WEEK 5: October 13

Tools and Material Consciousness
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This lesson was created for my 2008 Understanding Media Studies graduate class. The class was organized around the metaphor of “craft” – in large part because several books on craft, including Richard Sennett’s The Craftsman, had recently been released, but also, equally importantly, because “craft” seemed a helpful way to conceive of the integration of thinking and making – of the thoughtful application of methodological and technological tools – that ideally characterize our practice in media studies. This piece is about the importance of “material consciousness” in selecting tools and methods in our scholarly and creative work.

In this week’s reading, Sennett helps us to review the history of the social valuation of labor and craft, and how laborers and craftspeople have historically related to the tools of their trades. You might recall that we briefly addressed this “craft history” in class on September 22.

Sennett reminds us that in the 17th century, views of technology ranged from a belief in the superiority of machines; to a belief in the potential of tools to support “rational improvement” in pursuit of a “perfectible” Man modeled on the machine’s effectiveness and efficiency. Others still found that comparisons between men and machines made them think about what distinguished the two from one another: “Human virtues of restraint and simplicity came to the fore as man’s contribution to human culture; none of these sentiments could be called mechanical” (Sennett 83).

According to Sennett, Diderot’s 35-volume Encyclopedia, or a Systematic Dictionary of the Sciences, Arts and Crafts, published between 1751 ant 1772 – which, as you may recall, we’ve seen a few times already in class – presents the craftsman as an icon of the Enlightenment. The
encyclopedia showed and told its readers, through pictures and words, how to do things – how to build a windmill, keep bees, make paper, etc.; it promoted “learning by doing” and demonstrated how crafts are perfected through trial and error. In the process, the Encyclopedia “celebrated those who are committed to doing work well for its own sake” (Sennett 90).

As we discussed on September 22, serial manufacturing changed the nature of labor: it denied workers “control over quality, and specialized production skill based on highly skilled processes denied artisans their previous range of other activities” (McCullough 15). Architect Malcolm McCullough, author of Abstracting Craft, claims that, with industrialization, “tools’ motion became machine powered; their control became indirect; and they incorporated a greater conceptual component, which often surpassed the scale of the individual...[T]he means of production had become too elaborate, too extensive, and too centralized to be owned and operated by an independent craftsman” (70).

This process is what McCullough calls the “abstracting of craft” (see also Siegfried Giedion’s Mechanization Takes Command (1947)).

Nineteenth-century art and social critic John Ruskin proclaimed “all cast and machine work is bad; as work it is dishonest” (“Machine” 240). Ruskin, Sennett writes, “made the craftsman’s labors in his own age a blazon of resistance – resistance to capitalism coupled with resistance to machines” (Sennett 84). The craftsman also offered resistance to the Romantic ideal of technical virtuosity, to the “rigorous perfection of the machine”; the craftsman represented “variations, flaws, and irregularities” – in other words, human individuality (Sennett 84).

1 His Seven Lamps of Architecture proposes seven beacons to inspire the aspiring architect, and these “lamps” parallel the ideals of craftsmanship, as Sennett describes them:

1. Lamp of Sacrifice: “willingness to do something well for its own sake, dedication”
2. Lamp of Truth: “embrace of difficulty, resistance, and ambiguity”
3. Lamp of Power: “tempered power, guided by standards other than blind will”
4. Lamp of Beauty: “detail, the ornament – hand-sized beauty…”
5. Lamp of Life: “life equating with struggle and energy, death with deadly perfection”
6. Lamp of Memory: tradition
7. Lamp of Obedience: “example set by a master’s practice rather than his particular works”; “strive to be like Stradivari but do not seek to copy his particular violins” (Sennett 114)
We’ve briefly addressed other individuals’ and groups’ – William Morris’s, the Arts & Crafts movement’s, the Transcendentalists’, the Bauhaus’s – responses to industrialization and the “abstracting” of craft. We can identify many other periods and sites of “artisanal” resistance – from the 19th century Parisian cabinetmakers who upheld their status as fine artists in the face of de-skilling (see Weissbach); to contemporary bakers of “artisanal” breads. Maybe the Etsy <http://www.etsy.com/> crafts-y trend is part of this tradition, too? Maybe, too, the communities committed to book arts, letterpress printing, handmade or cameraless films (see the work of David Gatten and Jeanne Liotta), etc.?²


What social position does today’s craftsperson hold, and what is her relationship to her tools? This is Sennett’s concern.

