I could not have made this tool without digital technology. Such new technology enables me, and other individual makers, to create our own tools with unprecedented levels of ease and accuracy.

I think it would be interesting to explore the notion of “chains of tools”—the sequences of tools that facilitate the creation of other tools.
This is a project about a particular type of tool or tooling concept. It’s a concept known as “reconfigurable tooling”. It’s even been described as “universal tooling” or an ideal tool.

The idea is you have a tool that can be reconfigured to produce a number of different shapes or forms. In this case, the tool—or mold—is made of perforated screens in which kilns are set. I use this technique in this case for kiln-forming glass, to make a glass bowl. Once the pins have been put into desired position, they can be fixed in with side-clamps.

The next stage in the process is to prepare the glass for the molding process. I use round glass disks, and a circular cutter to cut them. It’s slightly ironic with the idea of the project being having a single, universal tool that can be useful for all sorts of things; but actually the whole process requires a range of tools to complete.

Once the glass has been cut, I use my fingers to open the glass cut. Probably one of the only stages in glassmaking where I can use my hands as the tools. Glass is an awkward material where you do have to use a lot of tools to work it. My background is as a ceramicist, and in that process you use your hands much more directly with the medium. With glass, either working cold or hot, you do have to use a number of tools to manipulate it.
I used tinted window glass for this project. Window glass is also known as float glass, as it’s made on a molten bed of tin, which presents some challenges in terms of treatment. You use a little instrument with a UV light to identify which side of the glass has been in contact with the tin, and then this side has to be treated with an acid to prevent the glass going matte during the firing. The acid is so strong that it actually destroys the brush after a few weeks of work. It’s a process that destroys some of the tools being used.

When everything is ready, I position the kiln mold in the kiln. It’s made of stainless steel and can resist the temperatures needed for kiln firing. I then apply a resist on the pin-tips, and place the glass disks on top of the pins. It’s a delicate process; you really must be sure the glass is positioned correctly to make the right shape.

As the kiln heats up, the glass will soften and fall onto the pins, and they will determine the shape of the piece. The project started out as an experimentation to see how tools can be used and utilized by individual practitioners. I designed the mold on a computer and got it made by a local laser-cutting firm. But I guess it also explores other aspects—how tools can be made by other tools, and how a complete chain of tools is needed to create a single artifact.

TOOL
Reconfigurable Pin Mold

TYPE
Custom Tool

FUNCTION
Transform Material
Tavs Jorgensen

*Glass Bowl*, 2011

Glass. 17 in. diameter
...the notion that one can use “just one tool” to make an object of art is naive.

Mark Lindquist

ARTIST STATEMENT

The “one tool” idea as an exercise in thinking led me down a path of greater and greater distillation of concept, formalization, and finalization. However, the notion that one can use “just one tool” to make an object of art is naive. Similar to President Obama’s July 2012 “you didn’t build that” campaign speech, in which he discussed the role of government and infrastructure behind (and precursing) successful business—there is no such possibility as “one tool making” given the vast history (evolution) and infrastructure behind each quasi-existential tool. If we can isolate the reality of materials and manufacturing (in the creation of a tool) from the idealism and dreaminess of conceptualism in art, then blissfully, this exercise serves as a catalyst rich in potential, despite opposing camps vying for hegemony. Yes, I made a work of art, (Dowel Bowl), seemingly with the “one tool” (a glue applicator) but I sang “dem bones” as I did so....
ARTIST VIDEO DIALOGUE

At the MacDowell artist colony in 1980, I experimented with form and texture on a grand scale—stacking 40 cords of firewood into large cylindrical forms whose surface was defined by the placement of the pieces. Through this piece and my photographic studies of it, I became fully committed to texture as equal in importance to form. Back in my studio, I began using the turning tool incorrectly, interacting with the structure of the wood, instead of the traditional woodworking process of obscuring the natural structure, trapping it inside an unnaturally smooth and opaque surface.

At MacDowell, I had used many pieces of wood to create large forms, whose surface had depth and texture. Now I focus on tapping into the depth and texture of the surface of a single piece of wood. In creating these pieces, the tool was as important as the material. I used chainsaws, routers, and other power tools with my lathe, to create textures and patterns—patterns that would not have existed without that action of that specific tool. The first major piece I created using this technique was made from a piece of wood given to me by the MacDowell colony in 1980.