² Given that there is often an ethical or moral dimension to such practices, we might wonder if they have anything in common with Sennett’s anthropomorphosis: the “attribution of ethical human qualities – honesty, modesty, virtue – into materials” in an attempt to “heighten our consciousness of the materials themselves and in this way to think about their value” (Sennett 137).
The poem begins by positing separate realms of existence for the snake, in the natural world of weeds, and writing, in the artificial world of words. Yet starting in line four, we see that even these seemingly inanimate words are “quick, sharp / to strike, quiet to wait, / sleepless.” Metaphor, the linguistic, has the power to “reconcile” people and stones. It does so by “compos[ing].” The intellectual and the material are thus intertwined; there are “no ideas but in things.” Metaphor “invent[s]” – it devises. The command, “Compose,” shares its line with “No ideas,” while “Invent!” follows “but in things”; one “composes” more ideational forms, while one “invents” things. Yet the parenthetical aside bridges the two lines of verse, suggesting that the material nature of ideas links the acts of composition and invention. Saxifrage, an herb whose name literally means “rock-rupturing,” is Williams’ flower – his word, his metaphor – that “splits / the rocks.” Metaphor has the power to pierce materiality. Ideas move through things.

Look also at the line endings; whether intentional or not, the ragged-right alignment of the text turns the line ends into a sinuous form, snaking in and out. Thus, even the form of the poem could be said to imply animation. We find embodied in the poetic form one of the poem’s central metaphors, and we can think through that form to achieve a greater understanding of the ideas – the material ideas – it presents.
Sennett encourages us to cultivate a form of “material consciousness” – to think through or with the tools we use. Mirror-tools, “implement[s] that invit[e] us to think about ourselves,” come in two varieties: replicants and robots. Replicants duplicate the properties and functions of human beings, while robots are “ourselves enlarged – stronger, faster indefatigueable” (Sennett 84-5). The “replicant shows us as we are, the robot as we might be” (ibid.). Sennett’s proposal might call to mind McLuhan’s claims that media are extensions of our sensory organs and faculties.

To take a simple example, how might the pencil replicate or “robotize” our humanness? How might it promote an awareness of self as a thinking being, a physical being? How might it promote a distinctive awareness of the act of writing, of communicating, of thinking? How is writing with a pencil different from writing with a pen? How is writing with a pencil or pen different from writing with a typewriter? (See Fletcher pp. 26, 132)
As his most famous statement had it, Klee took a line for a walk. It snaked, looped, wandered off, and turned back on itself as it made its little journey through the world of his invention. A line can run dead straight, be wildly crooked, meandering wildly, make sensuous curves or aggressive angles. It can meander, wander, twist or trace. Be a scribble, doodles, scratch, hatch, dash, dash, dribble or trickle. It can be precise or fuzzy, hard or soft, fine or gentle, thin or thick. It can be smudged, smeared, erased - or just fade away. You can push a line, drag it, manipulate and maneuver it, make it delineate, accentuate, articulate, emphasize. A line may be imperceptible or marked, authoritative or servile, brutal or seductive, passive or active, weak or strong, thick or thin. A line is bare, and dies, in a point.

The pencil developed from wrapping up lumps of graphite (graphite) which were used to mark sheep. Incidentally, pencil was also a cure for urinary disorders. The best plumago came from the north of England and was exported to Europe. Nowadays the pencil in a multinational affair. The lead is combined with graphite from Mexico and Sri Lanka, mixed with a mixture of clay. The eraser is a blend of Italian sponges and South American rubber. The shunt is either from California or discarded polyester cups.

Pencil connoisseurs favour the Biropoint Faber Mertol, recently painted with 13 coats of yellow and with a potential of 45,000 words per pencil. Other favourites are the Biro Medio No. 2, Faber’s Castel Vanetti and the Faber Blackwing - 'hot the pressure, twice the spread'. The comment on this page was pencilled with my favourite - the Staedtler Mars Lumograph EE.

Overleaf: The Biro ballpoint pen passed the test. Then the nib. Then the ink. Then the rollerball. Then the electronics. The simple pencil is now an endangered species. It is, for presently, I made a Technological Cowboy and now I'm a cowboy writer.

<<Consider the different qualities of pencil lines described in Klee’s tale, 1st column. Fletcher p. 26>>

<<Fletcher p. 132>>

Has anybody said publicly how nice it is to write on rubber with a ballpoint pen? The smooth, ink-rich line, rolled over a surface at once dense and yielding, makes for a multidimensional experience. No single sheet of paper can offer.
The first patent for a typewriter was granted to William Burt of Detroit in the 1860s. The keyboard, so-called for the six letters in the left top row, was designed so that people had to type slowly. To ensure this the commonest letters were scattered on the left side to confound the majority of right-handers. This masochist strategy was to avoid adjacent keys jamming when struck in quick succession. In addition salesmen could also acquire fluency in typing the letters as these occur in the top row of the keyboard. In 1886 a star pupil of the Shorthand and Typewriter Institute in Cincinnati entered a widely publicized contest and won on a typewriter with a keyboard – whereby became so entrenched in the public mind that it is still the layout of today's computer keyboard. Recently – over 100 years later – watching a documentary on the 1939-45 war I noticed that the famous German encrypter – the ENIGMA machine – had the first six letters as. Hmm.

The Boston Post (1865): Well-informed people know it is impossible to transmit the voice over wires and that were it possible to do so, the thing would be of no practical value. Despite this prediction the telephone imperiously forced its way into our lives with a bell. Telephone codes in the United States were selected on the opposite principle to that of the typewriter keyboard. They were selected to encourage speed. When area codes were introduced large cities were given low numbers because they took less time to dial. New York City was and although logically New Jersey should be the two could easily be misdialed, so was given to Los Angeles. And to Chicago.

We assume that technological progress develops along logical functional engineering paths. It doesn't. Factors outside utility or purpose can influence results. For instance aeronaught engineers have calculated that an aircraft with one wing swept back and the other swept forward, would be a better configuration for flight than conventional bilateral wings. I can imagine the enthusiasm with which passengers would greet that proposal.
And how is typing on a QWERTY typewriter different from typing on the alphabetically-organized keys of some cell phones? How might these different systems for organizing the alphabet alter our consciousness of the act of writing, or the concurrence of thinking and writing? How might the various configurations of buttons and dials on our machines shape the human-machine interaction, and shape the minds of the humans using those machines? How might the variations in menu options between different editing suites, or the various configurations of different camera models, or the various forms and uses of different microphones, alter your consciousness of the sound and image? <<See http://www.noideasbutinthings.com/ixd/>>

But it is not only material tools that promote different forms of consciousness; symbolic tools can shape thought, too. Eric Havelock and others argue that hieroglyphics, the Chinese logographic system, the Phoenician alphabet, and the Greek alphabet all promote different ways of codifying language and representing thought. The Greek system, Havelock argues, was the only system to assign one and only one symbol to each phoneme. An atomistic view of language, in which a consonant represents “an object of thought,” thus exemplified what he regarded as the Greeks’ distinctive capacity for abstraction (Havelock 43). The Greeks then applied this abstract, atomistic approach in their study of nature. The notion of a “phoneme” inspired the notion of an “atom.” Havelock claims that the Greeks’ new “ways of knowing” “alter[ed] the character of human culture” – in particular, their alphabet “democratized literacy”: because the Greeks had implemented a system of instruction to introduce schoolchildren to this exhaustive, unambiguous, economical, easily mastered alphabet, literacy became an “automatic reflex” (44-5).

Many charge Havelock with technological determinism; his argument is “material consciousness” – or, perhaps in this case, “formal consciousness” – taken to an extreme. Consider, though, how other representational systems, mapping systems, accounting systems, etc., might promote different ways of looking at the world and conceiving of the self’s relationship to that world.
Despite their differences in form and materiality, however, might our communication media – whether clay, paper, plastic, or silicon – embody certain constants of human consciousness? 

Nevertheless, most material illumination occurs in light of failure, innovation, change, movement. Sennett identifies three kinds of metamorphoses that can promote greater material consciousness:

1. **Evolution of type-form**, “a generic category of object. “[C]hange occurs through the elaboration of [the type-form’s] species” (Sennett 125)

Failure can prompt metamorphosis: “When an object as simple as a pot cracks or as complicated as a bridge shifts, the analyst’s first port of call is its details, its small parts” (Sennett 126).
As film historian Tom Gunning notes, “It is the breakdown of equipment that allows us to experience it afresh” (45). He continues:

Heidegger’s early discussion of work in terms of the dynamic of the tool shows that we can suddenly gain a new perspective on technology through an interruption of habitual actions. His conception of the tool as ‘the ready to hand’ gives us another way to conceive the ‘unconsciousness’ of habit in terms of technology. According to Being and Time, it is in the nature of a tool not to assert itself, but rather to withdraw in favor of the project it is supposed to accomplish. When a tool works, we pay it no attention; it seems to disappear. However, if the tool breaks down, if in some way it doesn’t function, it suddenly becomes conspicuous (Gunning 45).