As I applied my new techniques to the inside of the bowl form, I found the interior of a bowl could be larger than the exterior. When you view the entire bowl, you can see its relationship to the space it exists in: it is a bowl, it’s smaller than you are. But when you focus on the interior, you are removed from your environment, the way you are when you look at a painting. A painting can encompass a small space, like a single flower; or a space as large as a mountain range.
When I look deep into the bowl, its connection to actuality is broken, and the space expands. I might be looking at a canyon wall. Sometimes the orientation of up and down reverses, and I’m looking into a soaring dome.

To create these works, I used machines and tools on the scale of an operating room, or a recording studio. The idea of making a work of art using only one tool, which is the theme of this show, presented a unique challenge for me; eventually drawing me back to my experience at the MacDowell colony. I had used no tools in the creation of that work—simply picking up pieces of wood and stacking them.

I decided to create a bowl by stacking dowels. I would need just one tool, an applicator for glue.

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**TOOL**

**Glue Applicator**

**TYPE**

Hand Tool

**FUNCTION**

Apply Material

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I became fully committed to texture as equal in importance to form.
Mark Lindquist

*Dowel Bowl*, 2011

Wood dowels, glue. 36 in. diameter x 5 in.
ARTIST STATEMENT  
I usually use a tremendous amount of tools in my work. But eventually I realized that the part of my practice that I am most invested in is when I compose and glue. That brought me to caulk, and it brought me specifically to polyurethane which is quite transparent.

For this project, I took a caulk gun, put some polyurethane in it, and cut the top off. My rule was that if I started a canister of polyurethane, I would finish it so I didn’t leave any. I started with piles of stuff and I started gluing them together. Time was a huge element in this process. First, I let the caulk cure and then started to caulk at a more rapid pace and everything kept falling apart and falling apart. So, I had to slow down and wait for things to cool off. It was just a waiting game—for months and months.

The only strength in this material is the material itself. I had to create rules for the gun and the material that would allow me to make something.

I started with piles of stuff and I started gluing them together.
I usually use a tremendous amount of tools in my work. But eventually I realized that the part of my practice that I am most invested in is when I compose and glue.
The only strength in this material is the material itself.

**TOOL**
Caulk Gun

**TYPE**
Hand Tool

**FUNCTION**
Apply Material
Beth Lipman

*Gift Bowl*, 2011

Found glass and glue. 26 x 26 x 10 in.
ARTIST STATEMENT

The artwork you see here is more like a proposition, a proposition that the blade is mightier than the sword or the pen. And that in fact, the hand plane, the seemingly passive hand plane is a weapon. A symbol of aggression, much like a machine gun or a dueling pistol. Maybe woodworkers are more dangerous than we think. I think the act of making objects can be as harmful as it is helpful.

We think we are innocent, especially woodworkers. I mean, Christ was a carpenter. Why did they choose carpenter? Give me a break. Because carpenters are all nice and they only do good? They also build after taking over our countries and killing everybody. They are not all innocent. It’s just a little proposition. Building is an aggressive act.
I’ve often wondered what separates us from beasts—other beasts, that is. Tools? That single factor isolates us.

What is “using tools”? We’re only one small fragment of mother nature—what has this provided? Is this some form of advantage? Or rather a crutch—prosthetic—for some giant disability. What advantage has there been for us in requiring tools?

Sometimes we use these to get splinters out in the field.

Woodworkers. They’re such nice people. They even go as far as to say Christ and his father Joseph were cabinet makers. Noblest of tasks. A maker in wood. Well...perhaps.

But cabinet makers have traditionally made coffins. A final piece of furniture for the body. The final prosthetic. A drawer for the corpse. These are beautiful things. They’ve been used to build cities, houses, furniture, wooden limbs where war has killed, land confiscated. Patterns for iron castings, aircraft hangers, runways, even tanks. Campaign furniture. Using tools is a beautiful thing.

God I love the smell of cast iron!
I’ve often wondered what separates us from beasts—other beasts, that is. Tools?

I don’t think using tools is so human-centric; but perhaps what it is is we build tools, and that’s very different. It’s a shame, really. Other beasts don’t consider their situations so inadequate that they must enhance it so.

A cabinet maker gets to know this object like no other. I guess because it resides at the source of his conviction. And I think the hand plane, probably more than any other tool—more than the saw, chisel, square, or drill. It’s where the rubber hits the road.

I can field-strip, sharpen, tune, and reload one of these babies in under a minute—perhaps less if I had to. Where the food for his family comes from. This is his weapon of survival. God I love the smell of cast iron! And the handles of these things are made of rosewood. And if this plane is almost, what, 75 years old? It still smells like roses.

Rosewood—interesting wood. I don’t know why they chose it. Kind of expensive; but also, it doesn’t split very easily. It’s a sinewy wood, very very hard. Maybe it has something to do with England controlling wherever they got the wood from.

Look at the beautiful curve of the side of the plane. You need maximum strength here, because you’ve weakened the sole here with the slot for the blade. Then it dissipates as you need less and less structure. Resulting in such a lovely undulating form. And, the Japan-black.
Bailey. Stanley bought Bailey.

This is the sole.

When working in such an established profession, one has its history to contend with. We often employ old ways, old tools, old materials even; and therefore establish a kind of confluence with the past. While a deliciously sensual action, this is also an aggressive act. Some cultures push, some cultures pull.

Like glass.

It’s a lovely sound, when the blade is sharp. It’s like a musical instrument, really. Musical instruments—the most precise level of woodworking. Scottish warriors and the advancing horror of the bagpipes. Those were made of ebony, and ivory I think. The orchestras of the concentration camps. The concealed messages of the Chicago mobsters. Beautiful, concealed weapons.

God, this is starting to sting again.
The artwork you see here is more like a proposition, a proposition that the blade is mightier than the sword or the pen.
Gord Peteran

Secret Weapons, 2011

Found objects. Two objects each 30 x 10 x 5 in.
ARTIST STATEMENT  The Tool At Hand premise—to craft a work of art with a single tool—immediately prompted me to think about the most fundamental elements of working wood. The gut reaction was not to cleverly figure out the most versatile, complicated tool that would allow for the most possible crafting options. Rather, the desire was to develop a working relationship with the most rudimentary tool used for working wood—in this case a bark covered log—in its rawest harvested form.

The timing of The Tool At Hand project corresponded to a period when I was particularly fascinated with traditional Scandinavian wooden spoon and bowl carving. One defining trait of this time honored craft tradition is an unusually powerful bond between maker and artifact. Even when using specialized chopping, sawing, and carving tools the work is laborious and extremely physical. Yet chopping out a log for a utilitarian function—be it a canoe, a chair, a totem pole, or even a spoon—is, at heart, a primal and strangely logical act.

...to craft a work of art with a single tool immediately prompted me to think about the most fundamental elements of working wood.

Jon Prown
Rather than being a limiting assignment, the one-tool act was, in fact, quite liberating and inspiring.

My specific decision was to carve several spoons from a hard oak log with a small, curved-edge knife. Rather than feeling constrained by the lack of a complete tool kit, I instead found the process very freeing and easy. Compared to makers in millennia past who were forced to do such work with coarse iron tools or even crude cutting tools made of stone, I quickly discovered how fortunate I was to have such a sophisticated, well-engineered, and well-conceived little blade. At first it allowed for the most brutal cutting strokes to reduce the log, and then was effortlessly adaptable to do the type of fine cuts and even scrapes that refined the surface of the spoons. Rather than being a limiting assignment, the one-tool act was, in fact, quite liberating and inspiring.
I quickly discovered how fortunate I was to have such a sophisticated, well-engineered, and well-conceived little blade.
Jon Prown

*Tree Spoons*, 2011

Oak
My aim was to create an object that looked like two things at once...

**ARTIST STATEMENT**  
An Object in Disguise  
In working on *The Tool at Hand* piece, *Waiting for a Miracle*, thoughts of camouflage occupied me. My aim was to create an object that looked like two things at once, or rather, like two materials at once. I wanted the final piece to be recognized simultaneously as plastic and glazed ceramic—making it into a material impossibility, a miracle.