We must learn from these snafus: in them, as formalist critic Viktor Schlovsky reminds us, “the familiar becomes strange and can be rediscovered in its sensual specificity and vividness” (qtd in Gunning 45). “In technical craftsmanship, the sense of possibility is grounded in feeling frustrated by a tool’s limits or provoked by its untested possibilities” (Sennett 209-10). What won’t Final Cut allow you to do? What are the limitations of your DAT recorder, or your word processing program, or Google Books, or the English language?

We learn even more from fixing what’s broken, from developing work-arounds, from improvising when something doesn’t turn out as planned. “[I]t is by fixing things,” Sennett

... if you want the rainbow, you gotta put up with the rain. - Dolly Parton

If you’re in a hole don’t keep digging – look around. Then get the bits and pieces into some kind of order so as to point up the problem. Sometimes it comes easy, other times it’s like confining jelly with a rubber band. Anyway, once achieved, the next move is to head off along the most promising route. The solution may become evident or you can end up in an exasperating period of hiatus when, despite trying this and that, the answer remains elusive. Hopefully the germ of an idea eventually peeps through, but before leaping on it with relief let it incubate for a while. Here the mind works on the idea in some mysterious way. Either the potential evaporates, in which case you have to start all over again, or it emerges [said Henry James] with ‘a firm iridescent surface, and a notable increase in weight’. Designing looks easy if you don’t know how, difficult if you do.

<<Fletcher p. 421>>
says, “that we often get to understand how they work”; he refers to sociologist Douglas Harper’s notion that making and repairing are part-and-parcel, and viewing them as such allows one “to see beyond the elements of a technique to its overall purpose and coherence” (qtd in Sennett 199). You could simply perform a “static repair” – take it apart, find the defective part, and put it back together – or you could execute a “dynamic repair” that will, when complete, change the object’s form or function. A dynamic repair “may involve a jump of domains” – you could find yourself working on new projects, in new territory – and “may invite new tools for working with objects” (Sennett 200). Such a “progressive” repair could lead to the second category of metamorphoses…

2. **Joining of two or more unlike elements** – e.g., in combining the radio and landline phone, the craftsman had to “decide if the combination will best work like a compound, in which the whole becomes different than its parts, or like a mixture, in which the elements continue an independent coexistence” (Sennett 127)

How might the iPhone, for instance, change our conceptual distinction between interpersonal communication, personal data management, research,…and all the other functions this combination-tool collapses into one neat package?

3. **Domain shift**: “how a tool initially used for one purpose can be applied to another task, or how the principle guiding one practice can be applied to quite another activity” (Sennett 127)

Sennett uses the example of the mortise-and-tenon joint used in shipbuilding “domain-shift[ed]” over to urban planning. We use the metaphor of “weaving wood” to think about laying out urban streets, weaving them together, into an “urban fabric” (128).

<<Fletcher p. 420>>

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**The Peeling Onion Strategy.** A method of exposing hidden potentials by peeling the subject apart, layer by layer. Italo Calvino introduces this strategy in a story in which Marco Polo challenges Kubla Khan to look beyond treating his empire as an abstract chessboard. He points out that in addition to the individual values of the pawns and castles, there is the delicate carving of the ivory pieces and the subtle texture of the wooden board itself. Each square of the pattern contains a unique trace of a previous condition: the fibres indicating it was cut from a tree in a year of drought; the hint of a knot suggesting it was planted in the spring, the faint ring signifying the tree’s age. The original plank from which it had been cut identifies the kind of forest – ebony or mahogany – where the tree grew, and the colour and resins indicate the rivers which brought the logs down from the hills of the imperial kingdom. Peeling reveals and informs.
We might also think about the translation of montage and “cut-ups” into other media forms. Media studies has borrowed the technique of “close reading” – and our habit of referring to media “units” as “texts” – from literary studies. Can you think of other examples of “domain shifts” within the field of media studies, or between media studies and other fields?

Taking into consideration how potentially illuminating mistakes and break-downs (and their consequent register shifts can be), Sennett proposes that we intentionally manufacture such problems on occasion – just to build our material consciousness. The steps he proposes represent a “special form of induction,” a strategy for reasoning through problems (212).

1. **Reformatting**: “break the mold of fit-for-purpose,” see “if a tool or practice can be changed in use” (210)
2. **Establishing adjacency**: “Two unlike domains are brought close together” – e.g., “making a dynamic repair with simpler instruments; the hand or eye senses that this isn’t what the tool was meant for” (210)
3. **Surprise**: “dredging up tacit knowledge into consciousness to do the comparing”
4. **Gravity**: recognition that “unresolved problems remain unresolved in the transfer of skills and practices” (211); “more often, the technical import, like any immigrant, will bring with it its own problems” (212)

<<Sennett p. 429>>
Medium-Specific Process

“Pope Sixtus V remade the Piazza del Popolo in Rome at the end of the sixteenth century by describing in conversation the buildings and public space he envisioned, a verbal instruction that left much room for the mason, glazier, and engineer to work freely and adaptively on the ground. Blueprints...acquired legal force by the late nineteenth century.... The blueprint signaled...the idea of a thing made complete in conception before it is constructed” (Sennett 41-2)

“A positive embrace of the incomplete is necessarily absent in the blueprint; forms are resolved in advance of their use” (Sennett 43)

An MIT architecture student says of his work with CAD (computer-aided design): “You get to know a terrain by tracing and retracing it, not by letting the computer ‘regenerate’ it for you” (Sennett 40).
Architect Renzo Piano describes his design process: “You start by sketching, then you do a drawing, then you make a model, and then you go to reality—you go to the site—and then you go back to drawing. You build up a kind of circularity between drawing and making and then back again” (Sennett 40).

“Drawings in bricks by hand, tedious though the process is, prompts the designer to think about their materiality, to engage with their solidity as against the blank, unmarked space on paper of a window. Computer-assisted design also impedes the designer in thinking about scale, as opposed to sheer size…. [W]hat appears on-screen is impossibly coherent, framed in a unified way that physical sight never is” (Sennett 41).

Many architecture programs are still committed to teaching students to draw before they teach them any rendering programs. Some photographers believe one must understand the materiality of film and its chemical development process before one can apply that understanding to digital photography. How might the expense of 16mm film production and the relative affordability of digital video alter your approach to production planning? How do the different processes called for by these analog and digital counterparts promote different understandings of the nature of “design” or “image creation,” or of the holistic practices of architecture and photography and videography? What particular processes are called for in particular realms of media design?

And what different processes are called for in particular fields or modes of research? How, for instance, is doing research in online full-text databases different from scouring through old, dusty documents in a basement archive? What different reading processes are called for by different kinds of texts? How do these different practices allow us to engage with texts differently?
Using Technology as a Craftsperson Would

Sennett recommends that we who are accustomed to “abstracted” and automated processes and digital tools consider “how to think like a craftsman in making good use of technology” (44). “The enlightened way to use a machine,” he says, “is to judge its powers, fashion its uses, in light of our own limits rather than the machine’s potential. We should not compete against the machine…. Against the claim of perfection we can assert our own individuality” (Sennett 105). We might try to capture, in whatever media we use, “the tactile, the relational, and the incomplete” – qualities that are characteristic “physical experiences that occur in the act of drawing” (44; italics mine). We should aim to feel the material specificity of the media we handle; to be aware of the relation of parts to wholes and connections between different stages of design and execution of a project; to appreciate the incompleteness, the possibility, of a design or plan that is not spit out of a machine as a fait accompli.

To McCullough, computer animation, geometric modeling, spatial databases – in general, all forms of media production or design – can be said to be “crafted” when creators “use limited software capacities resourcefully, imaginatively, and in compensation for the inadequacies of prepackaged, hard-coded operations” (21). He continues:

As a verb, “to craft” seemingly means to participate skillfully in some small-scale process. ..[I]t suggests that partnerships with technology are better than autonomous technology. …[T]o craft implies working at a personal scale – acting locally in reaction to anonymous, globalized, industrial production (McCullough 21-2).
Again, as Sennett suggests, we “assert our own individuality” against the prepackaged, predetermined processes and limitations of the tools we’re using. Craftsmanship, says aesthetic historian David Pye, is “workmanship using any kind of technique or apparatus, in which the quality of the result is not predetermined, but depends on the judgment, dexterity and care which the maker exercises as he works” (45). You, not the tool, shape the end-result in light of local, immediate concerns – framed, of course, within a larger context of “anonymous, globalized, industrial production.”

McCullough rephrases: “Craft is the application of personal knowledge to the giving of form. It is the condition in which the inherent qualities and economies of the media are encouraged to shape both process and products” (McCullough 22). Software, for instance, can often function as a “symbol for the operations it performs”; a software tool, McCullough says, “gives visible form and physical action to a logical operation” (80). In other words, the symbolic form of the tool visualizes and materially shapes how you use that tool. (How does Microsoft Word visualize the act of writing? How does Garage Band visualize the act of composition? How does Facebook visualize…well, whatever it is that Facebook does?) Craft is knowing the properties and limitations of your media – research media, production media, artistic media, etc. – and of yourself; and allowing that knowledge to inform your process and end-goals.