Caroline Slotte

The absurdity of this gesture, of taking an object of no value and transforming it into another object of no value, served the function of directing attention to the process, to the manual labor involved. Ultimately the time and effort spent working on the piece seemed to be the only detectable thing of value within it all.
ARTIST VIDEO DIALOGUE

I carve a pattern into plastic cups. The knife I use is one I’ve had for a long time. It is a standard paper knife; probably the cheapest one in the store when I bought it. But the size of the handle is just right, and the blades don’t break as easily as they do in knives with more pointed blades. I consider it my best paper knife. Still, it is far from “good enough”. The best would be if the tip of my right index finger was shaved like a razor-sharp, yet inflexible, rotating cutting blade.

The best would be if the tip of my right index finger was shaved like a razor-sharp, yet inflexible, rotating cutting blade.
<table>
<thead>
<tr>
<th>TOOL</th>
<th>Paper Knife</th>
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<tr>
<td>TYPE</td>
<td>Hand Tool</td>
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<tr>
<td>FUNCTION</td>
<td>Subtract Material</td>
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Caroline Slotte

*Waiting for a Miracle*, 2011

Coffee on a plastic cup. Two objects each 2.8 x 3.5 x 2.8 in.
My hand is my tool.

Hongtao Zhou

**ARTIST STATEMENT**  
I miss winter. I really miss winter. This piece is made of wax to remind me of winter. It is the same color and texture as snow. Wisconsin used to be really cold, with snow and ice. But right now, winter is like summer.

My hand is my tool. But this object wasn’t completed 100 percent by my hands. I melted the wax in a hotpot, in kitchenware. And I used other people’s hands to make the chair. I used people’s hands to work for me. We made this chair in Milwaukee, as a public art project. In a way, the tool is the crowd; other people’s hands. Many artists are no longer working with their own hands. Things may not be 100% satisfactory for these objects because they lose control over their work.
I miss winter. I really miss winter. This piece is made of wax to remind me of winter. It is the same color and texture as snow.
In a way, the tool is the crowd; other people’s hands.
Hongtao Zhou

Burniture, 2011

Wax.
Tool Comparison Chart

**TYPE OF TOOL**

<table>
<thead>
<tr>
<th>Tool Type</th>
<th>Transform Material</th>
<th>Subtract Material</th>
<th>Connect Material</th>
<th>Apply Material</th>
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**FUNCTION OF TOOL**

**TOOLS THAT:**

- Transform Material
- Subtract Material
- Connect Material
- Apply Material
Exhibition Information

Tour Dates
Milwaukee Art Museum
December 8, 2011–April 1, 2012
700 N. Art Museum Drive
Milwaukee, WI 53202

Philadelphia Art Alliance
January 30–April 29, 2013
251 South 18th Street
Philadelphia, PA 19103

Houston Center for Contemporary Craft
June 1–September 8, 2013
4848 Main Street
Houston, TX 77002

Museum of Contemporary Craft
October 1, 2013–January 31, 2014
724 Northwest Davis Street
Portland, Oregon 97209
About the Chipstone Foundation
The Chipstone Foundation is a non-profit organization located in Fox Point, Wisconsin founded by Milwaukee collectors Stanley Stone and Polly Mariner Stone. Its mission is to promote scholarship in the decorative arts field through the sharing of its collection, as well as providing support to significant projects, programs and publications at different institutions. The Chipstone Foundation partnered with the Milwaukee Art Museum in 1999 in order to provide a broader audience with access to its objects and its innovative ways of presenting and conceptualizing the study of decorative arts. The foundation’s holdings of early American furniture, historical prints, British pottery and contemporary craft are creatively displayed and interpreted alongside the Milwaukee Art Museum’s collection. In addition to its collaboration with the Museum, Chipstone has a variety of exhibition related programs and social media initiatives. It partners with the University of Wisconsin–Madison in an effort to digitize decorative arts collections, provides video content on Artbabble, and publishes two annual scholarly journals, American Furniture and Ceramics in America.

Acknowledgments
The Chipstone Foundation would like to thank all of the artists that participated in the exhibition The Tool at Hand. We would also like to give a special thank you to Dedi Pitzi for transcribing the discussion between the Kohler factory employees, the Chipstone curator, and The Tool at Hand artists.

Website
Further exploration of this exhibition can be done at toolathand.org, including streaming video and interaction with the artists via social media.
What would it be like to create a work of art using only one tool?