While we can learn a lot about our tools and about ourselves by manufacturing problems that “make the familiar strange” and remind us of the “sensual specificity and vividness” of our tools – we also must be careful not to allow the tool to assert itself over our process, or to focus on the tool at the expense of our end-goal. “Although a tool focuses your work,” McCullough says, “it should also let you focus on your work – in this sense it should go largely unnoticed” (63). Your tools – whether technological or methodological – should not upstage you. “In practice you aspire to [technical] transparency, that is, mastering your means to the point where they no longer interfere with attaining your ends. But as a beginner you may have difficulty reaching any subsidiary awareness, not only for lack of sensory-motor reflexes but also for lack of perspective on the process. Habit hones skills, but it also expands sensibility” (McCullough 248).
Sennett, McCullough, and many others warn against fetishizing technology. Media artist Amy Alexander agrees that “cybertriumphalism” that generates “an exclusive emphasis on software programs is extremely problematic, as it leaves out the history of the tools we use, the politics of these very machines and the all permeating social context” (email; qtd in Scholz). Media theorist Anna Munster concurs that

[i]the concentration on technology per se, whether it features as part of the content the development of a kind of digital style or the emphasis on computational processes, thus draws so much of this cutting-edge digital artwork back within the discourse of modernism (which, she argues, holds “the notion that art can be defined according to the medium through which it is realized”).…The content and ideas expressed through digital art should be addressed over and above the technology that supports them (email; qtd in Scholz).

Serial Consign blog conducted an interview with musician and media artist David McCallum (http://sintheta.org/projects/), in which McCallum addresses the dangers of “gee-wizardry”:

**SC:** I know that you frequently work in software environments like Max/MSP and Pure Data. How has being fluent with code affected how you address technology in your work?

**DM:** I wish that I were fluent! I think that what I do is more hacking than programming: I use my limited skill set to bash other people's tools into submission for my own purposes.

I'm a strong believer in the craft of new media. Contemporary art seems to have divorced itself from the artisan history of the arts, and I don't think that because the tools in new media are abstract that it's somehow a field where it's okay that the designers are also not craftspeople. There are aspects of a medium that you can only understand by experience. If you don't understand the medium, the work itself risks being naive. This isn't guaranteed, but the risk is higher. I also think in some sense all artwork, despite the content, is also a comment on the form and medium - and how can you comment on something you don't really understand?

You also run the risk of been seduced by aspects of the tool. Early new media (sic) was fascinated with technology and the technology became the end, and not just the means. It was an important process to go through, but I'm certainly glad we've outgrown that. Now that we have a better understanding of technology we can hopefully divorce ourselves from the fetishism and appreciate it as what it is: a tool. Not understanding the medium runs a dangerous risk of falling into the gee-wizardry of technology. I've seen too many middle-aged artists making astoundingly boring art works exploring virtual reality and computer-rendered spaces. The sooner that artists stop using Second Life, the better.
Drawing is looking. Keynoting is calculating.

The Australian National Dictionary defines an artist as a person practised or habitually engaged in an activity which requires little skill, or is reprehensible. The example offered is house painter. At the beginning of his career Michael Caine was given a small part playing a drunk. He was rather convincing, he thought, staggering about and slurring his speech. The director thought otherwise. A drunk tries to walk straight and speak clearly, he explained, underlining the point that execution without context is merely wince. Skill is being at one with the purpose in hand. When asked by the Pope for a sample of work, Giotto took a chalk and drew a perfect circle. The Pope got the message and Giotto got the job. Skill appears magical to the uninitiated or incompetent. I still remember being flabbergasted by the seemingly unattainable skills exhibited by the older and experienced fellow students in my first life class. They produced amazing renderings by smudging instant shadows, erasing to make dramatic highlights and conjuring up striking resemblances. A talent, I realized later, much later, which was really no more than something Anthony Burgess aptly described as a small fiddling capacity for producing the conventional and the well shaped. A Chinese carving of a grasshopper pinned on the edge of a cabbage leaf made out of one piece of ivory may seem seductive, but treating skill as product — instead of process — is only pushing pencil. Even since the ancient Greek painter Zeuxis astonished his audience by painting a bunch of grapes so real that birds tried to eat them, some skills have seemed to be magic. Many people find it exceedingly difficult to draw what they can clearly see. Their usual response is that they can’t co-ordinate hand with eye; on the other hand, the very same person may be an excellent knitter or model-maker. The more accurate answer is that they find it difficult to co-ordinate eye with brain. The difficulty arises because our brain is directed towards investing the image, which appears flat on the retina, with the properties of space which is how we see the image in our mind’s eye. So by trying to draw a three-dimensional flower on a flat sheet of paper we are reversing the way we naturally see. No wonder drawing doesn’t come easily.

"…treating skill as product — instead of process — is only pushing pencil.” See Fletcher p. 356>"
Choosing and Knowing Your Tools

“Workmanship engages us with both functional and aesthetic qualities. It conveys a specific relation between form and content, such that the form realizes the content, in a manner that is enriched by the idiosyncrasies of the medium” (McCullough 203). “[E]ach medium,” McCullough says, “is distinguished by particular vocabulary, constructions, and modifiers, and these together establish within it a limited but rich set of possibilities” (McCullough 230). Similarly, each methodology, or each research resource, has its own particular vocabulary, constructions, modifiers, obligations, and limitations. We need to choose our tools with these potentially enriching, and just as potentially debilitating, idiosyncrasies in mind. Do we need advanced software, or will iMovie suffice? Do we need to record a focus group in video – or will the presence of the camera compromise my rapport with my interviewee? Will an audio recording be more appropriate? Do we need to conduct primary interviews if others have already documented extensive interviews with these same subjects? Do we need to conduct extensive, long-term field-work – or can we accomplish everything in a short, well-planned research trip? How do I match my problem or project to the most appropriate tool?

Should we choose a “simple tool” or a “difficult tool,” to borrow Sennett’s terminology, for a specific task? Do I need a Leatherman, or will a flat-head screwdriver suffice? Sennett explains how the arrival of new “difficult tools” – the telescope, the microscope, the scalpel – affected medieval society’s “material consciousness”:

[These tools] challenged the medieval view of humanity’s place in the world and the understanding of the body. The telescope helped dethrone human beings’ former place at the center of the universe; the microscope revealed teeming life invisible to the naked eye; the scalpel allowed anatomists a new understanding of organic structure. (Sennett 195)

How might the arrival of new “difficult” research tools or methodological tools or media technologies effect similar epistemological or ontological shifts? How might increasingly precise, specialized instruments raise the stakes, increase the potential for error, require more training for use? Might some of our “simpler tools” – like a pen and some paper, or a good old Pentak K1000 camera – open up possibilities for use or “increas[e] the puzzle of how they are best employed in a particular application”? (Sennett 198)
McCullough discusses how the consideration of *what’s at stake?* – of tolerance, affordances, forgivability, or lack thereof – could inform our choice of medium, and could eventually inform our practice for using that medium:

…must a true medium entail sufficient risk and irreversibility to demand the rigor and devotion that have always been necessary for great works? Can a computer with its _undo_ and _save as_ functions ever demand sufficient concentration on our part to enable serious, expressive works to come forth? …Or do they render us noncommittal and our work superficial? (McCullough 212-3)

Then again, how might these “undo” functions open up a space for _play_? McCullough concedes that “[t]here is much to be said for play in a medium. If a medium is defined by its affordances and constraints, then learning consists of exploring these properties. Experimentation is especially useful for becoming familiar with constraints: we learn from our mistakes (McCullough 224-5). And “just as there is play in applying the software tools within a particular medium, there can be play in choosing the medium in which to work” (McCullough 230). We can “pilot test” different tools and methods to determine which, or which combination, best suit our purposes.
Teaching and Learning Technological Craft

Some might argue that, with the rapid rate of technological and market change, we’re so busy learning new software, familiarizing ourselves with new equipment, and keeping up with new publications, that we never attain a level of familiarity and comfort with our tools that affords us the freedom to “play around.” McCullough argues that the tool makers need to help students find conceptual continuity through market-driven technological changes: technologists “must reduce demands for new forms of intuition and make better use of the existing cognitive background that so effectively drives traditional craft learning” (251). In other words, equipment and software makers need to refer to a consistent set of universal principles or design guidelines and patterns of use that persist through subsequent models or versions of technology. Teachers play a role in helping students develop transferable skills, too:

Educators may address this media stability problem too. They must approach digital media at the conceptual level where frameworks are already quite stable – and they must almost expect the circumstances under which these concepts manifest themselves to remain in constant flux. They must counteract the effects of merchandising and chauvinism that surround superficial differences between systems that are fundamentally the same. They cannot simply train as in trade school, nor educate in the abstract as in engineering analysis, but must combine skill and intellect” (McCullough 251-2).

You might recall from our second lecture, on September 15, that MIT’s Henry Jenkins and Syracuse’s Pamela Shoemaker have similar visions for media education.

The promotion of play and the provision of conceptual grounding should also be mixed with respect for technique (see below) and tradition. As Alexander reminds us, we can’t “leav[e] out the history of the tools we use, the politics of these very machines and the all permeating social context” (qtd above).
Sennett reviews several forms of “[e]xpressive directions [that] connect technical craft to the imagination”…and to tradition (Sennett 193). We might teach or learn through “dead denotation,” wherein concrete verbs “name rather than explain the process of acting”: push this, pull-down that menu, click here, cut here, paste there (183). We might employ “sympathetic illustration” (à la Julia Child), which is “structured around empathy” for the learner and focuses on “the human protagonist” rather than on the tool (185). A “scene narrative” “seeks to impact technique through evoking the cultural context of [the] journey” (Sennett 87). You can make films in the style of the French New Wave because you understand what it was to live in France at the time the films were being made. You can read and know Foucault because you understand his personal story and the cultural context within which he worked. Consider again the “material consciousness” promoted by each of these forms of direction. How does each method frame the act of teaching, the act of learning, the subject of the lesson, the relationship between the student and his or her tools? Which of these modes of direction, and which of these approaches to learning, resonate most strongly for you? Which best convey the connection of imagination to craft, of ideas to things?

Moore, Skinner, and Bukowski – poets who came after Williams – remind us of the dynamic, alternatively resonant and discordant, relationship between these realms of consciousness and materiality – and our role, as craftspeople, in bridging the divide.
Poetry
by Marianne Moore, in Selected Poems, 1935

I, too, dislike it: there are things that are important beyond all this fiddle.
Reading it, however, with a perfect contempt for it, one discovers in it after all, a place for the genuine.
Hands that can grasp, eyes that can dilate, hair that can rise
if it must, these things are important not because a high-sounding interpretation can be put upon them but because they are useful. When they become so derivative as to become unintelligible,
the same thing may be said for all of us, that we do not admire what we cannot understand: the bat holding on upside down or in quest of something to eat, elephants pushing, a wild horse taking a roll, a tireless wolf under a tree, the immovable critic twitching his skin like a horse that feels a flea, the base-ball fan, the statistician--
or is it valid to discriminate against "business documents and school-books"; all these phenomena are important. One must make a distinction however: when dragged into prominence by half poets, the result is not poetry, nor till the poets among us can be "literalists of the imagination"--above insolence and triviality and can present for inspection, "imaginary gardens with real toads in them," shall we have it. In the meantime, if you demand on the one hand, the raw material of poetry in all its rawness and that which is on the other hand genuine, you are interested in poetry.
Fetch
by Jeffrey Skinner, in Gender Studies, 2002

Go, bring back the worthless stick.
"Of memory," I almost added.
But she wouldn't understand, naturally.
There is the word and the thing

adhering. So far so good.
Metaphor, drawer of drafting tools--
spill it on the study floor, animal says,
that we might at least see

how an expensive ruler tastes.
Yesterday I pissed and barked and ate
because that's what waking means.
Thus has God solved time

for me--here, here. What you call
memory is a long and sweet,
delicious crack of wood in my teeth
I bring back and bring back and bring back.

*    *    *

so you want to be a writer?
by Charles Bukowski, in Sifting Through the Madness for the Word, the Line, the Way, 2003

if it doesn't come bursting out of you
in spite of everything,
don't do it.
unless it comes unasked out of your
heart and your mind and your mouth
and your gut,
don't do it.
if you have to sit for hours
staring at your computer screen
or hunched over your
typewriter
searching for words,
don't do it.
if you're doing it for money or
fame,
don't do it.
if you're doing it because you want
women in your bed,
don't do it.
if you have to sit there and
rewrite it again and again,
don't do it.
if it's hard work just thinking about doing it,
don't do it.
if you're trying to write like somebody
else,
forget about it.

if you have to wait for it to roar out of
you,
then wait patiently.
if it never does roar out of you,
do something else.

if you first have to read it to your wife
or your girlfriend or your boyfriend
or your parents or to anybody at all,
you're not ready.

don't be like so many writers,
don't be like so many thousands of
people who call themselves writers,
don't be dull and boring and
pretentious, don't be consumed with self-
love.
the libraries of the world have
yawned themselves to
sleep
over your kind.
don't add to that.
don't do it.
unless it comes out of
your soul like a rocket,
unless being still would
drive you to madness or
suicide or murder,
don't do it.
unless the sun inside you is
burning your gut,
don't do it.

when it is truly time,
and if you have been chosen,
it will do it by
itself and it will keep on doing it
until you die or it dies in you.

there is no other way.

and there never was.

What’s true for poets and writers is true for scholars and producers. Their craft can teach us about our own.
Works Cited


Other Resources: