MAKERS, CRAFTERS, EDUCATORS

Makers, Crafters, Educators brings the do-it-yourself (DIY) ethos of maker and crafter movements into educational environments, and examines the politics of cultural change that undergird them. Addressing making and crafting in relation to community and schooling practices, culture, and place, this edited collection positions making as an agent of change in education. In the volume’s five sections—Play and Hacking, Access and Equity, Interdependence and Inter-disciplinarity, Cultural and Environmental Sustainability, and Labor and Leisure—authors from around the world present a collage of issues and practices connecting object making, participatory culture, and socio-cultural transformation. Offering gateways into cultural practices from six continents, this volume explores the participatory culture of maker and crafter spaces in education and reveals how community sites hold the promise of such socio-cultural transformation.

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MAKERS, CRAFTERS, EDUCATORS

Working for Cultural Change

Edited by
Elizabeth Garber, Lisa Hochtritt, and Manisha Sharma
To our families and makers, crafters, educators everywhere who inspire change through their work
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As it happens, I am writing this foreword on the 60th anniversary of the 1957 First Annual Conference of American Craftsmen at the Asilomar Conference Grounds on the Monterey Peninsula in California. There is a general consensus among craft historians that Asilomar, which was organized by the American Craftsmen’s Council (now the American Craft Council), represented the coalescence of the American Studio Craft movement.

The three-day conference brought together such diverse figures as ceramists Peter Voulkos, Toshiko Takaezu, and Marguerite Wildenhain, fiber artists Anni Albers, Jack Lenor Larsen, and Lenore Tawney, woodworker Sam Maloof, and other notables like painter Millard Sheets and designer Charles Eames. Panel discussions over the three days grappled with many of the same issues that the crafts face today—new technologies, how to make a living, craft’s role in culture, and perhaps most importantly, the relationship between craft and education.

1950s America was the era of gleaming chrome and soaring tailfins. The *populuxe* esthetic dominated in popular culture, while darker undercurrents of xenophobia and Cold War politics swirled. The United States is once again struggling with a polarized electorate. Although arts education is in decline and the threat of defunding looms over the National Endowment for the Arts, the health of the field of craft is arguably stronger than it has been for a generation.

To be sure, craft’s resurgence is in part a reaction to the ubiquity of technology and digital culture. I tend to think of the ebb and flow of craft in terms of generational theory. Craft seems to ebb and flow generationally, starting in the 20th century (in the United States, at least) with the Arts and Crafts movement, then in the postwar years that culminated at Asilomar, followed by a counterculture-led resurgence in the late 1960s and early 1970s.
My own biography fits perfectly into this narrative. Although my Nebraska parents were far from being hippies, they embraced the handmade from both a practical and a creative standpoint. In the early 1970s, we tried just about every handmade fad to come down the pike—macramé and wire art were soon followed by experiments in stained glass. In college in the early 1990s, I discovered ceramics, and was instantly drawn to craft as a community. After grad school, in the early 2000s, I was lucky enough to make friends with an emerging wave of feminist knitters and tech-savvy DIY hackers with shared roots in 1980s punk culture.

In 2005, I started a blog called *Extreme Craft* (extremecraft.com) that became something of a gathering place for those who made and thought about craft that existed on the margins. With the generation that gave birth to the Renegade Craft Fair and Etsy maturing and moving from crocheted skull and bones iPod cozies into more sophisticated goods, I have also evolved. Oddly, editors, museum professionals, and even academics had been tuning in, and began giving me a chance to curate exhibitions and write for a wide range of publications. All of this actually led to a tenured teaching job, then a stint as the curator at Philadelphia’s legendary Clay Studio, and finally to curatorial positions at the Arizona State University Art Museum Ceramics Research Center and at Everson Museum of Art, both of which have outstanding collections of contemporary studio ceramics.

As craft has come to take itself more seriously, I have come to take craft more seriously. As more and more young makers enter the field, the network of galleries and collectors that has traditionally supported them has slowly eroded. Craft now finds itself at another Asilomar-type junction. There is energy and vitality in the field, but questions loom about the future. Conversations about privilege, identity, and accessibility have replaced navel gazing about the dividing line between craft and art.

One thing remains certain, and that is the importance of education to the future of craft as a field. The transmission of knowledge is at the core of craft’s ability to build community and act as a social catalyst. In the 20th century, craft freed itself from strict associations with function and broadened its horizons. The history of 21st-century craft will be defined by the field’s ability to build inclusivity and relevance in an increasingly digital world.

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ACKNOWLEDGEMENTS

This volume grew out of early conversations in the office hallway we shared at the University of Arizona. It would not have materialized in its current form, however, without the initial support of Naomi Silverman at Routledge, our first editor, and the thoughtful input from anonymous reviewers on the initial proposal. Our current editor, Karen Adler, and editorial assistant, Emmalee Ortega, have provided invaluable feedback at every turn of the passage, for which we are most grateful. Katie Finnegan proved to be an insightful Copy Editor and a delight to work with and Katharine Atherton, our Production Editor, to be organized and responsive. We thank both of them.

The authors and image makers in the volume have grown our thinking and we thank them for working with us, sometimes at short notice. In addition, we gratefully acknowledge friends and colleagues for their various introductions to some of the authors in the volume: Nicholas Houghton for introducing us to Sandra Wilson, Pamela Harris Lawton for introducing us to Supriya Manandhar, Orhon Myadar for putting us in touch with Uranchimeg Tsultemin, Jessica Parker for introducing us to Stephanie Chang, John Ploof for his suggestion to contact Lisa Vinebaum, Andy Polk for telling us we had to know Soledad Zamora, and Namita Gupta Wiggers for introducing us to Liz Collins. A very special thanks goes to Tonya and Jatin Kampani for working with Condé Nast India, and to Sanjeev Shankar for letting us include his photo of Project-Jugaad. Elizabeth and Lisa gratefully acknowledge Manisha for her design of the list of chapters and help on lettering for the visual maps that introduce each section. And we thank Sam Rodriguez for administrative assistance.

Thank you to Ginger Shulick Porcella, Eli Burke, and the Museum of Contemporary Art, Tucson for inviting us to talk about our book in progress at their ArtNow! series and the participants who gave us insights and feedback.
at an earlier stage of the manuscript. At Xerocraft Hackerspace we thank Dale and Adrian for inspiration.

Finally we would like to thank family, friends, and colleagues whom we didn’t contact enough during the time it took to put this book together, and the sunny skies of Tucson for bringing us together.
INTRODUCTION

Makers, Crafters, Educators: Working for Cultural Change

Elizabeth Garber, Lisa Hochtritt, and Manisha Sharma

People make meaning through making. They also gain pleasure from doing so, “a joie de faire” that Ellen Dissanayake argues from a biobehavioral position (40). Faythe Levine, author of *Handmade Nation*, contends that through making and crafting people can come to realize that “they have the power to make their lives what they want them to be through simple personal choices” because making things, “anything, with your hands is a quiet political ripple in a world dominated by mass production” (Levine 58). Making and crafting, and educating about them, is a global movement, a “do–ocracy” of people who take action to make because people are happier when they are “doing or making things for themselves” (Gauntlett 226). Gauntlett talks about making as a social activity that connects people, much as Davies found in her study of maker and hackerspaces. With authors of one report finding that as of 2012 almost half of people in the United States engaged in some form of craft (Davies 16) and 40 million U.S. Americans were part of what Richard Florida has termed “the creative class” (Hatch 52), making and crafting are part of the zeitgeist of this moment in time.

As you read this Introduction, you may be asking yourself why makers and crafters are hinged together within it. Crafting is a type of making, underlying their twining in this volume. At the center are makers, crafters, and educators who engage DIY (do–it-yourself) and DIT (do–it-together) practices as strategies for cultural change; authors and makers within the volume offer gateways, or hacks, into cultural practices. These authors are engaging with a tactile and visionary world. In these senses, crafting and making are knit closely together.

This volume is focused on making and crafting as cultural change, which we are defining as developing cultural capital—such as making, crafting, and educating—to influence and effect changes on individual, community, governmental, and/or economic behavior. You, the reader, will sense different
emphases on the development of the individual and the social unit vis-à-vis cultural variations and diverse sites of practice across the global perspectives of the six continents the essays cover.

Putting craft and making in historical context, craft arose out of a perceived separation of materials and certain approaches to making that were different from art (see, for example, Greenhalgh and Fariello in the Works Cited). While the perceived differences are immaterial to this volume, some key ideas associated with craft are that it is handmade, often associated with function or utility, sometimes perceived as nostalgic or retro as well as associated with a pastoral lifestyle, is associated with certain materials (e.g., textiles and fibers, clay, wood), involves skill, and is often practiced by amateurs (Adamson) in addition to professionals. Craft as it is thought of in today’s industrialized societies is rooted in the British Arts and Crafts Movement as purveyed by art critic John Ruskin and interior designer and poet William Morris. Both wrote during a time when industrial means of manufacturing were changing how people worked and lived, making the knowledge and products of the craftsperson seem irrelevant. These changes led to aesthetic preference for a machined-looking object, where evidence of the hand became eschewed, and to the valuing of idea over skill or material objects (Fariello 17). Today, we see a renaissance of appreciation for the handmade, and moreover for making, even as crafters are challenging the connotations associated with craft.

While making reaches back as long as people have lived, the maker movement is much more recent. Gauntlett identifies an “attitude to everyday life” (57) through iterations of learning spaces such as the knitting circles after the 1700s; decorative or applied arts; the Arts and Crafts Movement articulated in the 1800s; the DIY culture emerging in the 1960s; Punk DIY or lo-fi culture and craftivism that grew with the popularity of the Internet; and contemporary maker, hacker, and slow movements. Early hackerspaces arose in Europe in the 1980s and 1990s as counter-cultural spaces (Grenzfurthner and Apunkt n.p.). Their early political agenda ceded to their existence as “tiny geeky workshop paradies” (n.p.), making them more like North American hackerspaces, that, Davies argues, tend to be “leisure-oriented” (33). She traces makerspaces to Make: magazine, allowing, however, that the term makerspace “tends to be used as a label for a more diverse range of spaces, with a wider range of histories, than hackerspace” (34). A non-profit version of makerspaces, still a franchise, is the Fab Lab. With an educational mission, they are often part of universities or schools. Although most makerspaces are not affiliated with any of these endeavors, they tend “to be more open to commercial structures and interests – both in terms of how they are run and in their membership” (35). Craft today shares some of these commercial interests, having been long marketed through chain stores and the corner knitting shop, with some stores offering classes. As presented by craft activists, however, who engage craft for political ends and may choose to work with repurposed materials in order to avoid consumption and practice
in sustainable ways, crafting challenges not only the commercialization of making but the beliefs that surround it (see, for example, Greer, a section of Buszek, and Garber in the Works Cited).

In the sections of this Introduction that follow, we will discuss objects and the meanings associated with them, the politics of socio-cultural transformation that surround making and crafting, and the participatory culture of do-ocracies—especially as it relates to education in schools, museums, and community venues, as well as in a few businesses. We will conclude with an overview of the organization of the book and the chapters within it.

**Objects and Meanings**

While “object” is a general term, referencing many material things—from sculpture to blankets to cars to cactus pads, and from the manufactured to the found to the handmade, it’s a good word because “it lies outside value-laden classification systems” of art, craft, and artifact (Fariello 19). American Studies scholar Thomas Schlereth defines the object in the encompassing sense of “concrete evidence of the presence of a human mind operating at the time of fabrication” (3). These framings suitably fit our concept of the object in making, crafting, and educating. They don’t suggest a hierarchy between objects, nor classification of objects, and furthermore imply the making of objects as deliberate acts.

Anthropologist George Kubler looked at the value of objects and noted three distinctions: aesthetic value, market value, and social value. Aesthetic value appeals to the senses and market value to economic concerns, whereas social value appeals to functionality, or ideological or personal value. When William Morris wrote, “Have nothing in your houses that you do not know to be useful or believe to be beautiful,” he was emphasizing aesthetic value and the social value of functionality (V&A n.p.). Both Morris and Ruskin promoted objects for their aesthetic, meditative function as an antidote to the industrialization of society.

In his introduction to *The Social Life of Things*, Arjun Appadurai helps us understand the entwined nature of aesthetic, social, and market value as he builds a case for the value of an object being socially determined, not inherent. An object, he argues, accues value through desire and demand for it. These values are illuminated in “the concrete, historical circulation of things,” with “their meanings . . . inscribed in their forms, their uses, their trajectories” (5). These insights help us understand more deeply Sandra Flood’s observations of the ways objects carry social messages that signal a “dialogue between object and user, shape, size, material, and decoration” that connote social messages and conventions (100). “Who wears emeralds?” she asks, and “[W]hat does the wearing of emeralds say about the wearer’s nationality and status?” (100). What are the differences between a handmade demi-tasse, a drugstore coffee
mug, and a throwaway cup, and how does each change our experience of drinking coffee?

Appadurai also observes that, “from a theoretical point of view human actors encode things with significance, [and that] from a methodological point of view it is the things-in-motion that illuminate their human and social context” (Appadurai 5, original emphasis). Emeralds are encoded with human-inlaid significance, giving them social value and meaning; the high-backed chair, however, is the thing-in-motion that not only tells us how to sit, but holds connotations about sitting in different contexts. The object itself exists in a dynamic relationship, a “deep play” (Appadurai 31, citing Clifford Geertz) with these contexts and values, and the meanings arising from them. Because of these various levels of meaning and points of view, we develop “co-relationships” with objects that speak to us (Hood and Kraehe 33); these objects have power and agency within our lives.

The methodological point of view could also be understood to encompass relationships between object makers and what they produce. Celebrated craft writer Rose Slivka proposed,

> At that moment of rightness, there is transfiguration, and exchange of presence between maker and object. The object becomes itself the poet. The object is seen and touched in the language of materials . . . The object provides thereness, a physical place: it holds the space, marks the terrain, the geography of the metaphor. (10)

For some, making is done with an eye towards the finished object; for others, it is the process; for many, it is both. Materials and processes, as well as use, provide feedback to makers and these interactions spur new ideas and sensations, and new work.

Canadian ceramic artist Steven Heinemann has observed that despite the emphasis in art school on developing ideas, people remain hungry to make: “They want to get their hands on things not necessarily located in their heads” (Cannon 172). The initial results may not be attractive, nor well crafted, nor fit into concepts of what “good” art is about. “The times that I’ve come across 3D printers, in hackerspaces or elsewhere,” notes Sarah Davies, “they have almost exclusively been used to print what we might term cheap plastic crap: trinkets, slightly wonky though theoretically useful household organizers such as soap dispensers or pencil boxes, miniature figurines” (7). But the sense is that the quality may improve once the newness wears off or that DIY can allow users to break into new ground (Davies 26), or that each object made serves as prototype or inspiration for the next.

Making in education can be understood as an ideological tenet. When an instructor or workshop leader suggests making an object, what is the learning goal? When students/participants undertake that suggestion, what is their
motivation? For any of these parties, it could be the development of skill or procedural knowledge, as is frequent in schooling or community classes. Teachers and parents might have broader goals to develop personal qualities such as patience and discipline, conceptual development, awareness of and involvement in social justice issues, even dexterity and coordination. Makers themselves may seek building community and collaboration, as Davies found in makerspaces. Making for the student/participant often has something to do with an object to use, admire, critically interact with, and with which to relive the experience of making. Any of these qualities might be considered part of a desired habitus, sociologist Pierre Bourdieu’s term for practical actions made regular by habit (Bourdieu, *Distinction*). Whether acquired through gift, inheritance, purchase, or a maker’s own efforts, objects have meaning and always will.

The Politics of Socio-Cultural Transformation

According to Harvard University’s research network for Youth Participatory Politics, while the personal was political in U.S.-based activism in the 1960s, in the contemporary moment the political is social and cultural (Youth n.p.). Globally, since the 1990s, there has been a significant increase in the creative economy, with a rising recognition of creativity and culture. Intelligent Manufacturing in China (see Nesta) and Make in India (makeinindia.com) are two examples of nationalistic brand-building campaigns that include the promotion and revival of making and crafting industries in the interests of cultural tourism, and of internationally projecting a strong national identity. While China’s objectives include strategic development of making for collaborative robotics and 3D printing for futuristic manufacturing, India is capitalizing on its multicultural heritage by reviving traditional and Indigenous crafts, especially textiles. Such political and cultural policies encourage craft collectives and maker facilities to support small-scale entrepreneurship and creatively address social and economic inequities. Fair trade crafting practices seem especially effective in fostering social entrepreneurship for disadvantaged and disempowered persons, especially in gender justice. From Local Women’s Handicrafts in Nepal, to Beads of Hope in Uganda, to the Global Gallery in the United States, making and crafting provides entrepreneurial opportunity for political, economic, and social sustenance as well as programs of literacy, health, and education on civil and legal rights that transform lives.

The 21st century’s increasingly networked society brings with it an escalating volume of voices that share information, skills, and opinions, along with a need to be heard and a desire to make a difference. Gathering and organizing in physical and digital spaces, these voices knit the social and cultural with the political to speak truth to power, from the Arab Spring to the Me Too movement. They expand dominant and singular narratives through making and crafting and indicate a shift from support to solidarity: for example, a stitch-in campaign
sewing messages on handkerchiefs to advocate for a living wage for employees of a corporation in the UK; The Women’s Domestic Needlework Group at the University of Sydney gathering to reclaim women’s knowledge by making and documenting histories of needlework and its materials; Jugaad in India and rasquache in Mexico that combine practices of frugality and “making-do” often connected with class and economic-related issues; and groups that are now being reclaimed by makers and crafters as innovative and sustainable life-hacks. The prolific variety of such active explorations in public and private domains reveals a thirst for change in political attitudes and social mores that are realized through participatory practices of making and crafting as a type of cultural capital.

Bourdieu ("Forms") defined cultural capital as the embodied characteristics, learned skills, and material belongings of people according to their social context. Social capital includes both economic and cultural capital as well as the relationships among cultural groups. Authors in this book indicate how cultural change occurs when innovative and inventive practices and materials are introduced and spread among cultures to grow and develop social and cultural capital. They also suggest how, when an environment is set up by stakeholders for a culture to be introspective, self-aware, and engaged in assessing its values and vision, cultural transformation occurs.

In envisioning the transformative potential of making, crafting, and educating, authors in this volume call to mind decolonial scholar Gloria Anzaldúa’s wariness of unchanging categories that define culture as well as her call for constantly disrupting them to invent new ones. The authors reveal processes of socio-cultural transformation by seeking and incorporating new realities in their work, signifying ways we are “in each other’s worlds and how we are each affected by the other and . . . dependent on the other” (Anzaldúa 215). She reminds us that identity and culture are subject to change; the authors in this volume are working within these spaces of change.

Cultural transformation involves orientating or hopping “back-and-forth between landscape and time, geography and emotion, knowledge and behavior” (Hall 15) and between the sectors of formal and informal education together with craft and maker movements. Such “hopping” provides opportunities to look at “what we are in the middle of as we consider . . . consumption of culture as space, object, ideas, and ritual” (Sharma 118). This is done in order to disrupt romantic ideas of a global village in capitalist paradigms, and to dis-identify with dominant hegemonic practices to promote productive rather than reproductive practices. The term social profit is useful to identify and measure such values that “can’t be expressed in numbers” (Grant 2) but that bring people together around our best collective vision of whether or not we have a shared and expanding knowledge base about the field in which we work (Grant 130–131). Donna Haraway argues that it is worthwhile to examine social profit from standpoints of knowledge constructed from a variety of perspectives. In an essay in Social Objects, Baumstark and Waldman show us how makers, crafters, and educators
do this through making aesthetic objects and providing community service from a variety of perspectives and positionalities.

In recounting a history of the Arts and Crafts Movement of the 19th century as a resistance, Morozov notes it was a “radical alternative to the alienated labor of the factories” (para. 3), which died when it was co-opted as a hobby for the affluent. According to him it was revived as resistance in the DIY movement where hacker, a slang term used at places like the Massachusetts Institute of Technology (MIT), was adopted by rebels who, distinct from elite technocrats, sought to de-institutionalize and democratize the personal computer and to accommodate themselves in it, rather than reform it. This account overlooks the role that craftivists have played in contemporary resistance movements. Hacking, which includes various forms of making and crafting, is a democratization of doing and inventiveness, which calls for and demonstrates a form of personal and cultural transformation.

Kohtala argues that the “fantastical ideology of the FabLab and Maker Movement” (para. 16) keeps at bay the mundanity of the outside world where issues of production, demand and supply, working conditions, exploitation, and co-optation of ideas are realities. Inside fab labs and makerspaces, however, she finds a “democratization of production technologies and empowerment of all people to make what they want, where they want, and how they want” (para. 16). She suggests that this separates the maker/fabber ethos from real-life conditions where technology, work, and organization intersect. For socio-cultural transformation to take place, this gap must be bridged. Such work must be approached with care by promoting dialogue about and making around themes such as reflexive cultural identity, fair labor practices (Kowlowski), equitable access, environmental sustainability, and meaningful learning.

**Education and Participatory Culture**

The more we dive into something we didn’t know how to do before, whether by figuring it out on our own or reading an article or talking to a friend, the more interesting life becomes. (Dougherty 14)

The maker education movement is an amalgam of “play, experimentation, and authentic inquiry” (Halverson and Sheridan 497) and encourages the construction of knowledge through a site of shared learning. Informal craft learning has traditionally taken place through sites such as women’s groups and hobby gatherings, craft stores, magazines, and Internet sites (Agostinone-Wilson; Lackey), which are also types of participatory culture, although today communities of craft practice are widespread on the Internet as well, as Stevens notes. It is the much more recent development of DIY craft activism, which Betsy Greer calls “craftivism,” that explicitly involves participation in building communities of people dedicated to socio-cultural transformation.
Halverson and Sheridan suggest three lenses to understand the maker movement, especially as researchers and policymakers propose how it can inform education: “making as a set of activities, makerspaces as communities of practice, and makers as identities of participation” (501, original emphasis). Anthropologists Jean Lave and Etienne Wenger use the term “community of practice” (29) to describe an apprenticeship learning model and “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger-‐Trayner and Wenger-‐Trayner para. 5).

As a committed advocate for making and tinkering and a supporter for changes in education that prioritize and support young people’s engagement in active learning, *Make:* magazine founder Dale Dougherty suggests,  

> We should be framing things in our schools not just in terms of “how do we test you on that?” but on “what can you do with what you know?” When you’re making something, the object you create is a demonstration of what you’ve learned to do, thus you are providing evidence of your learning. (12–13)

Dougherty, without overtly using the phrase, is referring to elements of project-‐based learning. Educator-‐journalist Suzie Boss suggests this type of learning “consistently emphasizes active, student-‐directed learning” (para. 9). It is “rigorous, relevant, hands-‐on learning” (para. 7), and engages learners in a do-‐ocracy. Making and sharing with a particular goal and project in mind are important parts of maker and crafting movements.

The importance of teaching craft is diverse: from the pleasures in making and working collectively for change (Garber), to development of motor skills, learning with body and mind, learning cultural and sometimes local traditions and histories, implementing design, and developing individual responses to these experiences (Weida). Halverson and Sheridan argue that the maker movement can transform “how we understand ‘what counts’ as learning, as a learner, and as a learning environment” (503). This change requires a challenge of the ubiquitous ways of teaching that still occur in some classrooms through a top-‐down dissemination of power delivered from teacher to students. It requires relevant curriculum that relies on the lived experiences of the participants facilitated in a manner that encourages curiosity and active learning. Kafai, Fields, and Searle further this argument when they suggest, “viewing students as problem solvers and inquirers and teachers as coaches, guides, and prodders requires a shift in educational practice and policy” (551). This rationale applies to education in schools, community, museum, and teacher education, as well as to makers and crafters themselves. To think beyond materials and doing to issues and ideas can forge together communities with a common goal. It encourages a hacking of the current educational structures, formal and informal, to include multiple voices.
Participatory culture and engagement with materials does not always need to occur in a physical makerspace. Sociologist Matt Rafalow suggests that youth and older adults can participate in an online culture “as a means to develop their skills and improve their craft as creators and makers” (160). Jenkins, Ito, and boyd suggest that participatory culture occurs in a networked era where learning is “embedded rather than sequestered” (5). Linkages in learning can happen in person, online, or in a hybrid space. A maker or crafter can tinker with technology, using it as a material to explore and change, and extending the definition of tinkering.

Gauntlett argues that making and connecting craft skill with the visualization of an object through craft labor “is experienced as a necessity” (Gauntlett 25), motivated by becoming part of collaborative, nurturing, empowering, inspiring, non-competitive networks. Web-based teaching and instruction as seen in YouTube tutorials and Instructables, as well as web-driven offline knowledge-sharing platforms like Ecomodo (ecomodo.com) and Men’s Sheds (menssheds.com.au) reflect this experienced necessity as one that fosters personal and collective happiness and curiosity. While this has burgeoned in informal learning spaces, it appears to be trickling down rather slowly in the culture of formal learning, quite possibly due to the culture of requiring measurable learning in quantitative, striated ways where productivity is viewed in terms of financial rather than social profit.

The idea of messing around with materials, sharing, and learning by doing in an environment that supports and encourages curiosity is at the heart of maker and crafter movements. If you have participated in or visited a makerspace, you might have noticed a preponderance of digital tools, but you may well have also seen different types of lathes and cutters; hand tools such as hammers, drills, wrenches, pliers, clamps, grinders, files, and saws; scissors, putty knives, yardsticks, heat guns, paint brushes, pens and pencils, utility knives; sewing machines, needles, irons, crochet hooks and knitting needles, awls, embroidery hoops; or even potter’s wheels. Makerspaces are designed to be collaborative and flexible, with each area of making amplifying other areas (makered.org), in a kind of “cross-talk.” Sarah Davies, writing in her book Hackerspaces, argues that there is a similarity between hackerspaces, the maker movement, DIY, and fab labs, finding this cross-talk affords members and users access to equipment, space, collaboration, and learning. She finds that it’s “also about ‘changing the world’ through invention and creativity, and taking control of the technologies that surround you” (5).

Yet, is everyone welcome in a makerspace? In DIY crafting? Who is included and left out of these spaces and conversations? Despite what seems like a welcoming attitude, access and equity are issues in maker and crafter spaces. Libraries have been at the forefront of offering open and free-of-charge environments for makerspaces, embracing the democratization of information and technology located in the maker movement. This is important, as issues of
access and equity are rife, especially with funding of equipment, maintenance, materials, and space for underserved groups, with the gender inequalities found in STEM fields, and with persistent gendering of activities (wood, metal, and technology are often taken as the realm of boys and men and fibers as that of girls and women).

For schools that hope to create a makerspace, support for technology, upgrades, technicians, and supplies to initiate and then maintain their labs are contingent upon grant funding or administrative budgets, and can be inconsistent. Schools and districts already challenged by funding may have a harder time developing and maintaining a makerspace, and may have less equipment and supplies. While “learning in makerspaces [and craft spaces] outside of school relies heavily on peer teaching, mentoring, and coaching . . . learning in school remains teacher driven” (Lindstrom et al. 89). This means that access to a community of learners in schools, along with opportunities for cross-socialization among different groups, is reduced. Authentic education networks can emerge from integration between traditional school and makerspace ideologies, and can be led by people closely involved in the process.

Largely self-funded, DIY craftivism is fueled by commitment to issues defined by a group, time to participate, and often, disposable income, creating different contexts for making and varying the outcomes. A backlash against “pussyhats” by some women of color and trans groups due to both the uniformity of the symbol (a knitted hat) and the color (pink to stereotypically symbolize women) is an example of access and equity issues in craft, argues Jagannathan. These are complex issues at play and can be exacerbated when not confronting “maker identities in relation to deeply entrenched expectations of gender performativity” (“The Maker Movement” 494).

The satisfaction of fixing something yourself or figuring out a solution to a problem through authentic learning can be supported through maker and crafter movements and education. These ideas grow out of the expanding notion of where education can take place. This environment encourages a networked community that can empower teachers, makers, and crafters to make their own decisions about appropriate teaching tools, environments, and practices for their individualized situations, accepting only those that support access, equity, personalized active learning, and shared knowledge acquisition. The participatory culture of maker and crafter spaces in education and community sites holds the promise of such socio-cultural transformation.

The Chapters: Thematic Connections and Emerging Questions

In this Introduction and the chapters that follow, making, crafting, and educating build individual and community growth as political, social, and environmental
action that contribute to cultural change. The five sections of the volume: Play and Hacking; Access and Equity; Interdependence and Interdisciplinarity; Cultural and Environmental Sustainability; and Labor and Leisure present a collage of issues and practices connecting object making, participatory culture, and socio-cultural transformation from many sites across the world. To help readers play with the connections, or the cross-talk between them, each section is introduced with a list of the chapters and a visual map suggesting thematic connections and questions emerging from and connecting to the contents of the volume. We encourage readers to use these as building blocks to make their own connections, and play with the cross-talk between sections.

Works Cited


Introduction


SECTION I

Play and Hacking
I. PLAY AND HACKING

THWAITS
THE JOY OF TINKERING

VINEBAUM
THE SEWING REBELLION

FARRAR
TINKERING WITH CHANGE

CABRAL & JUSTICE
MATERIAL INQUIRY

DE LA ROSA-CARRILLO
PEDAGOGY OF THE HACK

BYRNE, WARD, & SNEPVAngERS
MAKERSpaces IN A UNIVERSITY

ÖZSOY
DIY IN TURKISH TEACHER EDUCATION

CHANG
MAKER ED

MENAUGH
EMPTY BOWLS, FULL MINDS

THATTE
JUGAAD IN INNOVATIVE MAKING

BARNEY
WHAT SPINNING TEACHES ME
Play and Hacking visual map: Themes and emerging questions

Drawing: Lisa Hochtritt
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THE JOY OF TINKERING

Anne Thwaits

Remember back before we all had smartphones, when we had to rake the sand in a tiny, desktop zen garden or repose that funny figurine on the windowsill when struck by the impulse for a little whimsy at work? There was a time when grown-ups knew what to do with the urge for object play, but now there’s an app for that. According to play researcher Stuart Brown, the ability to play is critical to being happy, sustaining social relationships, and being a creative, innovative person. Play prepares us for the unique challenges and ambiguity continuously presented by the evolving social and physical conditions in our world. It enables us not only to adapt to and thrive in an environment of social and cultural transformation, but to innovate and initiate change. Through play and the resulting mastery of skills, humans learn self-efficacy—the belief that we can exert some control over the world and cause the change we desire (Cronin and Mandich).

According to Brown, object play with the hands creates a brain that is better suited for understanding and solving problems of all sorts. The rise and popularity of the maker movement is evidence that the impulse for object play—is irresistible in children—is also present in adults, but older players often require instruction to engage in activities that seem unproductive or immature. This instruction is readily available online and in a growing number of community maker spaces, where the school model of top-down education is replaced by a grassroots network of DIYers and DIWOers (do it with others-ers).

One such place is Tinkertopia, a creative reuse space in Tacoma, Washington. Founded by two artists, Tinkertopia promotes resource conservation by working with local industries to divert clean remnants, seconds, and overstock from the waste stream, then redistributing these goods as low-cost arts and crafts supplies. A call to action at tinkertopia.com lists 138 types of household objects—
from “Animals” to “Zippers”—that the public should donate instead of letting them become trash. These collected materials, piled on shelves and in bins, can be purchased in bulk by the bag full. Customers who prefer to stay and play can pay seven dollars for 90 minutes of time in the Make & Take Tinker Space, where drop-in tinkerers of all ages use the provided tools to assemble fantastic creations from the repurposed materials that fill the store. There are no instructions to follow or models to emulate, so every assemblage results from a process of open-ended discovery and experimentation. The proprietors might offer a helpful suggestion or guidance on tool operation, but it is up to each creator to figure out how to turn the store’s alternative arts and craft supplies into games, costumes, science experiments, puppets, home décor, Rube Goldberg machines, and other inventions.

Removed from their usual contexts, the reclaimed objects that fill the shelves are stripped of their expected utility. An empirical approach is then required to discover the structural, functional, and aesthetic potential of items like bottle caps, empty bobbins, or lengths of rubber hose. As sensory data are collected, the hands become more adept at manipulating objects, and imagination and problem-solving skills advance, leading to the recombination of objects in building and making activities.

The name Tinkertopia communicates not only how very well suited the space is to tinkering, but also the perfect joy to be found in disassembling and reassembling, in playing with objects, without rules or limitations. Tinkering is fun, and while tinkerers are happily engaged they discover new potential in available resources, including themselves. But what happens when we step out of the tinkering utopia of a community, school, or library makerspace and back into our daily lives? Long-term change—in self-sufficiency, attitudes towards play, involvement in the materials economy, innovation, or any of the other benefits of tinkering—requires more than occasional dabbling with objects and tools.

TinkerLab.com promotes a culture of creation, experimentation, and open-ended discovery within homes and families, where many lasting values and habits are learned. The website provides guidance for setting up a TinkerLab® at home in whatever space is available, enabling making, experimentation, and the repurposing of material goods to become daily activities. The TinkerLab® website contains a suggested supplies list that would entice almost anyone to develop a tinkering habit. In addition to basic art supplies for cutting, pasting, molding, painting, and mark-making, there are makerspace basics like glue guns, power tools, and sewing machines. Complete a quick website tutorial and you’ll have a light table for under $10 USD on which to place translucent shapes and found objects to be rearranged in an infinite number of designs. Beakers, pipettes, and test tubes are not common household items, but with many options readily available for purchase through Amazon and other online vendors there’s no reason not to set up a science laboratory at home. Recommended building sets
range from LEGO® blocks and marble runs to circuit kits that connect to a
computer. A list of scrap stores and creative reuse centers worldwide directs
would-be tinkerers towards local sources of recycled materials for making projects.

Once your home or classroom TinkerLab® is stocked, commence playing. If
you’re an adult with an impressive to-do list, start by giving yourself permission.
If play feels self-indulgent and frivolous, remind yourself that you could be an
agent of cultural change (surely “make a difference in the world” is somewhere
on that to-do list). You might model inquiry-based learning for your kids. Give
students permission to think more about the innovation and self-satisfaction to
be gained from a project than the grading rubric to be satisfied. Cut loose. Forget
or unlearn some rules. Forget what “looks good.” Ignore what the crafters on
your Pinterest boards do with a particular material or tool. Resist the urge to
throw away things that seem to no longer be useful—make them useful. Change
your environment. Change your world.

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Avery, 2009.

Cronin, Anne, and Mary Beth Mandich. *Human Development and Performance Throughout
the Lifespan.* Delmar Cengage Learning, 2015.
Imploring us to “Stop Shopping and Start Sewing!” artist and educator Carole Frances Lung (also known as her alter-ego, activist and garment worker Frau Fiber) asks that we consume fewer ready-made garments manufactured under abusive working conditions by buying less, buying better, and mending and reusing as much as possible. But how, given that so few people today know how to sew their own clothes? Lung’s project Sewing Rebellion, initiated in 2006, provides free, hands-on instruction and access to equipment while educating members of the public about the perils of global garment manufacturing.

Sewing Rebellion began in Chicago as a monthly skills-sharing workshop and clothing exchange, and quickly expanded to host weekly gatherings at Mess Hall, an experimental art and cultural center. Lung provided free, hands-on instruction in sewing and mending techniques, along with access to a sewing machine and other tools and supplies. Participants learned sewing skills ranging from basic darning and repair, to patternmaking and more complex garment construction, enabling them to alter or mend worn clothing or create entirely new garments. They also learned how to transform and repurpose items of clothing into wallets, tote bags, pouches, aprons, and hats. Sewing Rebellion expanded to include six additional local chapters, while Lung offered workshops across the United States at venues like museums and galleries, craft fairs, pop-up shops, community centers, universities, and schools.

Lung relocated to California, and in 2012 Sewing Rebellion created a national headquarters in Long Beach, where it occupies a storefront space and offers regular, twice-monthly sewing, mending, patterning, and construction workshops. Having a dedicated space also allows Lung to provide local residents with greater access to equipment and instruction they would not otherwise have access to. Hope, a regular participant, observes that, “The Sewing Rebellion provides supplies
and knowledge that I wouldn’t be able to have. People can benefit with this program because it is local, free and a great environment. More people should learn to sew, but they don’t have the money for equipment or supplies.”

*Sewing Rebellion* also hosts regular monthly or bi-monthly free workshops and drop-in hours across the greater Los Angeles area, at the LGBTQ Center Long Beach, the Long Beach Public Library, the Baldwin Hills Public Library, Thank You For Coming experimental food and art space, and The Village, a local mental health center. Many workshops and gatherings are conducted by “Faux Fraus,” a team of dedicated volunteers who learned or perfected their sewing skills through the *Sewing Rebellion*, and who work in close collaboration with Lung. In 2015, the *Sewing Rebellion* started a chapter in Boulder, Colorado, under the supervision of “Faux Frau” Steven Frost, hosting monthly gatherings of up to forty participants at a time at the Boulder Public Library. There are also plans to expand the project to offer free workshops at public libraries across the country. Beginning in January 2018, the *Sewing Rebellion* began publishing a quarterly production manual with specific projects and instructions in print and e-book versions that will include a link to instructional videos and a pattern for free download or purchase. A *Sewing Rebellion* Vimeo channel also launched at that time.

Today, many people want to learn how to sew, and the *Sewing Rebellion* responds to a desire for traditional craft skill instruction. Organizers seek to reclaim sewing skills that were lost when the ready-to-wear clothing industry replaced the home sewing of garments. It resonates with new generations of makers eager to revitalize sewing skills with a view to self-sufficiency, sustainability, and a desire to support the plight of garment workers. Making and mending one’s clothes is also empowering: it allows people to save money, assert their own personal styles, and subvert the fashion industry’s body size biases.

The *Sewing Rebellion* is also inspired by the American labor movement’s efforts to improve working conditions for garment workers. The storefront space that houses the *Sewing Rebellion* is named the Institute for Labor Generosity, Workers, and Uniforms—the ILGWU—sharing its acronym with the International Ladies Garment Workers’ Union, historically the largest union representing workers in the women’s ready-to-wear clothing industry in North America. During the first half of the 20th century, the ILGWU successfully fought for and won some of the most historically significant rights for garment workers, including the rights to freedom of association and collective bargaining, minimum hourly wages, the regulated work day and work week, and overtime and vacation pay. By the 1960s approximately half of all American garment workers were unionized and earning good wages.

Yet the context for *Sewing Rebellion* today is one of multinational corporate dominance; outsourced global production; precarious employment; cutbacks to wages, unions, and collective bargaining; a lack of enforcement of existing labor laws; and the prevalence of garment manufacturing in countries with few or no
unions or labor legislation. In the United States, a majority of garment workers are immigrants, many of them undocumented, often hired by subcontractors because it is easier to exploit them and prevent them from organizing—thereby creating similarly abusive conditions to those that exist abroad.

And while immigrant workers have historically faced exploitation and discrimination, today they face unprecedented barriers to full integration into the labor market and society more generally—and immigrant communities have become increasingly vulnerable under the Trump administration. Immediately after the election, Lung pledged to mend America by fighting xenophobia and oppression, and creating change through skills sharing, sewing, mending, and calls to action. Mend America workshops and events overlap with the *Sewing Rebellion*, bringing people together to hand sew patches inscribed with a map of the United States that they are encouraged to mail to their elected representatives. Since the U.S. election in 2016, *Sewing Rebellion* workshops have produced protest sock puppets, wearable body banners, and more conventional banners, in addition to the project’s regular roster of garments, pouches, bags, and other utilitarian objects.

As an educator in the Department of Art at California State University Los Angeles, Lung is also able to integrate perspectives on sustainable and ethical fashion into the classroom, teaching emerging designers that fashion does not have to succumb to the abuses of global supply chain manufacturing. But eliminating exploitation is a long, slow, and difficult process.

Attempting to repair the global garment industry—not to mention our country—is a daunting and perhaps impossible task. Lung knows all too well that it can be easier and more affordable to purchase cheap, fast fashion than the fabrics and equipment needed to make one’s own clothing. But Lung is committed to chipping away at the apparel industry’s grip on consumers, one stitch, one seam, one garment at a time. And she’s not alone: the *Sewing Rebellion* has helped hundreds of people learn to mend, reuse, repair, and repurpose. By stressing skills acquisition and the importance of investing in fewer, higher quality, more durable items, Lung is helping to create an informal community of more conscious consumers, reducing our dependence on fast fashion, and giving increased consideration to the workers who make our clothes, and by extension, to the true cost of cheap, disposable apparel.

**Note**

1 See sewingrebellion.wordpress.com/2013/08/
“Do you want me to clean the tape off the wall?”

Not realizing what the museum student intern was asking me, I looked up at the walls of the gallery we were in to realize that one corner had been decorated with the colored masking tape left out on the table. Foot-long letters, shapes, and lines of all colors adorned the wall near the pile of bean bag chairs we left for visitors to sit on while reading various books about artists. The “unconventional” use of the tape as an art supply was something I had not expected. I had left it out for visitors to use with drawing paper, and yet, some young child had disregarded this arranged offering and opted to explore the possibilities of combining the tape with the large empty vertical canvas of the gallery wall.

“No. Leave it. It’s great!”

A question that had plagued me since I proposed this new space at the museum where I work, “What does it mean for a makerspace to live inside an art museum?” was slowly being answered for me.

The Tinkerlab, a makerspace at the University of Arizona Museum of Art (UAMA) in the southwestern U.S, opened in the summer of 2017 with a great deal of anxiety and excitement. The lab was something new to me as an art educator and more specifically as a museum educator at a university art museum. I had been in charge of expanding programs at the museum so that we were serving our wider community, including families, children, and teens. We had no existing studio or education space in the museum, so the Tinkerlab took over an existing exhibitions gallery.

As evidenced by other essays in this volume, the exploding literature on making, and hands-on learning at the forefront of education policy, makerspaces are popping up in formal and informal educational settings such as K-12 classrooms, libraries, children’s museums, and science centers. Yet there is little
written in education or museum literature about makerspaces in art museums. I believe that art museums can position the maker culture as a model for younger audiences in the creative environment of fine art exhibition spaces. This idea becomes more salient at the UAMA in light of the Tinkerlab taking over an exhibition gallery, making the lab, in a way, an art exhibition as well as a creative makerspace.

The mission of the Tinkerlab is to demystify the act of making and thereby the culture of making. Everyone has a story to tell, but not everyone feels...
empowered yet to “write” that story. Not everyone has access to the tools or materials to discover their visual language to express that story. To work towards equitable access of these tools and materials for our visitors we have chosen to make the Tinkerlab primarily a drop-in gallery space. With tools and materials within eyesight or easy reach of all visitors (small and tall), the lab makes acts of making visible and accessible to museum visitors. At specialized events, a Tinkerlab educator guides specialized tools, techniques, and projects such as metal tooling or robot making. As evidenced by the young child who chose to create a wall mural with tape, I observed it’s critical that materials remain within eyesight at all times to help foster creativity, idea making, and the process of making.

Visitors to the Tinkerlab, like that young child, have demonstrated repeatedly an interest in combining materials in various ways (see Figure 4.1). While we initially set out stations of various “invitations” (such as tape drawing, mobile making, still life drawing, and LEGO® bricks), it has become apparent that a majority of users who are drop-in visitors spend more time exploring the materials than on completing any singular art or design challenge. Their behavior in the Tinkerlab, from combining materials from various centers to drawing with tape on the wall, suggests that visitors to art museum makerspaces are more interested in tinkering with the materials and exploring their range of possibilities than with creating singular objects.

What the Tinkerlab revealed for me was that galleries could become alternate spaces where the creative process can be celebrated. The UAMA’s Tinkerlab showcases the curiosity and creative potential of human beings. In our museum, I have witnessed young children, parents, high-school aged students, and college students wander in and lose themselves with the materials we have available (LEGO® toys, pencils, paper, tape, wire, wooden dowels, blocks, art books, and a light table). All museums have a trace history to the Wunderkammer, cabinets of wonder, or cabinets of curiosity—rooms with entire surfaces devoted to displaying vast collections of natural historical relics and antiques where objects were meant to inspire awe and of course curiosity about the world. The Tinkerlab has surprised me with its ability to counterbalance this notion of the treasure box, as we privilege an entire gallery to the act of curiosity itself.

As our staff begins to reflect on this past year’s season with the Tinkerlab, I am left with a growing list of questions to consider. As an academic art museum, what can makerspaces offer college-aged visitors? If we can help foster the identity of making with younger audiences, how do we support this with older audiences? In a setting where material production and final conclusions are produced, can our museum’s Tinkerlab offer an alternative to the empirical learning that is often expected of college students? Other chapters in this volume offer readers a multitude of ways in which the act of making and teaching with making can positively benefit students and communities. I look forward to seeing how the Tinkerlab’s celebration of curiosity can inspire learning experiences that carry over outside the museum walls.
5

MATERIAL INQUIRY

Digital Materials, People, and the Relationships Between Them

*Marta Cabral and Sean Justice*

We are artists and researchers who teach art education at the university level. We work with different populations, in different circumstances, but we each have experience with early childhood education and a variety of tools and materials, including photography, glass, and digital technologies. Together, we are Material Inquiry, an arts and scholarship collaborative that looks at the way tools and materials inform learning, knowing, and the relationships between them. Since about 2014 we’ve been working with digital tools from a position that holds learning as an encounter with materiality. This idea comes from our observations that learning and knowing emerge from and within engaged and attentive explorations of materials, no matter what the substance of those materials happens to be. For artists and art educators who work with a wide variety of tools and materials this might be an obvious statement. However, in our experience, the tricky part of this proposition, the non-intuitive part, is that the digital is material, or said another way, that code is just as tangible as clay, paint, or cardboard. This conclusion comes from research conducted with children and adults, from preschool through graduate school and beyond. In this chapter, we will first describe our individual and collaborative positions as researchers and educators; then, we’ll illustrate Material Inquiry by describing a recent project that incorporated Augmented Reality (AR) as an expressive material with which children and adults explored and created meaningful relationships.

We first came together as research partners when we started working with Marta’s preschool students in Sean’s digital media studio at Columbia University Teachers College. In that first study we looked at how young children integrated digital 3D modeling and printing with conventional art materials such as paint or clay (Cabral and Justice). At that time, we were both completing doctoral
degrees in art education, and conversations during seminars and at gallery openings had led us to discover a common interest in the notion that deep learning in the arts, and perhaps in other domains as well, might begin with open-ended exploratory play with tools and materials. As artists and educators, we were curious about how we had reached this independent conclusion about learning, and wanted to explore our shared intuitions about the connections between individual and community learning, knowing, and materiality. Serendipitously, we both had experience in art education at the university level, and in Marta’s case, in early childhood education as well. In this respect, we might say that a confluence of variables had come together to set the stage for the emergence of Material Inquiry as a response to specific characteristics of our learning journeys—namely, our individual observations of learners interacting with tools and materials as they formed learning communities. As it turned out, this interest in the intersections between individuals, communities, and materials—which we came to call material learning (Cabral and Justice)—led to a rich collaboration and, just as in this chapter, the creation of a dialogical space for making, reflection, and discussion.

Our work in this space proceeds from a position based on trust that our process will open shared spaces of innovative knowing. Basically, and too simplistically, we hold ideas loosely between us without forcing resolutions or hypotheses. This method is nicely illustrated by the arrival of our first study with children and digital 3D materials. That is, in spite of recognizing our common interests, we didn’t intentionally decide to conduct that study; rather, it emerged as a response to the children in Marta’s early childhood art program. As we listened to the preschoolers’ questions about the 3D printers in Sean’s studio, we realized that all our best responses began with exploring the tools with them, all of us together. As in our other work, interactions between people and materials—between us, the preschoolers who got us going, and the materials we all worked with—are what we find most fascinating. This interest in relationships and the roles that materials play in those relationships is at the foundation of Material Inquiry and of our work together.

One of our current projects explores the intersection of AR and conventional art materials. Each year since 2013, Marta has curated an exhibition at the early childhood center where she is director of art education. These exhibitions are staged in one of the art galleries on the campus of Columbia University, or in other less formal settings. Since 2016, after exploring AR in one of Sean’s digital art workshops, this technology has become one of Marta’s favorite digital tools. Briefly, AR is a form of digital display that links objects in the world with networked videos, animations, pictures, or texts. Though still in its infancy, AR technology was behind the worldwide mania that accompanied Pokémon Go, a find-and-seek style game that saw millions of gamers chasing imaginary creatures through parks and across busy streets. More sedately, and more slowly, the arrival of high-end production tools, and the increasing ubiquity of devices capable of
displaying AR imagery (e.g., smartphones and iPads), suggests that AR marketing and advertising is on the near horizon for most consumers.

In our work with AR, and specifically in Marta’s curated exhibition, free and easy-to-use tools make new material and expressive experiences available to novices, whether children or adults. For example, in the preschool exhibition, artworks are linked to videos or photographs that are displayed when the artwork is scanned with an AR-enabled device. In the gallery, visitors access these additional visual and textual layers by holding their device up to the wall. In Figure 5.1 we see a child pointing an iPad at a painting. As she looks at the device she sees a video overlay that depicts another child working on that painting. The video she is watching, and the AR link to it, were created by Marta in collaboration with the children themselves, in a process that is analogous to our earlier explorations of digital 3D with young children (Cabral and Justice). In fact, we see the resulting AR documentaries as artist statements that reflect the child’s commitment to what she or he wants gallery visitors to know about the making process itself.

“Look, Sienna’s baby brother can paint!” one of the preschoolers exclaimed. “Marta, did you see? The baby can do things!” In front of us, Sienna and her friend pointed an iPad at a watercolor painting in the gallery. On the iPad, the two girls watched a video of an infant—Sienna’s one-year-old brother—making watercolor marks on a large piece of paper. Her exclamation (“the baby can do things!”) suggests that this preschooler had just discovered something important: this baby could paint. And as she knew from her own artistic experiences, since making watercolor marks on paper involves choice, agency, and ownership, her inescapable conclusion was that this baby was a capable person, never mind he couldn’t make full sentences. Interestingly, the AR technology itself, so puzzling to many of our graduate students, was irrelevant to her. Instead, the notable thing was that “the baby can do things.”

Similarly, with AR, parents of infants often see their babies doing things independently as if for the first time—which can be a moving and powerful experience. That is, when watching a video of their child working with paint while simultaneously standing in front of the finished painting, parents seem to encounter their young children as independent people who are capable of making their own marks on a piece of paper and, by extension, on the world. In our experience, most parents appreciate seeing their child’s artworks in the gallery because they recognize that the setting confers respect and takes the work seriously. But watching a video of their children engage with real tools and materials to produce those artworks seems to amplify that appreciation and perhaps even catalyze an unexpected realization that their children are making their own way in the world. It’s this sense of their own that seems to create such a strong—or “augmented”—impact.

Our preliminary analysis of this effect hinges on a proposition about the way different materials enact relational choices. For instance, when preparing for their
exhibitions, children decide what they want to show the world, and they commit to that decision with their AR documentaries. Then, in the gallery, the children work in teams (e.g., with families, peers, or other visitors) to enact those choices as an AR performance with smart devices, for instance, by learning how to hold the device so that others can see the display. This shared navigation of the space...
around each participant’s body in relation to the gallery wall and to the artwork enacts the child’s prior choices and decisions in the context of shared agency. In other words, the children must work together to experience the works. In this way, the children come to viscerally understand that their actions have an effect on others’ experiences. We think something similar happens with parents or other adults as they too learn to navigate the shared space of the AR experience.

This is what we find fascinating about AR: It seems to make available an embodied experience of the relational intersections between people and materials. We think of this as a material effect of the tool, much like different kinds of paint have different visual characteristics, such as the saturation of acrylics or the transparency of watercolors. With AR, gallery visitors encounter the agency of other people as multiply entangled with a choreography of material actions, and thus come to a visceral understanding that what they see on the gallery wall is only one of many parts of a process that includes both the making of the work and the presentation of that work. We suggest that this encounter with the evidence of relational making, where idea, people, and context are irretreievably enmeshed with tools and materials, constructs an emergent context of empathy, a way of knowing based on affect and gesture with an expanded range of materialities.

These observational speculations spark questions that drive us to further explore material learning. How does materiality surface inquiry, and how might artists learn to reliably call on that process? How does watching children make art while simultaneously looking at the art itself amplify the recognition of agency, both for the parents of those children and for the children themselves? This work continues to excite and puzzle us. With AR, are we observing serendipitous effects, or is this yet another instance of deep learning catalyzed by material engagement?

**Work Cited**

PEDAGOGY OF THE HACK

El Rancho Electrónico and the Culture of Surveillance

León de la Rosa-Carrillo in conversation with Estrella Soria, Gato Viejo, Hacklib, and Jorge David García (AKA Sísifo Pedroza)

*El Rancho Electrónico* is a hacker space in Mexico City that welcomes “communities of hackers, hacktivists, open-source software users and people that simply feel like experimenting with technology” (“Invitación al Hackerspace”). My experience with it is limited: living 1,100 miles away I’ve visited only a handful of times, so when I requested their input for this chapter they were understandably skeptical. Nonetheless, they circulated my proposal through their email list looking for *rancheros* interested in chatting. I wanted to explore the pedagogy of hacking practices and the politics of privacy in the context of surveillance policies in Mexico, evidenced by recent reports of state-sponsored espionage.

Sísifo Pedroza first came to El Rancho hoping to explore the politics of creative processes and expand his practice as a music professor at Universidad Nacional Autónoma de México [UNAM] through the educational potentials of open-source software.

Whether free to acquire or not, open-source software is free to tinker with. While proprietary software, like Photoshop, locks its source code and holds users to strict consumer roles, the open-source alternative Gimp makes its code available to users that wish to develop the program’s features.

At UNAM, Sísifo mentions that his classes might be the only opportunity students have to absorb open-source software since industry standards shape curricula with the
proprietary kind. He also translates this openness into a classroom where student matters are engaged collectively. “Privacy is not a private matter,” he says resolutely.

Initially this seems contradictory; however, his point echoes one of eight didactic postcards that El Rancho produced in 2015 to prompt discussion regarding mass surveillance (Estrella S.). The postcard, titled ¡Protejamos a Nuestrxs Compas! explains that by encrypting our own online communications regardless of need, we make it tougher to pinpoint those whose privacy might be compromised, making privacy a collective issue.

On June 19, 2017 The New York Times reported that activists, journalists, and lawyers in Mexico were systematically targeted by Pegasus, a spyware sold exclusively to government agencies (Ahmed and Perlroth).

Shahani has detailed the role that spyware can play in domestic abuse by turning the victim’s smartphone into a tracking device that records activities, locations, and online communications. For her part, Coleman speaks of a robust “private surveillance industry . . . boasting close ties to three-letter government agencies” (209).

On June 21, 2017 Mexican president Enrique Peña Nieto confirmed his government’s use of spyware to target enemies of the state but denied any involvement in the cases portrayed by The Times (Redacción Animal Político) and supported by independent reports (R3D). Peña Nieto also intimated widespread espionage: “. . . in any case I’m careful about what I say on the telephone” (quoted in Redacción Animal Político).

Estrella Soria says that clearly everyone’s privacy is vulnerable while talking about cloud-based applications and all the personal information users supply in the name of convenience.
Soria is a member of both El Rancho and ADD FEM, a collective that promotes digital self-defense among women. “Most participants request our workshops after incidents online . . . that mostly involve simple oversights like not locking their phone or unlocking it in the view of others.”

Pegasus was first identified in 2016 when United Arab Emirates activist Ahmed Mansoor received suspicious text messages. Instead of clicking on the provided links he contacted researchers who found the spyware meant to infect his device. A few months later, Mansoor was charged with posting rumors and promoting hate online. As of this writing he remains imprisoned (Zavala).

The targeted attacks in Mexico followed a similar script. Victims received text messages that referenced their jobs, families, or safety and provided a link that if clicked would compromise their devices (Scott-Railton, et al.).

“Pegasus didn’t necessarily change the way we work” says Hacklib, since protecting privacy and fostering anonymity are staples of hacker culture; however, by engaging socio-cultural contexts prompted by particular state policies, El Rancho, according to Hacklib, becomes a place of techno-political inquiry.

Some of these inquiries have resulted in an array of collectivities within El Rancho, incorporating different levels of open-source principles and hacking practices. They range from the already mentioned ADD FEM, concerned with
gender issues and self-care in digital environments; to Armstrong Liberado, originating in Sísifo’s incorporation of Rancho practices into his UNAM classes, that explores open-source approaches to music matters; and Campechana Mental, where Hacklib participates and uses open-source technology to digitize and archive relevant texts.

But “software does not change practices,” says Sísifo, referring to the limitations of an open-source governing principle. Likewise, open-source is the last thing Estrella mentions during workshops, focusing instead on discussing software in terms of control and how much or how little it offers the user.

_Gato Viejo_ expressed a similar sentiment regarding user control in education, where learners routinely yield to the expertise that professors display through degrees. By assuming a cartoonish moniker, he distances himself from his state-given identity and all the credentials that come with it. During Rancho workshops, which can range from laptop care to legal self-defense, this nourishes a horizontal exchange of ideas and different types of knowledge that is based on trust as opposed to strict teacher-student roles. “It’s not about anonymity” he adds, “[online] I can have all the nicks I’d like but the device will identify me.”

“We are the new enemies of the state,” said Juan E. Pardinas (quoted in Ahmed and Perlroth n.p.), director of a non-profit organization that promotes anti-corruption legislation in Mexico. His device was targeted by Pegasus, which supposedly only happens to devices employed by criminals.
As multiple calls for external experts to investigate the matter with transparency remain ignored (R3D), maybe the state itself can be identified as a device running proprietary source code and holding citizens to strict, vulnerable roles. If so, places like El Rancho become crucial to collectively engage surveillance cultures through open-source principles, hacking practices, and horizontality. This is what I call pedagogy of the hack and in a classroom setting it may prompt questions that address education as a device beyond any concern for digital technology:

- What does it mean to open-source education and allow its users to tinker with it?
- To what extent should the students’ own inquiries inform and shape their educational experience?
- How can privacy matters be tackled collectively within institutions that routinely collect private information and link it with personal histories of achievements and failures?

Through questions like these, educators might be able to interrogate their own practices and recognize the nuances of an educational device that, much like smartphones, can very well render students—its users—vulnerable even as it professes empowerment.

Notes
1 Available at: ranchoelectronico.org/criptotarjetas/
2 ranchoelectronico.org/add-fem/
3 armstrongliberado.wordpress.com/
4 campechana.nomia.mx/

Works Cited


How do you resource the adult imagination so that alongside knowledge systems it retains a connective, open-ended focus, not bound by the constraints (habitual and hierarchical patterns) inherent in the parameters of its own self-aware systems? Ask a group of adults to make physical iterations of their ideas with cardboard and sticky tape and you quickly get a demonstration of how free or inhibited the adult imagination is.

In the makerspace at UNSW Sydney: Art & Design (A&D), making is about knowledge exchange that flows in multiple directions: between facilitator and participant (for example, staff to student, peer to peer, student to staff) and between maker, material, and idea. In seeking alternative spaces and proposing alternative curriculum interventions in tertiary art and design, we are writing this from the perspective of practitioners and participants. Situated within the university A&D, the makerspace is better positioned than most such spaces because of its visibility and accessibility to participants. Rapid demand for the makerspace has increasingly seen direct links to academic programs alongside its physical growth from one small room to multiple spaces within the faculty and across the university. This experiential approach to developing new “encounters” between participants, materiality, and projects allows the exchange of knowledge to be multifaceted, iterative, and interactive.

The maker movement reopens a way for the adult imagination to operate outside system constraints, democratizing knowledge exchange by removing the notion of an authority figure and replacing it with the shared expertise of multiple participants. Taking do-it-yourself (DIY) philosophy to a level beyond simple utilitarian thriftiness, the A&D makerspace provides a site where the inherent expertise of individual participants is acknowledged and valued for the unique contributions they offer. This approach countermands historical,
top-down knowledge transfer from master (skilled) to novice (unskilled), creating collaborative and exploratory learning spaces that encourage novices to regard themselves as having expertise to contribute. This shift to co-design is typical of many leading universities that have responded by augmenting top-down educational approaches through integration of grassroots, participatory practices.

In an effort to re-imagine neoliberal learning environments, Connell advocates invention and engagement with new educative spaces encompassing diverse, ever-changing communities. Connell signals the significance of “the creative development of social practice through time” (104) using the theoretical concept of encounter. For Connell, “encounters,” and for contemporary authors Snepvangers and Mathewson-Mitchell, concepts of “practice encounter” actively presuppose intervention in both formal and informal educational contexts to countermand linear social process narratives. Makerspaces nest concepts of flexible, community-based learning with the aim of increasing the effectiveness of student learning and efficiencies in terms of staffing and space requirements.

A&D has a combination of makerspaces, labs, studios, and workshops comprising analogue and digital technologies across a diverse range of design and art disciplines from woodwork to Virtual Reality (VR). The learning opportunities taking place within the makerspace, while intrinsically linked to university degree programs and course outcomes, have the benefit of sitting outside of the classroom (i.e. they are not linked to assessments and grades). It is made up of two highly visible, physical locations: the first, an open workshop and learning commons containing physical resources, and the second, a digital workshop, which houses VR equipment. Students from any degree program and staff may use these spaces. Collaborations with visitors and other UNSW Faculties are welcomed and promoted through a myriad of internal and external networks. Makers bring their own projects, seeking input or to assist others. They drop in and out of this peer community space at need.

Initial collaboration between A&D’s makerspace and CreateUNSW (a student making club led by engineering students) inspired A&D students to develop their own group, MAKE Club. Both of these groups have been instrumental in leading the development and delivery of peer-led workshops in the makerspace. Additionally, multiple cross-faculty, collaborative, student-led projects have resulted in the completion of works selected over successive years for public display in Sydney’s Vivid Festival—a festival of light, music, and ideas where art, technology, and commerce come together.

A&D’s making facilities, including its makerspace, are staffed full time by technical staff, each with their own discipline specializations. The staff promote comprehensive ideation, the acquisition of skills, and production of work through training and consultation on individual or group projects. The makerspace staff also facilitate connectivity, experimentation, and knowledge exchange through generative and transdisciplinary activities. These have included student-led projects
and outreach programs with regional and remote schools, businesses, community organizations, and other institutes.

The ethos of the maker movement, encapsulated within makerspaces, recognizes that everyone has ability to be a maker, as Mark Hatch has noted. This ethos enables the limiting static friction of systems thinking to be reduced to the point where the intuitive responses of imagination are mobilized. Its influence has been immense. The inclusion of makerspaces at UNSW has reinvigorated traditional workshop activity by allowing staff to move away from counter-based service to hands-on participation. Staff increasingly observe greater connections between makerspace activity and traditional workshop environments in the type of works created and overall workshop usage. This experience with makerspaces has freed us to reassess how we think about and operate all making facilities on campus.

Changing the nature of the traditional workshop has led to a desire for greater inclusion of makerspace activity in formal classroom outcomes. The future of making as experiential learning, as “encounter,” and its accessibility within universities is shifting. A&D’s future degree programs will include the development of Learning Hubs that are an adaptive, personalized, community-centric education model that integrates makerspace culture. The impacts of the Maker movement and DIY culture can no longer be dismissed as mere tinkering or hobbyist endeavor. The inclusive, exploratory, and serendipitous spirit of the makerspace nurtures crucial learning attributes and communities of practice, and encourages re-imagined encounters with practice.

Notes
1 www.artdesign.unsw.edu.au/campus/makerspace
2 According to Maietta and Aliverti, the maker movement inspired “the growth of hackerspaces, makerspaces and Fab Labs: workshops where lovers and creators of technology, mechanics, interaction, and art can meet, share their knowledge, and collaborate to create diverse objects” (7).
3 The authors recommend Hatch’s The Maker Movement Manifesto.
4 Limiting static friction is an engineering term that refers to a measure of the action of force on two physical surfaces. It is used here to describe the point where transformative action on ecologies of practice is made possible.
5 Learning Hubs are physical and digital platforms designed to bridge skills gaps identified by detailed curriculum mapping.

Works Cited


DIY IN ART EDUCATION AND ART TEACHER TRAINING IN TURKEY

Vedat Özzoyn

The Gazi Education Institute (GEI), founded in 1926, was an important teacher training institution in Turkey that included a model of DIY practices in its curriculum that spanned three years. The Department of Art and Craft within GEI was founded in 1932, and had a curriculum based on a system where teacher candidates were divided into groups of twenty with each group rotating through the studios in different terms.

This model was continued with small changes from 1932 till 1982; in the first semester of the first academic year, students studied the following studio courses over three-week periods: woodwork, paperboard work, bookbinding, and metal work. Drawing and theoretical courses spanned the semester. In the second semester, they continued with three studio courses, again each over a three-week period: modeling, mixed technique, and photography. In these studio courses, students produced their own tools and equipment, using DIY-like methods. These were tools and materials that would be used both in the above-mentioned studio classes and later in other studio lessons, as well as in the schools the students eventually worked in when they became teachers. Among the tools made were wooden pencils, a canvas case and paint palettes, a stool and wooden relief work, bound books, handmade marbling paper for covering books, pencil and brush boxes made of cardboard, drawing files made of colored and starched papers, and various boxes for pins and small nails made by cutting and soldering tin plates (Özzoyn). The method of training in the craft studios was in fact a kind of self-sufficiency model of DIY, but it was abandoned in 1982 when these educational institutions were transformed into faculties of education within the universities.
Faculties of Education

Though these art education institutions were absorbed into education faculties in the early 1980s, radical changes were made in the Faculties of Education in Turkey in 1997 when curricula were reorganized. Proposals from all education faculties were evaluated and new courses were put into the curriculum of the Departments of Art and Craft Education. These new courses were Methods of Art Education, Instructional Technology and Material Design, and Practices in Art Teaching I–II (YÖK). These courses are still included in the curriculum of the Department. The syllabi of these courses include art and design works that can be made by prospective teachers, especially those at middle and high school level. Some two- and three-dimensional DIY applications are also included, such as when teacher candidates use waste and raw materials in the workshop classes to devise how to create art and craft projects. However, it is not specified in the curricula of these courses that they are DIY studies.

Elementary Education

The Curriculum of Elementary Education (grades 1–8) for Visual Arts was revised in 2017 to include three learning areas that were also in the previous curriculum (MEB, “Görsel”). These are Visual Communication and Formatting, Cultural Heritage, and Art Criticism and Aesthetics. An examination of the curriculum reveals that DIY applications, that is, where students are encouraged to identify problems and opportunities for innovative solutions in the use of materials, are limited especially in the artistic applications of the Visual Communication and Formatting learning area. While they are more apparent in design studies, as before, the curriculum does not specify nor formally recognize these DIY and maker movement connections. Consider, for example, the phrase “Three-dimensional work using waste materials” in the field of Visual Communication and Formatting for 7th grade, where DIY approaches are incorporated but referred to as “waste.” Another lesson that comes to mind is from the 7th and 8th grades of the middle school curriculum, titled “Technology and Design.” The curriculum includes the following learning areas: the Nature of Technology and Design, Life and Technology, the Human and Built Environment, Needs and Creativity, and Design and Technological Solutions (MEB, “Teknoloji”). The sub-objectives of the Technology and Design lessons articulate: “Providing solutions to the problems encountered by using recyclable or waste materials, scientific methods and technology-design processes.” Accordingly, it can be said that middle school students have made “design works” using “recyclable or waste materials,” putting the learning on a par with curricular developments around the world, although the written curriculum does not recognize it as such.

On the other hand, the applications popularly called “DIY” in today’s Turkey are mostly realized through social media (Çetin). Websites that contain DIY
applications are open to everyone, although some of them are commercial. Practitioners, especially younger ones on these sites, describe the DIY applications they have prepared in a variety of subjects by showing the steps of the process. Among the subjects they include are art, craft, and design studies, as well as other fields. Some examples are “making a bench from a bicycle rim” or “making a powerbank with solar power” or “making a panoramic film camera” (KYS). Practitioners do not however appear to be making overt connections between these independent practices and in-school work.

Conclusions

It is extremely difficult to say that “DIY” in elementary education and teacher education programs is recognized as such in Turkey. However, when the history of education in Turkey is examined from the time the republic was declared in 1923, it can be said that the educational needs of the country were recognized met through domestic resources and people. Based on this argument, the practice of learning by doing and living and designing and producing one’s own art, craft, and design tools by oneself could be seen as early models of the DIY movement in Turkey. Today, from my perspective, the time is right for Turkish art and design educators to include contemporary DIY rhetoric and practice as part of art and design curricula in schools and art teacher training. Through this, they can further encourage the creativity and resourcefulness of their students.

Works Cited


Educators choose to work in classrooms, libraries, after-school programs, outdoor environments, and museum spaces because they believe deeply in the importance of learning, the innate abilities and talent of youth, and the opportunities (and responsibilities) we carry as adults to prepare youth to engage in a better world. No educator stepped into the classroom because they love content standards, outdated textbooks, or rote methods of memorization. They look for the spark, the giddy excitement and eager voices, the shared sense of understanding and passion.

The best learning environments have that. I have walked into classrooms across the globe where you hear the bustle before you reach its doors, where other teachers regularly sneak a peek into what’s happening in that colorful and busy space. One student shows off her LEGO® creation, while another turns it upside-down to figure out how it’s made. Another group of kids sits on the floor, sketching out designs as they’re immersed in conversation. The teacher sits with another team, discussing their third cardboard prototype, and a scattering of students are engaged on computers and tablets together, leaning over each other’s elbows, whether they’re creating graphics for a story, debugging code, or researching background information. A few are quietly and individually focused on building and tweaking. When asked, these youth can explain complex concepts in physics, elaborate on the intricacies of their designs, and tell stories about their users.

Today, a confluence of factors have given rise to a maker movement that finds sturdy ground and compelling uptake in education. Our traditional approaches to teaching and learning serve a time and place that we no longer live in. Maker education, or maker-centered learning, builds on educational research in learning sciences and psychology from long ago, as it also leverages new technologies,
democratized access, and changing demographics. It has the potential to be the most promising vehicle for authentic and relevant learning that allows for the true development of agency, confidence, creativity, and problem-solving skills in youth while showing the value of both hands-on engagement and conceptual learning.

At Maker Ed, our programs and professional development opportunities are focused on providing educators all over the country with training, resources, and a community of support as they integrate making into their classrooms, hallways, and learning environments. Maker Ed, founded in 2012, grew out of U.S. President Obama’s *Educate to Innovate* campaign to “move American students from the middle to the top of the pack in science and math achievement over the next decade” (Office of the Press Secretary, para.1). Science and math achievement are best when they’re grounded in real efforts. Our partners in the arts, research, community engagement, teacher training, and workforce development have been crucial as our efforts have ultimately reached almost 700,000 youth and families in five years.

For many educators, maker education starts with an open-ended activity with simple materials. Others embrace new tools and equipment. Yet others link school and life, by leveraging familiar, culturally relevant ideas and bringing them into the school day, from gardening to audio production, woodworking to sneaker design to electronic textiles and fashion. Overall, these efforts result in a shift in educational vision, culture, and systems. The lines between formal and informal learning start to blur, and grade levels and subject areas come together into multi-age, interdisciplinary environments where walls have been knocked down and desks don’t sit in rows. English language learners, Advanced Placement (AP) students, kindergarteners, remedial math students: they are all makers.

**Work Cited**

As a high school art educator, I constantly seek opportunities that help students connect the dots between their classroom learning and so-called “real” life, the looming, and often overwhelming, next step that happens when compulsory education ends. One of the more eye-opening opportunities in which students in my high school art classes participate is the collaboration with the Empty Bowls project in Tucson, Arizona. Empty Bowls, started in 1990 in a suburban Detroit high school by Lisa Blackburn and John Hartom, is now a national movement that is implemented on a local scale with local resources to address the issue of hunger in our communities (Blackburn and Hartom 20). Essentially, potters create and donate bowls, restaurants donate a variety of soups, and supporters purchase tickets and attend the event. Ticket holders get to choose a handmade bowl and enjoy the lunch provided by the restaurants while the ticket proceeds benefit the Community Food Bank (Hartom 99). Artists also donate a wide variety of art for a silent auction at the event. It is a strategically planned event that uses donated resources to benefit the Community Food Bank with very little initial output aside from planning.

In my twenty years of teaching in the art classroom, I have noticed a lack of young artists in our community who practice ceramics. Therefore, I was excited in 2012 when Jada Ahern, then the president of Southern Arizona Clay Artists (SACA), asked me to be involved with Empty Bowls because I teach high school ceramics classes. Over the next several years, a group of twenty to twenty-five students per year made a modest number of bowls to donate and they also volunteered on the actual day of the event. The Amphitheater High Art and Mural Club also hosted a Bowl-A-Thon in our school studio in 2016. A handful of experienced potters joined us to produce as many bowls as possible in four hours. The students completed the glazing later in class. All of the bowls were
donated and one potter later returned to class to continue working with the students on their throwing techniques. For young artists, this experience alters perception regarding the connection between classroom learning and empirical application of that learning. It enables them to focus on the reality of art in their lives after school.

Students in my classes are generally new to ceramics, apart from a singular clay assignment or two in their elementary and middle school art classes. As such, throughout the year, we work on building the technical skill that will allow them to produce work that can be included in the bowl portion of the event. Additionally, they are willing and capable workers so we help stage the event as a means of participation. Service to the community is a significant aspect of a well-rounded young person’s education. Moving tables and chairs, laying out tablecloths and setting up the bowls and silent auction are an integral way for the students to be a part of this event which includes makers and handmade objects as a piece of a real solution to an issue of social justice. In the process of unpacking and displaying the hundreds of donated bowls, the students discover favorites made by other artists. Viewing, exploring, and handling their own work next to the work of more experienced artists catapults the realm of possibility in students’ minds. Questions abound: “What kind of clay? How did she or he do that? Can we try to build that? Can we use a glaze like that?” Unpacking their own work this way creates a unique frame of reference that is unavailable in a classroom of peers. Their delight in discovering, comparing and imagining new work is, without fail, one of the highlights each time we participate in this event. This experience has provided the students with a vision of connecting their passion for art to the community around them in a meaningful and productive way. All of a sudden, making bowls is more than doing an assignment and earning credit for class but instead becomes the pathway to share social responsibility and a sense of community with people that share a common interest.

Although the donation of bowls and the community service aspects are the most tangible pieces of our participation in Empty Bowls, the personal connections that students make between their content knowledge from study of ceramics at school and the artwork at the event is a high point. Students visit with artists individually and examine objects empirically. One significant measure of learning is the ability to ask thoughtful questions about the subject at hand. As mostly novice artists, the students begin to ask about the differences between work from our low-fire studio and the high- or mid-fire work we see at the event, noting the differences in the quality of glazes and clay bodies. As a result, students have asked to add a mid-fire component to the curriculum to achieve the results they have seen in the professional work. The art students engage their existing knowledge in order to ask for clarification about techniques and processes the participating artists employ in the work available at the auction. Students use this new information as a starting point for individual research about new and
alternative processes. Exposure to the variety of unique individual knowledge held by each of the participating artists, paired with the introductory knowledge the general classroom curriculum provides, offers each student the opportunity to construct meaning that connects their learning and passion in an authentic way that transcends the classroom walls and impacts their quality of life as they navigate their way into the world beyond.

Note

1 For more information on Empty Bowls in Tucson, visit www.southernarizonaclayartists.org/E-Bowls.html

Works Cited

JUGAAD IN INNOVATIVE MAKING AND CRAFTING IN INDIA

Examining the Work of Sanjeev Shankar

Asavari Thatte

A little girl in Mumbai, India, wanting a board game called Business—the Indian version of Monopoly—makes one herself using cardboard, paper, dice, and pawns.

A facilitator in an alternative school in Pune, India, seeing the kindergarten children in her class collecting leaves, decides to use the leaves as learning material to teach adjectives. The children explore the leaves—one leaf is thorny, the other is broad, another one is round, and most of them are green.

An artist in New Delhi, India, creates an installation that uses discarded oil cans to make a canopy.

All three of these narratives share one commonality: local contexts, materials, and circumstances dictate actions and responses aimed at addressing emergent needs. In their making and crafting of objects, these individuals engage in organic processes that respond to the cultures, materials, place, and circumstantial needs of the time and context within which they are situated. Sanjeev Shankar’s Jugaad Canopy is an artwork that exemplifies this approach to creating using available resources. A suspended shade canopy spread over 70 square meters, the canopy was fabricated from 945 discarded cooking oil cans and was made for a public art festival in New Delhi, India, in 2008 (see Figure 11.1). The installation was made with the participation of ninety residents of Rajokri, an urban village near New Delhi (Shankar). In this interview, Shankar discusses how jugaad—an Indian cultural construct broadly referring to innovative quick-fixes or solutions springing from necessity and available resources— informs his creative and artistic processes and his life philosophy. Shankar’s work and words provide a lens for examining the potential of jugaad as a transformative tool in pedagogical,
curricular, and design contexts. In order to explore its potential for innovative making and crafting contexts, I present this interview through my personal interpretive lens of a designer, educator, and maker.

**An Interview with Sanjeev Shankar**

Asavari Thatte (AT): In your artist statement for *Jugaad Canopy*, you define jugaad as “attaining any objective with the available resources at hand.” Can you explicate how the construct of jugaad informs your artistic or creative processes?

Sanjeev Shankar (SS): As I look back, I realize that the philosophy of jugaad resonates with life itself. Each one of us struggles and makes do with what we have—especially in India, Africa, or such contexts. People are bound by constraints that are remarkable within those boundaries or thresholds. How can one be happy and content and achieve what you want? . . . [Jugaad] is a very powerful philosophy that challenges every a priori condition that we think is necessary to achieve anything. Jugaad for me became a very powerful force. It informed my life, and my every project. The jugaad philosophy is reflected in my work as I try to do more than what the mandate is—giving more than what you get. I think certain ideologies and philosophies go beyond the contractual mandate. Even if I
have an art, design, architectural, or research project, all of those things come together. I try to give more to the project, in the available resources, even if the client does not ask for it. In other words, my interdisciplinary sensibilities come together in my creative process.

The jugaad philosophy resonates with a much wider canvas. It is a Hindi, Indian term, but it is still relevant in any country, in any extreme context. You see people doing jugaad all the time—in some contexts more than others. I think jugaad has a lot to offer to many countries, and to many contexts.

AT: How was the community transformed as a result of their involvement in the Jugaad Canopy project? Also, how has this project impacted you?

SS: Many unexpected things came together in Jugaad. The community became involved and excited. That was a phenomenon in itself. However, there was a lot of resistance in the community initially. I was trying to do something that was not done before—with material that was never used in that context. This material [the oil cans] was considered as waste or filth. There was a lot of cultural resistance. I was an outsider in an urban village. I was up against a lot of these challenges. [I realized] sometimes, you just have to start and then people join you. By the end of the project, more than 200 people got involved. Initially the locals were giving [the oil cans] away for free, because they thought of them as dirty and as waste. Later, they started charging 80 rupees for a can. That itself shows a shift of consciousness—a shift of how communities start perceiving something and valuing it.

Even today after eight to nine years, [locals from that community] call me and invite me for marriages and festival celebrations such as Holi and Diwali; that itself is a very special feeling. The memory and the experiences live on despite the material thing having existed then gone away. Things change and communities get influenced. A lot of it is beyond words. The local communities see something transform in front of their eyes—something that none of us had imagined. Just overcoming obstacles and going beyond it showed a lot of unity—the force that took us forward.

The Potential of Jugaad to Inform Design in/and Curriculum

Jugaad is, I believe, an approach to living—of creatively attending to emergent needs using available resources. Jugaad has much to offer the reconceptualization of incorporating design in curricular contexts. A reconceptualization of design that moves away from design as a standardized, prescribed notion of problem solving to a more humane, organic response attends to and prioritizes local, emergent, and human contexts. The construct of jugaad can inform design and curriculum by negotiating the constraints afforded by the local contexts.
Pedagogy, teaching, and design inhabit the liminal space between the known and unknown (Irwin), and the planned and the lived curriculum (Aoki). Such an in-dwelling, argues Aoki, possesses the potential for socio-cultural transformation, as well as a transformation of the physical environment. Such a transformation, of which jugaad is consciously and unconsciously a part, is reflected in a child experiencing the empowering potential of creating a toy herself, the teacher perceiving the curricular potential inherent in children’s exploration of leaves, an artist creating art from mundane objects, and local communities experiencing a shift in consciousness and changed perceptions.

Note
1 www.sanjeevshankar.com/jugaad.html

Works Cited
In the West, when we think of spinning or knitting yarn, we may not think of a radical practice that has any particular pedagogical value. Of course, historically, spinning was a necessity. As Eamer notes, it was the way humans clothed themselves, created ropes, bags, and tents, and created sails to cross oceans. When I spin in public, I have an opportunity to talk about such histories, but I am often asked, “you know you can just go down to that big box store and buy some yarn for $4, right?” While that might be true if I were simply spinning fiber for practicality, buying $4 yarn does not have the same pedagogical value as actually producing the yarn myself. For instance, the artist Oliver Herring produced hand-knit mylar and tape sculptures throughout the 1990s in which the accumulation of incremental stitched units marked the passing of time. In fact, he has stated this series was less about knitting and more about what knitting gave him, which was the time and space to mourn the death of a prominent figure in his life. The sheer isolation he felt in creating his knitted sculptures for almost a decade led him to produce more improvised and performative work, first with friends and later with strangers. Certainly knitting, for Oliver, was more than the product or even the process. Knitting taught him something about who he might become as an artist. Likewise, I am mindful of spinning as a potential pedagogy, and I wonder how other educators might ask their students to question what their own practices teach them, from the materials and processes used, to the sites in which they create or select to perform or present their work. At the forefront of such a potential lies the notion that a pedagogy becomes radical when it is less focused on optimization of and adherence to institutional demands or standards and more about investigating and building new social connections and structures. Place and time, therefore, can be defined together as a context that is tied to a radical pedagogy as we highlight the matters of where, when, and with whom.
Spinning and Knitting as Introspective Artivism

Political theorist Chantal Mouffe suggests a radical politics of abandoning existing power structures to form alternative social forms. However, she also presents a strategy, using “artivism” to engage differently within institutions. She argues that artistic practices can become critical artistic practices, or artistivist activities, as they engage with institutions to foster dissent and challenge oppressive structures. While the fiber arts like spinning, crocheting, knitting, and weaving do not seem like radical practices, as an art educator interested in the fiber arts I take note of Mouffe’s arguments since much of my creative work and scholarship function within multiple institutional spaces, including schools and various sites of research dissemination. Here, I return to a more quiet and introspective, broadly defined studio practice that focuses on a sustained inquiry on a material (fiber) and process (spinning that fiber) in relation to my own learning and artistic practice. Crafter Betsy Greer calls the “quiet activism” of an artist who is “motivated by social or political activism” craftivism when the craft invites “others to join a conversation about the social and political intent of our creations” (8). The roads on which I travel, my home, and the public places where I choose to perform become a living studio that is sensitive to place, time, and social practices. While I work thus with fiber, I challenge the institution of the studio, as well as myself as an institutional structure.

The Lived Practice of the Craft Studio

Contemporary artists are increasingly “choosing to engage with timely issues by expanding their practice beyond the safe confines of the studio and right into the complexities of the unpredictable public sphere” (Pasternak 9). Bruce Metcalf encourages craftspeople to move beyond the aesthetics of Modernism and start to examine ways in which their “practices are contingent on social life” (19). Many contemporary artists recognize the limits of the traditional definition of a studio space and are celebrating the affordances of an immersive life practice where art enhances and challenges standard ways of living, and living invigorates and questions conventional artistic practices. Similarly, Suzanne Lacy states, “Artists committed to a social practice encounter the street with openness, pay attention to the details and images and bits of information, and seek connections according to our personal histories and political perspectives” (320). Lane Relyea describes “post-studio approaches” as a living network that “no longer distances the artist from society, no longer holds out that kind of separate identity to the artist” and the studio is “no longer identifie[d] as separate and resistant or self-determining the artist’s materials or medium or labor” (349). While not every craftsperson will find value in moving beyond a walled studio or craft room, I will illustrate my own inquiry into these ideas as I share one particular work that I created through spinning.
For me, learning how to spin fiber into yarn quickly developed into a deeper exploration into time, movement, place, material inquiry, and memory. In 2013, a curator asked me to create a work of art for an exhibition in response to
the concept of pilgrimage. I spent a year creating *A Pedagogy of Reach* (see Figure 12.1). To create this piece, I converted my own reach of 71 inches (from gripped fingers of one hand to the other) into miles, then started traveling without a definite destination in mind, stopping at approximately 71 mile intervals for roughly 2,500 miles in total. At each stop, I photographed an object found at that location. I also took a screenshot of the location on my mobile device’s map, and then I took another photograph from the object’s perspective. These three images were used to create thirty-five triptychs that were exhibited next to a mile-long, handspun yarn made from local wool and milk protein fibers.

Place is a theme often discussed in contemporary art. Robertson and McDaniel suggest, “A place is an event, as well as a collection of tangible materials . . . and [as] events unfold in a specific place, they invest the location with historical significance” (228). As Herring’s work exemplifies in craft, spinning is a slow pedagogy that gives me time to mourn, but also time to transform what I think I know in a specific institutional space and to share that transformation with others.

Notes

1 Rejecting British-made cloth and spinning yarn, and making clothes indigenously in India was one of the early forms of activism and non-cooperation in the Indian Freedom movement led by Gandhi.
2 Please see oliverherringstudio.com/links.html

Works Cited


SECTION II
Access and Equity
II. ACCESS AND EQUITY

GUIMARÃES
BRAZILIAN DIY CRAFT

MCCANN
DOES OUTREACH EQUAL EQUITY?

PLOOF
TRICKSTER IS A BOUNDARY-CROSSER

WINGO & SHERIDAN
EQUITY & LEARNING IN MAKERSpaces

CIAMPAGLIA & RICHARDSON
TACTICAL PEDAGOGY

WEIDA
CHANGE THROUGH CRAFT

COLLINS
CAVE OF SECRETS

SPERRY-GARCIA ET AL.
COLLABORATIVE CRAFT AS SOCIAL PRACTICE

BLACK & RAMSEY
QUEER ACADEMICS HACKING PATRIARCHY

GARIBALDI
DEMOCRATIZATION OF A MAKERSPACE
Access and Equity visual map: Themes and emerging questions

Drawing: Lisa Hochtritt
This text about the do-it-yourself movement starts with a confession about my own education and a reflection on the division between art and craft that can build prejudice about handmade work as a meaningful but not formally educated process. Based upon my own experience, I raise questions about how we could approach the DIY movement in Brazil, a country that has a historical bias about handmade work, which was linked with slavery.

I am fifty-nine years of age. The daughter of a middle-class family, I grew up in a rural area but surrounded by books. My mother, an employee of the city post office, used to buy collections such as *Barsa Encyclopedia* and other collections of general knowledge. Also, she tried to teach me to knit, but my dreaming mind did not let my hands learn.

As a teenager growing up in a military dictatorship during the 1970s, the rebellion and counter-culture movements that ran in major cities also affected my small town. Despite having no clear consciousness about women’s liberation, this movement challenged the way I would choose to be in the world. I tried to fight stereotypes regarding the role of women in society where handiwork was considered a female attribute. As dictated by a sexist society, I too, like most middle-class girls, was expected to be trained in cooking, sewing, knitting, embroidery, and other crafts in order to be a good housewife. However, this did not interest me. I wanted to reject this bias towards the association between women and crafts, and become well versed in other arts, like literature, drawing, music, and cinema. But breaking this bias was not that simple. Growing up in a little town in Brazil, especially in the northeastern region, gave me visceral contact with the craft and folk culture of potters and makers of straw mats, quilts, and many other utilitarian crafts; many of these makers live quite simply.
This universe later became a large part of my research in academia. I realized that my childhood rejection of handmade work carried a lot of prejudice about how I thought about manual labor as not creative, smart, nor artistic. Looking back, I question whether my artistic choices were a form of petty bourgeoisie and colonizing white middle-class values. What can I say about my search for women’s liberation during which I did not consider women’s handmade traditions that sustain so many lives? In talking about my own history I am trying to contextualize how the division between brain knowledge and handmade work draws frontiers that provoke cultural and pedagogical misconceptions. In 1967 Alan Watts stated:

Our educational system, in its entirety, does nothing to give us any kind of material competence. In other words, we don’t learn how to cook, how to make clothes, how to build houses, how to make love, or to do any of the absolutely fundamental things of life. The whole education that we get for our children in school is entirely in terms of abstractions. It trains you to be an insurance salesman or a bureaucrat, or some kind of cerebral character. (Cited from PIPA, para. 4)

How does my narrative meet the DIY movement objectives? A Google search informs us that the trend of do-it-yourself is nothing more than the practice of manufacturing, recovering, or repairing something with our own hands without having to buy a ready, industrialized product or pay someone. Remember that this trend was one of the mottos of the hippie movement in which young people, mostly white and middle class, embraced the crafts as an ideology of life. Making things with their own hands was an approach that distanced them from a bourgeois lifestyle and ideology and a way to reject industrialization.

We are now seeing a renewal of the movement in the 21st century in several countries, including Brazil. Different from the 1970s, the contemporary practice of do-it-yourself wins a lot of strength and popularity through the Internet. On the ’net there is a never-ending stream of tutorials teaching people how to do woodwork, play instruments, learn languages, and especially, form communities of learners that are encouraged to do their own thing.

How to View the Do-It-Yourself Movement in the Brazilian Context

As a professor and teacher of art, I recognize that this movement can expand pedagogical spaces, engaging many people in different art and crafts forms. My challenge in accepting this is to consider how DIY reverberates in educated middle- and upper-class Brazilian society, which has been historically averse to handmade work.
In Brazil there is a tradition of devaluing the work, especially the manual work. Work in Portuguese is called “slave,” something that, according to the Portuguese, should be left to the Moors. In Brazil, a racial slur to set hard work is “work for black,” a direct reference to slavery. Even after the abolition of slavery and the introduction of salaried employment in factories, the work has never been valued, because the social order remained extremely exclusive. (Oliven 11)

This devaluation has settled the perception of manual work as a mechanical process, whose producers have neither creativity nor imaginative capacity and who are disconnected from mental prowess. How can a society that denies this kind of work engage in a movement that calls for people to use their hands and make objects by themselves? My hypothesis is that middle- and upper-class people may engage in this as dilettantes. A corollary to this is that DIY is a condition of the Brazilian lower classes and has always existed, not as a trendy movement, but as a resilient capacity, a necessity to everyday living. To frame this discussion, I present two cultural aspects of handmade production in Brazil: first, a vernacular design born from the daily life of recycling operations from industrial products; second, the longstanding traditions of the artisans’ creations that organize daily aesthetics and create an informal economy.

Lina Bo Bardi (2011) argues that the capacity of invention or reinvention of products accords with the needs of everyday life and is identified according to principles of usefulness and necessity. Their design is connected with the realities of need; technology is connected with human-oriented principles. Bardi understands handmade production as an anti-capitalist, revolutionary consciousness. To this author, what matters in production linked to everyday life is the potential of recycling to meet utility value. For her, poverty drives Brazilian craft and is its strength. This highlights an important cultural foundation of the country. Bardi places a distinction between the “pretty” production as the cute figurative craft pieces used as souvenirs, and other ones, related to a “simple” operation of transforming industrial waste into objects of “use and beauty” like candles made using useless industrial lamps. She strongly believes that popular art in the Brazilian context is never kitsch (see Figure 13.1).

Another way to understand DIY as part of Brazilian culture comes from Barbosa (2010), who works with craftwork and design to give visibility to women in the country’s art venues. Barbosa believes that prejudice based on social classes is still robust in Brazil, arguing that, “Everything made by the poor is labelled ‘craft’ or ‘folklore,’ not art. That contributes to the economic system, but at the cost of craftwork being undervalued culturally, artistically, and pedagogically” (196). All over Brazil we find women artisans developing their craft creations: embroiderers, dressmakers, quilters, potters, and many other types of makers who learned inside familiar contexts or acquired their knowledge and skills through other sources (Guimarães). These artisans are creating strong
networks of craft experience where women’s knowledge is not related to housekeeping. They are moving economic systems and (re)signifying cultural systems. Resisting is part of their knowledge and being.

Popular craftwork is part of Brazilian cultural, familial, and community history, and students and faculty in art and design majors could benefit from the knowing-how-to-be and knowing-how-to-do of artisans. This would also help deconstruct the hierarchy where certain kinds of knowledge are more aesthetically valid or have higher cultural and monetary value than other art forms.
According to George McKay, Professor of Cultural Studies at Stanford University in England, the DIY movement presents a potentially critical and historical sense of nostalgia. In his view, new generations can enjoy the experiences of older generations, which, in turn can be inspired with the energy and sense of justice of youth today. In agreement with McKay, I see the possibility to extend this to the experience of handwork processes.

In conclusion, I believe that we can join the DIY movement with a decolonizing gaze to understand historical issues surrounding the handmade in Brazil, heeding Lina Bo Bardi and Ana Mae Barbosa. Perceptions of do-it-yourself can be joined with the do-it-together perspective that our artisans teach us. I know that many young people in the movement are proposing collective forms of work to change realities that seem impossible to move. Educators must work with these youth and with maker communities, employing technology and art knowledge to develop a more egalitarian society, piece by piece, building justice and empowerment.

Notes

1 Barsa is a famous encyclopedia published in Latin America. It is widely known in Brazil, Argentina, Chile, Venezuela, and Mexico. It has published versions in Portuguese since 1964.

2 The northeast is considered a region rich in folk art manifested in strong traditions in visual and musical arts, and festivals.

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DOES OUTREACH EQUAL EQUITY?

Thoughts on the Impact and Challenges of Off-site Community Programs and the Struggle to Use the Arts in Achieving Social Justice

Sarah B. McCann

In this reflection, I consider “community/outreach” programs of arts non-profits that work primarily in economically sabotaged communities with populations that do not mirror the people they serve in their on-site programming. I prefer the term community (without qualifiers), for if we are really building community through programs outside our studio doors then we are building relationships and breaking down silos—a civic responsibility for a more equitable society. Making connections across difference ideally moves us towards challenging and changing ourselves. As we change, it becomes more possible to change the institutions and structures in which we exist that have been built on a history of white supremacy and the oppression of people of color. We cannot avoid this history in the United States; it is here even when we as a culture choose to disregard it. In The Black Book, Grandpre and Love use William Faulker’s observation that “The past is never dead.” They go on to explain that, “despite attempts to categorize historical events as irrelevant to the present, they have a tendency to continually manifest themselves. This is a good starting point to understand how past policies and biases have created the contemporary political system of anti-Blackness” (Grandpre and Love 4).

I have been involved in some incredible community projects that have challenged participants to discuss and transcend the painful history of racism and discrimination in the United States. These projects leave the space transformed and those that participated in the making having grown and healed as well. The best of these projects leave a piece of artwork behind that continues the dialogue with the public. Art-making projects can bring together folks that are different from each other to find space to be vulnerable, share differing points of view, and heal wounds inflicted through lives divided, histories hidden, and inequity
continued in the present. One memorable project was a mosaic facilitated in 2008 by Christina Ralls at the University of Baltimore with people who had experienced the 1968 riots; they were both Black and white residents of Baltimore City with very different experiences of the conflict. Two of these participants were Christina’s parents, white citizens of Baltimore who chose to leave the city following the events of 1968. All these individuals came together in a room to share reflections and stories and to create ceramic tiles for a Martin Luther King, Jr. mosaic now installed at the Y of Central Maryland Weinberg Center. In writing about this experience, Christina shares that,

Our greatest teachers are each other. If we are to go beyond the racial, generational, cultural, and economical boundaries that society has defined for us, we must come together to share and listen to each other’s experiences in new ways. It is from the intimacy of respectful interaction that we might accept and even embrace our differences and the tensions that might exist, and arrive at a greater understanding and working relationship with one another.

(Ralls n.p.)

How do we translate the growth and healing in a project like Christina’s into our work, both on-site and off-site in community? Creating a space in a neighborhood where young people can experience the joy of clay or jewelry or other crafts or fine arts sets the stage for transformation of the individuals involved and the space itself. It is possible to then transform the institutions and structures these spaces exist within. The divide between off-site locations and an organization’s main studio is more than physical when the participants’ race, socio-economic background, and other factors play into the equation. Gomez says, “Many who recognize social injustice must know what it looks like and feels like deep inside” (n.p.). I have witnessed microaggressions, outright racism, and acts of naïveté on the part of white participants in studios. “Many who have not or experienced relatively little injustice will not easily recognize inequity, right in front of them,” notes Gomez (n.p.). If a majority white studio space is created on-site and an organization commits to working off-site in communities of color, without anti-racism work being done by the white people in the space, how can the studio be a welcoming and inclusive space that is safe for all?

When our studios are segregated, we are missing an opportunity. Working to heal our historical wounds takes more work than just ensuring studio spaces are available and our classes located in diverse locations. We must also make sure we are prioritizing equity. How, then, do we, as arts administrators and teachers engaged in community arts, move forward? I have developed the following commitments to guide my own practice as a white artist and arts administrator. This list is applicable to a broad range of arts programming, including crafts and makerspaces, and I hope others can commit to them.
1. Keep funding and managing off-site community programs—the joy and love and community I have seen built in schools, community centers, senior centers, and other non-arts space is AMAZING. It is really and truly important work, but DO NOT stop there.

2. Find a local organization that does anti-racism work and have them train staff and artists who work on-site and off.

3. Require anti-racist training for the public that wants to use the studio and participate in programming. While I have not yet had the opportunity to test this, it could happen through hands-on workshops that would thematically address issues of race and privilege.

4. Diversify governance: Include people who are served in off-site programs in decision-making. Create funded seats on the board; hire from the neighborhoods you serve; add local artists born and raised in the area to artistic programming committees.

5. Hold everyone accountable. Do the work to ensure a deep understanding of equity issues as an individual and across the organization so microaggressions, outright racism, and other forms of discrimination at all levels of the organization are addressed.

6. Observe patterns and act accordingly—don’t excuse people for being racist. If there is a student, artist, or staff member that acts in a racist manner or makes racist comments, do not look the other way while these continue. Don’t make excuses for them or let them off the hook because you know they really are a “nice” person, “they didn’t really mean it that way,” or because of the high quality of their art. Instead, take the time and the risk of addressing it.

7. Remember that this work is hard, that you will make mistakes, and so will others. The more generous we can be, the better we will do. Just be sure to move from the stage of awareness to that of action and find a way to be accountable to people of color.

8. Create a cohort. Find people who also want to have greater impact against racism and support each other; keep each other on task; and care for, nurture, and challenge each other.

9. Be careful of falling into the trap of scarcity—if you are an artist who has spent time and money to go to an institution of higher education, don’t think that another artist who has come up through the community program and is receiving accolades is taking something away from you. Check your privilege.

10. Be vigilant in fundraising and how your funds are spent. Ensure that funds raised specifically to support programs in communities of color are used solely for that purpose; don’t use them to supplement your business model.

11. Find ways to support artists of color in starting and running their own studios and institutions.

12. Be honest, be vulnerable, and proceed with love.
As makers, we are able to envision what does not yet exist and use our hands and materials to create it. This is a skill that can also be used to have a greater impact on ourselves, our organizations, our communities, and the structures in which we live and work. However, the past is still present in the inequities we continue to see in the world today. Imagine what we, as makers, can accomplish if we use our skills of transformation to realize our civic responsibility to work towards justice and equity.

Notes
1 I think it is important to share a little about myself as you read through this: I am a female, white artist, and arts administrator.
2 You may be more familiar with the terms marginalized, underserved, and vulnerable. However, when we study the history of how our urban and rural communities have come to the extreme poverty in which they exist, it is often a series of purposeful decisions made to take advantage of, profit off of, and in other ways disinvest in communities because of race, wealth, and other social factors.
3 This can be racially, economically, ability level, etc. and all forms of discrimination are harmful. I will focus primarily on race here; it is the form of discrimination that impacts all other issues.
4 You’ll notice that “Black” is capitalized while “white” is not. Quoting from Dottye Burt-Markowitz of Baltimore Racial Justice Action (BRJA) in an email exchange with the author:

   There are many different ways of dealing with capitalization of terms like “white,” “black,” “people of color.” At BRJA we do not capitalize “white” or “people of color,” but we do capitalize “Black.” We have a very specific rationale for this. Capitalization generally applies to Nationality, not race. The enslavement of Africans robbed the descendants of enslaved people of knowledge of the countries of their ancestors, so the term “Black” substitutes for the national identity that was taken away by slavery. “White” on the other hand is a term that was used to define who had rights and privileges in this country and continues to carry the racial privilege that those seen as white carry; white people have the ability to claim the nationality of their ancestors (although many gave up that identity in return for whiteness). “People of color” is a term (often used as a euphemism for avoiding naming Black or African American people) that provides a shorthand for naming people who are not white; it came into use as a way of avoiding the term “non-white” which centers white people rather than those who are the targets of racism.

(Email to the author)

Works Cited
CONTRADICTION AND ANSWERING BACK

Trickster in the Makerspace for People with Disabilities

John Ploof

Little City was established in 1959 by a group of parents who envisioned a place near Chicago where family members with developmental disabilities could live meaningful, productive, and dignified lives. The current art + makerspace at Little City was preceded by Project Vital, a video training program created in 1985 for people with disabilities to learn video production, including studio, camera, and editing skills.

I arrived on the scene in the mid-1990s to work on a project involving collective art production that today might be called socially engaged art. This story revisits an early moment inside Little City that emerged during my work with Charles Beinhoff, an artist and maker born in 1939, who passed in 2007. Charles’s obituary states that, “He attended art classes at Little City, where his drawings were featured on holiday cards and at various art shows” (“Charles Robert Beinhoff” n.p.). Herein is a story about the production of those cards that grapples with understanding the utility of “contradiction” and “answering back” within Little City, a program that I consider as an art + makerspace for people with disabilities.

Our first fundraiser was pretty much a failure. The artists, many of whom had developed an accomplished art practice, were not at fault. They had produced holiday cards that reflected their familial traditions including Kwanzaa, Hanukkah, and Christmas; however, at the close of the first season, most of the cards were left unsold, especially samplers that bundled together the various holiday traditions. Honestly, this project felt, to most people, like a distraction from more serious work; yet, a burgeoning entrepreneurial spirit and potential capital propelled the project forward. The second year, we agreed to try again with a new approach that was geared to appeal to a broader audience: seasonal cards or, as collectively determined, cold weather cards. I got to work making sure that everyone was
off to a good start, beginning with Charles Beinhoff. After making my way around the room, I circled back to see how Charles was doing and I could not believe my eyes.

Charles had drawn the interior of a cabin that pictured its inhabitants frozen to death in their bunk beds. Icicles clung to the contours of their bodies and encrusted their bedframes, and a pool of translucent blue leaked its way across the floor.

“Interesting point of view,” I said, trying to contain my surprise.

“The whole cabin got frozen,” he said.

“Yes, I see,” I replied.

“They are all dead,” he continued, and then, slowly, as if to underscore the fulfillment of an invisible rubric, he looked at me and said, “it is a cold weather card.”

What sense can be made of an event such as this that confounds expectations for the outcomes of an art curriculum and, at the same time, satisfies it so perfectly? Charles Beinhoff was no stranger to navigation of this sort. He often seized the moment to cross the boundaries of curricular initiatives with situational irony, a literary device that shifts the plot in unexpected ways. Charles shifted a generic curriculum to one of his own design. In doing so, the cards he created ventured away from the cheery holiday scenes produced the previous year to portray mundane circumstances from his daily existence. As he often did, Charles summoned the morbid and surreal to combine with humor and absurdity, a combination that served him well to evidence the rancor of life. Rather than a stereotypical holiday scene, Charles used these tools to portray a litany of references to his daily existence, all within a state of freezing cold. But he didn’t stop there.

Extending from the cold weather cards, the frozen theme took on an expanded role in Charles’s work through *Frozen City*, a self-produced picture book that included depictions of his house, a frozen car, and other makers—Tarik, Kathy, Harold, Peggy, Eric, Andy, Mike, and Luke—all frozen solid. It shows a frozen stairway, dehumidifier, seat, television, kitchen appliances, dining room table and chairs, air conditioner and window, toilet sink and shower stall, desk, and bed, and concludes with an image of “Frozen Charles Beinhoff” peering out at the viewer from the back cover (see Figure 15.1).

Artists produce work for other people to see, and this is undoubtedly true of artists with disabilities. What did it mean to disentangle the subject-position of holidays from the stereotypical representations of holiday cards and to remake them in this self-directed way? Institutions are hard-wired for sorting people into roles that regulate, control, and pervade our everyday existence. Creating spaces where the social dynamic is more democratic and works to value the labor and perspectives of people with disabilities calls for more egalitarian conditions in the workplace and a porous curriculum, grounded in the poetics and politics of everyday life.
FIGURE 15.1 Charles Beinhoff, *Frozen Charles Beinhoff*, ink on paper, 8 1/2 × 11 in. Courtesy Little City Foundation
Looking back, it is easy to see the many ways that operations at Little City parallel the culture of makerspaces, more than other models of art education. Did the context of the art + makerspace contribute to how Charles was able to contradict and answer back to the “art curriculum” in self-determined ways? Did it support his efforts to cross boundaries between what was expected of him and what was possible?

Trickster is a boundary-crosser. Every group has its edge, its sense of in and out and trickster is always there, at the gates of the city and the gates of life, making sure there is commerce. (Hyde 7)

Recasting hierarchical institutional structures is well within the role of the “trickster,” as described by anthropologist Lewis Hyde. He writes that the trickster, across cultures, uses the process of crossing boundaries to “shape this world so as to make it a hospitable place for human life” (8). The culture at Little City created new possibilities for self-directed learning and fostered more democratic social interactions between participants and staff. Similar to the culture of many makerspaces, at Little City we focused on creating access to a broad array of learning arrangements (Sheridan et al.), including various technologies, art and craft supplies, stations with tools and both discrete and common spaces for making. This design was conducive to a cultural component that is common to other makerspaces: a community of practice (Lave and Wenger; Wenger).

Four key procedures were imperative to constituting a community of practice in this context: hiring residents to staff and run the center; designing a choice-based environment for self-directed work; fostering a positive disability culture to support the vision of individuals; and actively challenging inappropriate or unjust institutional norms that might otherwise remain frozen in time. This combination operates to support the work of artists while simultaneously problematizing the concept of disability across and through the predispositions and confines of the institutions where we meet and work.

Reflecting on the pedagogy embedded within the project at Little City illuminates how the processes of contradication and answering back were made more possible. Considering the culture of Little City through the lens of makerspace, and as a site for the production of socially engaged art (Helguera; Thompson) rather than as school or atelier affords a different and perhaps more complex reading of the social dynamic between participants, curriculum, and the site of production. Within a culture that questions given social norms and realities, creating a self-determined viewpoint other than the dominant perspective was not only possible, it was encouraged. In this way, the processes of contradication and answering back provided significant resources for decentering curriculum and making way for self-determined narratives.

Charles went on to make other holiday cards including one that pictured the earth from outer space that became a top seller. Sadly, none of the frozen scenes
ever made it through to publication. This contribution is dedicated to Charles Beinhoff and to the image he created for publication that has, at long last, found its way into the world.

Works Cited


At the makerspace I’m not just making stuff, I’m remaking myself.” Mrs. O., a former pharmacy manager and mother of seven, details how participation in a Detroit makerspace helped her recover self-worth after a traumatic brain injury. After months of sitting on the sidelines as she brought her children to the space, she slowly joined in: when her son “earned a bike” by learning to repair it, she opted to do the same. But watching her daughter silkscreen really “lit a fire.” “So many things since my accident just depress me about how much slower I am, how much I have lost . . . But I’ve never silkscreened before, so I’m not comparing. I’m just learning at the pace I’m learning.” Over time she moved from learning the basics of silkscreening to developing a small business from it and mentoring others on what she learned.

Maker movement supporters often announce themselves and the movement through manifestos about democratizing manufacturing, revitalization of community, and a return to a do-it-yourself ethos (Hatch). At the same time, critical attention as to whose “making” is viewed as innovative; who is left out of maker movements; and how race, ethnicity, class, and gender affect access and experience in makerspaces is on the rise. As the maker movement gains influence in education, educators need to examine how these sites serve, and fail to serve, all learners (Calabrese et al.; Halverson and Sheridan). Following Nasir et al.’s argument for the value of case studies of successful situations for traditionally underserved populations, we draw insights from case studies of two spaces, Mt. Elliott Makerspace in Detroit, Michigan, and ARTLAB+, housed in the Hirshhorn Museum in Washington, D.C. At both, participants are comprised primarily of African-American youth and families. In particular, we focus on how these spaces are attentive to potential barriers to participation and support diverse routes to learning.
Unlike many makerspaces, ARTLAB+ and Mt. Elliott Makerspace do not charge admission or membership fees. Free access is important to youth who often describe how making distracts them from their lack of money; one teen digital music maker explains: “I’m not minding I don’t have money in my pocket when I’m doing what I love, when I’m makin’ what I would be spending money on.” They are also both “drop-in” spaces, meaning anyone can come in while the space is open. At Mt. Elliott, it is not uncommon to host participants ranging from toddlers to senior citizens. ARTLAB+ is explicitly restricted to teens, but any teen is welcome to drop in. ARTLAB+’s mission statement explicitly espouses that it seeks to be “radically inclusive” and a frequent refrain among mentors and teens in the space is “Everyone is welcome here.” In both spaces people work also to create a safe community. Members in each space collectively created mission statements and rules that adapt to the needs and wants of participants. The community addresses how it handles issues such as protecting personal property and community equipment, and what kind of behavior is acceptable in the space.

Both spaces are designed to attract participants beyond those who already know they want to come. Mt. Elliott members often participate in soup kitchens, neighborhood parades, and other community events to invite people who do not think of themselves as makers to join in. In the ARTLAB+ space, there are “social hubs” where teens bring friends and just hang out, play video games, and chat. Youth who may not identify as makers, artists, or musicians feel like they also belong in the space. Mentors join in to develop rapport and to naturally find out teens’ interests.

Both spaces encourage diverse routes to learning. They are designed to invite exploration: tools, materials, and equipment are out or in well-marked bins. Mt. Elliott is divided around “shops” that help separate spheres of action, such as the woodshop from the screen-printing area, but activities are visible throughout the shops. There is an inventive and adaptive approach to learning and teaching. At ARTLAB+, mentors are exploring the use of “blip-shops,” quick workshops on topics such as music editing that can be offered more frequently and require less initial commitment than their more extended workshops. A certification process is used to gain access to certain equipment/processes; the participant’s achievement is marked with the clang of a loud gong and everyone cheers. Peer teaching and mentoring is common and expected: two eleven year olds at Mt. Elliott proudly cite teaching several hundred people to solder. There are also larger collaborative projects: Mt. Elliott youth built a woodshop in their space, including framing walls and wiring alongside professionals. At ARTLAB+, four Black teens applied and were selected to produce and create a short video for the Black Male Identity project. Teens came up with questions such as, “When and how are we going to change the future for the better?” and, “Why do 50% percent of Black males drop out of high school?”
Our aim in this brief account is not to capture the richness of practice in these spaces (for fuller accounts see Sheridan and Konopasky; Sheridan et al.; Wingo). Nor do we aim to provide a recipe on how to make a more equitable makerspace. What we suggest here is that the maker movement has potential to support innovative and equitable learning, and that looking at cases of underrepresented participants can help the movement move beyond its manifestos, anticipate and remove potential barriers to participation, and ensure that everyone really is welcome to participate.

Notes
1 The case study at Mount Elliott Makerspace was supported by a National Science Foundation Cyberlearning Exploratory grant: Award number: IIS-1216994.
2 Both spaces are funded primarily through grants.

Works Cited
Calabrese Barton, Angie, Edna Tan, and Day Greenberg. “The Makerspace Movement: Sites of Possibilities for Equitable Opportunities to Engage Underrepresented Youth in STEM.” Teachers College Record, in press.
Early proponents of the maker movement argued that the installation of makerspaces in K-12 schools and public libraries would help democratize learning. By providing access to these technologies in a hands-on, non-traditional classroom environment, these youth makerspaces would promote the learning of 21st-century skills associated with both engineering and design practices: creativity, critical thinking, collaboration, and problem solving (Blikstein; Dougherty; Martinez and Stager; Torrone).

As socially engaged artists and educators who use emerging media in our practices, these predictions about the burgeoning youth makerspace movement piqued our interest. But the initial rush of seeing young people using cutting-edge technologies such as 3D printing gave way to the realization that, in many cases, the experiences actually offered to young people were very limited. Many youth makerspaces seemed to feature cookie-cutter, objective-focused projects with a fixed endpoint: young people could 3D print a keychain that they customized from a restricted menu of options, or affix a marker to a vibrating motor to create a “drawing robot.” It was also apparent that the majority of these makerspaces were in schools and libraries in affluent white communities, effectively undermining the claims of access and democratization originally proffered about the makerspace model.

We saw these developments as a missed opportunity and we set out to create our own version of a youth makerspace, one with a focus on the artistic process that would embrace experimentation. We called it the ArtMakerSpace, a pop-up, drop-in, art and technology happening that simulates an artist studio atmosphere in an informal community setting. In an ArtMakerSpace, participants are encouraged to experiment with materials—user-friendly, age-appropriate
electronics and art media—as artists do. The result is simple, but not simplistic, interactive artworks.

Since 2014, we have partnered with community arts and social service organizations in diverse Chicago-area neighborhoods to offer ArtMakerSpaces as social practice events. We specifically choose partners in low-income communities whose members are traditionally underrepresented in the arts and technology. We bring the electronics, plus low-cost and repurposed art materials, such as cardboard, masking tape, and twist-ties to our community partner’s site. (Our choice of materials is both deliberate and practical. We believe that using inexpensive and repurposed materials promotes sustainability. Plus, it is imperative that we keep programming expenses at a minimum, as we are supported primarily by small grants.) One by one, as young people arrive, we introduce them to the electronics, set them up with materials, and encourage them to explore.

An ArtMakerSpace is not driven by rigidly predetermined outcomes. Instead, it is a space where participants manipulate media, play with form, and explore audience and interactivity. The atmosphere is deliberately less structured to encourage interest-driven making. We act as facilitators, prompting the participants to think critically about the materials by articulating their observations. We ask, “How does this servo motor move?” “What does that motion sensor do when you wave your hand in front of it?” We prompt the youth to connect these materials to their everyday lives: “What things do you know that move like this, or make a noise like that?” Finally, we ask the participants to imagine and build a new object that combines the electronics with art materials, i.e., an interactive kinetic artwork. This is an iterative creative process and also a leisurely conversation. We step away and give each young person the space to try out ideas. Then we return to offer help analyzing and solving any design or engineering issues that arise (see Figure 17.1).

While the ArtMakerSpace involves learning, we do not see our process as didactic instruction. Rather, our goal for this and all our work is a kind of radical co-creation. We bring the resources and the technical skills, along with years of experience facilitating group work and a commitment to socially engaged collaboration. The young participants bring their own lived experiences as youth in Chicago, including an innate curiosity about the world, an interest in technology, and a desire to express themselves through art. The ArtMakerSpace intersects both making and education, but ultimately we consider it to be our own artistic practice: our work exists when these elements—the young people, the materials, ourselves—come together in a community; it is realized in the shared experience of the event.

Our ArtMakerSpaces have antecedents within the art world. We are influenced by Experiments in Art and Technology (E.A.T.), a collective co-founded in the 1960s by engineers Billy Kluver and Fred Waldhauer, and the artists Robert
Rauschenberg and Robert Whitman. Like E.A.T., we bring together emerging technologies and engineering concepts in an artistic context. In one way we are markedly different, though: the ArtMakerSpaces are intended for all community members, not just professional engineers and artists.

We also link our work to the public happenings produced by Thomas Hoving in New York’s Central Park in the mid-1960s (McPhee). He established a playful social space in which lay people could work alongside professional artists building cardboard cities. However, holding an art-making event in a giant public space such as Central Park is a bit like building a makerspace in a suburban library: technically it is free and open to the public, but some communities—especially those that are already well-resourced—are likely to be overrepresented. Simply providing access is not enough to ensure broad participation.

In Chicago there are many culturally rich communities that routinely face inadequate funding and resources for schools and libraries. Parents in these communities hunger for learning opportunities for their children on a par with those routinely offered in more affluent neighborhoods. That is precisely why we deliberately target these communities. As such, we see the ArtMakerSpace as tactical pedagogy. The scale of our project may be relatively small, but we work strategically, directly engaging young people with emerging technologies in a critical and meaningful artistic context.

FIGURE 17.1 A family collaborates on a helicopter with rotating blades and blinking lights at an ArtMakerSpace event at ElevArte Community Studio in Chicago. The father expressed frustration in finding resources for his daughters to learn about engineering. He thanked us for facilitating an ArtMakerSpace in his neighborhood as it gave him and his daughters an opportunity to explore their interest in engineering together.

Photo: The Plug-In Studio
Works Cited


Craft and Activism in the Classroom

I have experimented across several artistic media, as an artist and teacher, but I have always been particularly drawn to the crafts, such as ceramics, basketry, and fiber. This “soft stuff” has enthralled me, and also helped me to make sense of intuitively felt connections between activism and feminism in education. My research into and teaching about craft has been inspired, in part, by Glenn Adamson’s definition that encompassed objects, along with deeper approaches, attitudes, and actions of craftspeople. His writing and my own work have cultivated an integrated and collective sense of making, talking, and writing about craftwork that has informed my work and the resources I use when teaching young people.

In one project, together art education students and I explored the International Fiber Collaborative (IFC) and its *Gas Station Project*, a collection of panels from individuals and communities that question oil dependency. Founder/artist Jennifer Marsh, working with on-site volunteers, connected panels sent from around the globe into a quilt, and draped the massive covering over an abandoned New York gas station. Through their creative processes, global makers—including students I worked with—represented multiple ecological realizations, for example that petroleum fuels the transport of fiber, or that petroleum is often an ingredient in yarns and fabrics, inspiring shifts in processes and materials. Other contributors reflected on ecology by depicting indigenous plants and wildlife threatened by hydrofracking. The ephemeral installation of the *Gas Station Project*, a sort of Christo-meets-grandma’s-knitting-circle endeavor, remains catalogued in online photographs and captions.¹
Although this project’s installation has come and gone, students engaging with fiber and issues such as historical labor conditions might explore or recreate the ongoing Sewing Rebellion. Founder Frau Fiber invites participants to alter, mend, or make garments as political action against mass production and pollution. Classroom communities can fashion clothing, combat consumer complacency, and lessen environmental footprints through craft and political expression.

From Possibilities of Pussyhats, Exquisite Uteri, and Pedagogy . . .

More recently, I introduced similar fiber projects to graduate students for consideration in their own future classrooms. Especially with the recent presidential election and Education Secretary appointment, students hunger for contemporary forms of activism and making appropriate to their classrooms and students. Some of the graduate students explored K–12 involvement with the Pussyhat Project and its intended purpose during the January 2017 March for Women, subsequent rallies for related causes, and ongoing town halls with local representatives. Like the Gas Station Project, the Pussyhat Project invites makers to identify, reflect upon, and record their purposes in contributing to this collaborative work. One student, for example, commemorated a deceased feminist relative. Pussyhat makers send cards to marchers along with the hats, describing their reasons for making and inviting further response and dialogue.

Though the Pussyhat Project has been criticized as a movement for its emphasis on cis-gendered, white, and middle-class women in the symbolism of the color pink and/or reference to female genitalia (St. Félix), it was inspired by mass outrage towards grabbing women by the “pussy,” as well as meant as a broad celebration of a diverse craft ethos and feminist craft traditions. Though not unproblematic in its complexities, the Pussyhat Project represents ongoing, large-scale political dialogue that encourages involvement from diverse participants.

Other craft activist projects involve greater creativity and personalization in the very design of the individual contribution. Through them, students delve deeply and directly into iconographies of female bodies and related politics using aesthetic means. Some advanced students I have worked with have gravitated towards the Exquisite Uterus Project, inspired by the surrealist exquisite corpse game and created by curators Klebesadel and Gates, inviting makers to transform plain cloth with a line drawing of the uterus into individual representations of restrictions on female reproduction (see Figure 18.1 for an example).

Anonymous submissions and group projects included reflection on local reproductive care, concurrent voter registration, and other volunteer activism relating to reproductive rights. When explored together, these fiber projects and grassroots activities become practices of philosophy, integrating political statement with artistic production.
To Craft Collectives and Craft Curriculum

In theorizing and justifying craft curricula in my own teaching, I am working to reconcile craft and activism with resources like The Craftivist Collective. Founded by Sarah Corbett and other artists, this group promotes gentle protest, combining craft with investigation of global issues. Their manifesto offers useful suggestions for exploring craft and activism: valuing slow efforts in craft and action; elevating and integrating craft as an activist tool; connecting crafting and contemplation so that creating objects and generating movements can become parallel activities that inform one another; cultivating small-scale action and imperfections in grassroots communities and craft communities; and focusing on values of humility, provocation, positivity, and change. The element of care present in this form of craft and activism connects threads of grassroots action with creativity.

The Craftivist Collective also emphasizes “hands, hearts, and head” to engage young people through artistic expression (Barnes 52). In relating contemporary craft with important art/craft history, Black Mountain poet-potter M. C. Richards, who was a disciple of Waldorf Schools’ founder Rudolf Steiner, can be illuminating. She stands out as a foremother of craft and activism in education,
with her synthesis of deep ecology, philosophy, and craft practice. In her 1973 address to craftspeople, Richards urged, “there’s a connection we ought to make between what we ‘profess’ as creatures sensitive to form, and what we practice in community” (9). From my perspective, this guiding voice deepens our practice as creators of objects as well as movements.

Conclusions: Continuing in Craft and Activism

Critical theorist and educator Henry Giroux reminds us that, “Hope at the moment resides in struggling to reclaim the radical imagination and . . . fresh educational opportunities to create a new language for political struggle along with new modes of solidarity” (n.p.). Activist craftwork stands at the forefront of new political language, with all its possibility to build community and creativity. As craft and activism has yielded craftivism, we must seek fresh terms to characterize feminist activism in the crafts. Feminist art offered feminist collage as well as femmage, and it is time to embrace feminist craftivism, womanist craftivism, or yet unknown feminist craft hybrids.

Notes

1 ifcprojects.com/the-gas-station-project/
2 For more information, please visit sewingrebellion.wordpress.com/about/
3 www.pussyhatproject.com/
4 exquisiteuterus.com/
5 craftivist-collective.com/

Works Cited

Cave of Secrets is a place where handcraft and industrial production merge in the realm of textiles. Within this installation are artworks made with a manually operated knitting loom used as a sculpting tool, producing fabric in three dimensions that manifests as body parts, and fabric that is slashed and repaired and reveals wounded flesh and eyes crying (see Figure 19.1). One of these is the Fat Curtain, handloomed with Japanese silk—a complete labor and extreme physical effort of repetitive motion for the creation of a big saggy skin. At the other end of the production spectrum in the realm of high-tech and industry are artworks on the door, floor, and walls, made in partnership with various factories who specialize in the fabrication of interior and fashion textiles. In some cases, the machine-made pieces are re-worked by hand, stitched over hours and hours, returning to the toil, combining the efficiency and precision of technology with the irregularity, slowness, and touch of hand. The artwork invites viewers to consider the spectrum of labor in the process of making.

The West end of the room is the female side, with a blood-red nailed leather wall, a framed textile piece called Specimens that is a sampler of knit vulvas, and the video archive of a lesbian soap opera called Room for Cream. The East side is gendered as male, with black wallpaper, confrontational artworks, and Gregg Bordowitz’s video entitled Lectures on Masculinity.

Cave of Secrets is a dreamscape of objects that hold light, secrets, sorrow, elation, mystery, violence, deep and utter despair, hidden meanings, the unknown. It is a body both male and female, and an emotional chamber—an empty room full of secrets and stories . . . a dark tunnel. It holds Euphoria, the sinister path to euphoric states, a dark passage to dreams and emptiness, Dystopia/utopia, Light in Darkness, Sensations, Surrealist Tunnels, Dreamscape, Hypnosis,
Shadows, Caves, Landscape of Interruptions, Portal Seduction, Decadence, Darkness, Mystery, Love. Moving through this work offers viewers opportunities to experience what we might normally perceive as contrasts and opposites (handwork and industry, female and male, art and craft), as co-existing, intersecting and present in the same space, the same moment, in us.


Media: digitally printed carpet, wallpaper, leather, nails, wood, welded steel, rayon jersey, silk chiffon, and silk wool gauze with knit-grafted wool, cotton, lurex, rayon yarns, jacquard knit and woven textiles, two-way mirrors, video monitors, videos, fluorescent gels, headphones, speakers, casters, peephole

Photo: Corrado Serra
In the work of some potters and other clay craftspeople, the labor-intensive processes required for materials preparation, kiln building, and kiln firing are most efficiently achieved through communal group effort. Although these tasks can be accomplished by individual craftspeople, when shared, the labor required in such efforts both reflects and exemplifies the centrality of collaborative practice.

Many groups of individuals working together in collaboratives respond to social, health, and basic human rights needs. A critical need in many parts of the world is the lack of adequate access to water. Collaboratives in the form of non-profits, education outreach initiatives, and service learning endeavors offer affordable, community-based efforts to address this basic human right.

Artistic collaboratives adopting cultural and professional protocols as inspiration and medium for artistic production reflect what scholar, artist, and museum educator Pablo Helguera and others call social practice or socially engaged art. The four stories in this chapter are brief meditations on the intersections of each author’s relationships with social practice, process, collaborative craft, and water access.

**Stephen’s Story: Ceramic Water Filters as Collaborative Craft and Social Practice**

One in six people lacks adequate access to clean water. In response, affordable ceramic water filters developed in Guatemala by Dr. Fernando Mazariegos of the Central American Industrial Research Institute (ICAITI) render contaminated water safe to drink (Potters for Peace). Comprised of clay, sawdust, and colloidal silver, the filters are more than 99% effective against waterborne disease. The technology and ethos of the filters have been adopted by organizations such as
Potters for Peace, Potters Water Action Group, Potters Without Borders, and university-community partnerships like PureMadi, and Reservoir Studio. 

Through Reservoir Studio, I conduct public performances with colleagues, students, and community members under the name Collaborative Creative Resistance (see Figure 20.1). The performances are at once actual and symbolic forms of socially engaged craft practice (Helguera). As public pedagogy, the performances render visible the labor and benefits of socially engaged craft. Informed by craft traditions and social responsibility, the centrality of clay in the production of the filters and the performances recalls the words of poet Estella Conwill Majozo, “to search for the good and make it matter: This is the real challenge for the artist. Not simply to transform ideas or revelations into matter, but to make those revelations actually matter” (88). While individual efforts of lone artists are often extolled, collaborative craft practice as social engagement should also matter.

Christen’s Story: Food Production and Consumption as Collaborative Craft and Social Practice

When I moved to Lumberton, New Mexico, some friends taught me how to make flour tortillas. Our tap water came directly from the Navajo River, untreated. Forced to source clean water from a neighbor’s well or a military
tanker for the tortillas and other food uses, together my friends and I would craft and consume the tortillas. This memory came flooding back to me as I was working with Reservoir Studio a few months ago. Now living in central Pennsylvania, my sons and I make tortillas at home. Unlike in Lumberton, we now have the luxury of using our home tap water to make the masa (dough) to which we add food coloring, a metaphor for multiplicity, hybridity, and border.

Social theorists Nick J. Fox and Pam Alldred posit, “new materialism de-privileges human agency, focusing instead upon how assemblages of the animate and inanimate together produce the world” (399). In the act of consuming flour + water—the tortilla—(the inanimate) and community (the animate) come together to form an assemblage. An event of multiplicity (Nail 22), the intercultural conversation that occurs in the process of crafting and consuming tortillas creates an assemblage of making, craft, research, activism, pedagogy, and art.

**Felix’s Story: Murals as Collaborative Craft and Social Practice**

In 2012, I joined an initiative that brought together community partners, local business people, professional artists, and Cincinnati teenagers to create opportunities for learning, social connections, and awareness about the city through public art. Modern mural making is a craft often connected to radical politics, activism, empowerment, collaboration, sense of community, and public pedagogy. I conceptualize my mural work as opportunities for artists-educators, teenagers, and local communities to see aspects of our social context as open for transformation (Freire). In a similar collaborative experience that took place in 2015, I worked with Professor Carpenter on a project that focused on developing spaces for young people to participate in making clay filters as creative interventions responding to the global water crisis. Speaking with U.S. American youth about the water crisis in the context of the African diaspora evoked memories of my older siblings fetching water from a well in the Dominican Republic. Moreover, this project has helped me to think more critically about the fluidity of social practices across various crafts. While each craft has its own potential for social activism, mural and clay filter making offer similar opportunities for public engagement, identity reflection, a sense of belonging, and responding creatively to the needs of various communities.

**Xalli’s Story: Drawing as Collaborative Craft and Social Practice**

As a Mexican artist-researcher, I channel the aesthetic agency of drawing to awaken individuals’ creative potential for reimagining their place in reality.
My work combines Helguera’s concept of socially engaged art (SEA) and participatory performance art as I use drawing both relationally and physically through the act of trace-making. Inspired by film director-pedagogue Gaston Kaboré who says, “I am a storyteller, drawing water from the well of my culture” (Martin and Kaboré 168), I conceive identity as refraction in the micro-communities I craft, from a perspective that deconstructs people’s notion(s) of “difference.” During a 2016 drawing workshop I conducted in Chiapas, Mexico, I learned about how the river Jatắte was cosmologically regarded as a sacred life source. The participants and I then drew it together on the market walls. Drawing water became an act of meta-weaving the mythical narratives through which the community made sense of their world. When I started to consider drawing as my way of craft, relationally, I found inspiration in Joseph Beuys’s social sculptures wherein drawing becomes a phenomenon that happens not only as a visual trace on a surface, but rather is performed holistically in the process of sharing the experience of encountering reality through the eyes of an artist.

My spring 2017 project, Political Portrait, facilitates encounters between different people who simultaneously draw and converse about their perspectives on otherness. By crafting a drawing community in this sense, people can find potential ways to resolve conflict through aesthetic dialoguing/creating. This kind of art thus draws from the well of creative emancipation to conduct an experimental project for a different kind of democracy.

**Thinking in Water and The Process of Collaborative Craft as Social Practice**

Our process of thinking literally, symbolically, and theoretically in and through water to craft this collaborative assemblage speaks to the power of arts-based social practices. In these four stories we attest to the power of craft—matter, material, making—as form, process, content, and context for activism, intervention, social awareness, and dialogue. Our collaboration is linked through dynamic, critical reflections on water that suggest ways activism and intervention about water can be taken up in public gatherings and social spaces to produce objects—filters, food, murals, and drawings. In these same spaces, we have also crafted new understandings, meanings, and perspectives about water and collaborations with others. In combining our four stories we have, in turn, worked as a collaborative to craft a range of social concerns, community relationships, and individual experiences unified by our various modes of access to water.

**Note**

1. See sites.psu.edu/reservoirstudio
Works Cited


TWO QUEER ACADEMICS WALK INTO A MAKERSPACE

Hacking Patriarchy and Knowledge

*Rebecka A. Black and Anna Ramsey*

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**Getting Off the Grid of Patriarchy: Anna**

Tucson, Arizona’s makerspace, Xerocraft, is positioned/envisioned to support community. People participate for a variety of purposes: some access financial self-support by creating items in the space to sell; some find friendship, learn skill-building, and practice self-care. I find access to large power tools. Gendered divisions of labor have historically segregated paternal and maternal knowledges, assuming eventual shared knowledge economies within heterosexual, monogamous partnerships. As a queer person, I sometimes experience deficits in my skill/knowledge economy. Part of my gender/queer identity enjoys employing “boy skills” in life and relationships. Using power tools to make things for myself is about getting off the patriarchy grid and stabilizing gender/queer agency.

I met up with a friend at Xerocraft’s WTF (Women-Trans*-Femme) night between attending a political protest and band practice, after a full day of teaching. There were five attendees; three regulars chatted and ate tacos—a culinary stitch-n-bitch. I helped sew straps on a bike rack for my friend’s car. At WTF night, I felt permission to be both confident and uncertain, to ask questions and trust my knowledge. The narrative about paternal knowledge, taking up “men’s tools,” shifted through sewing. Sewing is a queer craft, a femme knowledge I learned from my grandmother. On WTF night, the segregated craft section becomes just a nice room. This is the heart of queer identity for me, one that centralizes but extends beyond sexuality, where emergent desire and loving what we love is celebrated.

As an artist and academic, Xerocraft offers refuge from academia. I move, become manual, and power down. I fantasize about meditatively cutting puzzles
with the bandsaw and turning my drawings into stickers. Seeking refuge this way doesn’t challenge the nerdy white male culture. The visual and social culture of Xerocraft does not indicate they are actively feminist or critical, or tinkering with or hacking power. It’s an economic and anarchic pooling of resources, without clear intentions to address norms people bring with them, thus inviting reproduction (see Figure 21.1).

FIGURE 21.1 Xerocraft Hackerspace, Tucson, Arizona, USA
Photo: Elizabeth Garber
I’m Out of Place in a Makerspace: Rebecka

I visited Xerocraft several nights to observe/interview members about education in that space. Gender and knowledge were also of interest to me. The female gender I present and academic knowledge I possess were notable outsiders in that space, which I perceive as non-academic and male. The men were never rude or inappropriate, but I perceived a palpable hypermasculine atmosphere when females were present versus when they were not. However, I didn’t feel as out of place when I was there with male classmates. In visits without my classmates, it was my academic identity that caused me to feel out of place. It’s like how I feel when I visit family in Mississippi. I’m the cousin that’s thought of as too smart/good for everyone, which is a common feeling among academics (Jackson and Mazzei). It’s strange, but maybe not so unusual that I felt it at Xerocraft. Makerspaces are designed to be alternative and reactionary against elitist academic spaces, created by and for non-professional makers. So, my unease makes sense.

The outsider feeling was also present among some members of Xerocraft. I spoke with a female member who described her dislike of the cliquish atmosphere, and openly questioned why she remained a member. Perhaps she was unhappy because, like Anna and me, she is a feminist, who intentionally disrupts gender expectations and finds the male dominance in the space challenging. She shared with me her history of radical feminism and feminist pedagogy practices in academic fields mostly populated by men. Maybe that caused her outsider feeling despite being an active member. However, I may be projecting my experiences onto hers to help me salvage some sense of belonging in that space.

In thinking about Anna’s and my different Xerocraft experiences, I keep hitting a sort of Derridian “snag” (Jackson and Mazzei 30), a discomfort from my experience at Xerocraft I can’t fix. The gender issue bothered me. But I can’t shake the memory of feeling uncomfortable even when I was with my male classmates. And I think this snag speaks to the issue of my academic identity in connection with my gender identity. As one who identifies as an art historian I am entrenched in practices dripping with historical elitism. Makerspaces strip that elitism away intentionally. If my academic knowledge is not relevant in such a space I am of no value without the ability to express my own power and identity. Couple that with a space that reinforces gender normativity of women as less powerful (the “soft crafts” area was infuriating), then my negative experiences there make sense beyond gender differences. It also makes projecting my own experiences onto the female member I spoke with more meaningful. She too was an academic who was uncomfortable and felt devalued in that space. Perhaps we both perceived our ability to express our academic knowledge and gender nonconformity eliminated there. As feminist academics, she and I experienced a loss of self in the space through restriction of knowledge. But Anna, also a feminist academic, experienced a new facet of self through exploration of masculine and feminine gendered knowledge.
It’s interesting that Anna views the space as a haven from academia, whereas I view it as an unwelcome space for academia. This speaks to how she identifies as artist first, then academic versus how I identify as only academic. It is clear from our different experiences that academia is not meant to be part of that space. It’s not consciously excluded. And knowledge is welcome, but only a particular gender normative, gender replicating knowledge, not academic knowledge.

Wrap

We both wanted something from Xerocraft. Anna wanted knowledge and Rebecka wanted to express her knowledge. Berlant says, “when we talk about an object of desire, we are really talking about a cluster of promises we want someone or something to make us and make possible for us” (93). Xerocraft is mostly a set of promises. They’re not inviting their promises to be hacked or tinkered. They want them to be welded, sawed, printed, and stitched. It invites imagined futures, built through greater access to tools, but perhaps these are still the master’s tools (Lorde).

Works Cited

In the spring of 2016, I participated in the steering committee of Xerocraft, a hackerspace in Tucson, Arizona. During these meetings, important activity-planning and operational decisions are made. I arrived early and sat quietly at a large table. My role was that of an independent party studying the political climate of the organization, thus my intention was to stay in the background and observe in silence. However, within a community that exercises genuinely democratic decision-making, everybody must have the same rights and duties. At Xerocraft’s steering committee meetings, all participants, regardless of their membership status, have both voting and vetoing power. I was amazed when I was invited to voice comments, suggestions, or concerns I might have by the moderator—who was democratically elected at the beginning of the session. This shared responsibility to self-govern inspires me to recall Paul Goodman’s declaration, “progressive education was anarchist” (55–56). In a world of representative technocracy, these instances of direct democracy and informal consensus are incredibly refreshing and empowering.

The international makerspace movement is a perfect example of people getting together to fill a niche and meet a need without the vertical intervention of the government or an external institution. This is not to say that a makerspace like Xerocraft does not work or collaborate with the state or with the private sector—they often do—but it is their grassroots, horizontal spirit of democratic governance that comes to attention. In conversations with Dale Tersey, one of the original founders, I was surprised to learn that some components of Xerocraft’s philosophy of democracy and education draw from anarchist principles. Xerocraft was originally hosted at Dry River, an anarchist collective in Tucson that operated on an informal basis. One of these principles is non-discrimination. One of the
ways in which this principle is reflected is “NOTAFLOF,” which means, “no one is turned away for lack of funds.”

There is a lot of learning going on at places like Xerocraft. While they do offer semi-formal courses—you enroll in these ahead and pay a small fee for materials—most learning takes place in a non-hierarchical, organic fashion. The roles of teacher/student are fluid; they are continually being redrawn as people reach out to those who are more or less experienced in a craft or the use of a certain tool. One of the reasons why this approach to education is so successful is intrinsic motivation. Just like in democratic education, learning is entirely interest-driven. Unlike traditional schooling, makerspaces like Xerocraft do not need to resort to coercion or bribery to motivate students. People learn at their own pace and make progress according to personal goals. Along the way, they also find out about themselves and their interests.

Democratic and anarchist models of education are not devoid of important challenges, however. For example, as Kimberly Sheridan and Erica Rosenfeld Halverson suggested in their 2014 study of makerspaces, it takes time for newcomers to these spaces to don the hacker identity (502), even if they have experience using power tools and making things. After my research at Xerocraft, I concluded that while interpersonal relations are fundamental in building a sense of community and belonging, these can easily be taken for granted and neglected.

The decentralization of learning is part of a zeitgeist where the general public has open access to information in spaces such as public libraries, or digitally through the Internet. Xerocraft is a living reminder that other models of democratic, public pedagogy are possible. What started out as a club for a few tinkerers has expanded into a committed organization, which actively contributes to the larger community’s cultural and scientific life.

Works Cited


SECTION III

Interdependence and Interdisciplinarity
III. INTERDEPENDENCE AND INTERDISCIPLINARITY

METZGER & WATTERS
BORDERLANDS COOPERATIVE

LAKIND
SEWING WITH COURT-INVOLVED TEENS

BRADSHAW
THREADS OF THE SELFIE

GRAN
SHTREAM IN SHANGHAI

KARPPINEN
INTERDISCIPLINARY CRAFT CURRICULUM

PEARLMUTTER
SUSTAINABLE PRACTICE OF AN ART TEACHER

TSULTEMIN
MONGOLIAN ARTISTS & CRAFT

SANDERS
QUEERING CRAFT: NICK CAVE

MINER
THEY VISIT & WORK TOGETHER

LESPERANCE
FEMINIST VISUAL TACTICS

MANANDHAR
MAKER CULTURE IN NEPAL
Interdependence and Interdisciplinarity visual map: Themes and emerging questions

Drawing: Manisha Sharma
On a dusty street in the Colonia Ladrillera, inside the border city of Agua Prieta, Sonora, Mexico, murals stretch across the outside of the DouglaPrieta Works (DPW) community center. On this small property in a section of town with high rates of unemployment and poverty, DPW has created an oasis and living model for developing sustainable life skills. A longstanding fair trade sewing project, the co-op makes quality hand-sewn products and supports a community center that teaches self-reliance and promotes food security.

The name DouglaPrieta describes the interdependent relationship between a cross-border community—Douglas, Arizona to the north and contiguous Agua Prieta to the south—and represents the Mexican DPW cooperative members and the non-profits, churches, and other U.S.-based supporters. Despite this relationship, a militarized steel wall divides the communities of Agua Prieta and Douglas, separating those with material prosperity from those without. As such, cross-border cooperation is absolutely critical for the success of DPW.

In the 1990s and early 2000s, Agua Prieta teemed with NAFTA-driven factories. But as corporations relocated factories to lower-paying countries in Asia, the exodus devastated the Agua Prieta economy. Simultaneously, the city saw an explosion of people from southern Mexico and Central America migrating to the United States. But as immigration enforcement increased in the United States, people were deported back to Mexico through the Douglas-Agua Prieta port of entry. Each day, hundreds of people were left without any resources and no option but to take up residence in the border town. When DPW formed in 2004, it specifically provided resources for migrants caught in this immigration vice.

By engaging a system where people learn and apply skills, DPW is changing the paradigm for its members, as well as for the extended community. In an effort to make cultural shifts and tangible opportunities for those seeking a better
quality of life, the cooperative teaches skills to others in the community. Weekly English classes bring in kids from the neighborhood and cooperative members teach gardening at a home for the elderly.

Co-op members make decisions together with the progress of all in mind. The sewing cooperative is one function of the whole cooperative, which also trains members in growing food, building trades, and language skills. The community center serves as a home base for all co-op activities and as a center of cultural exchange and further expression of interdependence. DPW, a 501c3 non-profit, has been collectively raising capital and seeking donations for infrastructure, equipment, and training to expand their programming.

On an adjoining property, pepper plants are loaded with fruit and cucumber vines snake through a series of DPW garden beds. Members say that gardening goes along with improved nutrition and building self-esteem. Each co-op member works in the garden to produce vegetables, tree fruit, and herbs (see Figure 23.1). Chickens and rabbits are raised on-site for eggs and meat. Just before monsoon season, members plant corn in the wash. “The garden is a benefit to us. We grow and harvest for our families. Everything we grow is organic,” says Ester, a co-op member. “It is also a benefit to other families, because they can come and can learn how to cultivate the land.”

Orders for bags, aprons, and bandanas made by the sewing co-op are placed by U.S. churches and non-profits, as well as local Tucson businesses. The Gloo

FIGURE 23.1 DouglaPrieta Sewing Coop is also a center for community classes in gardening and English as a second language

Photo: Dwight Metzger
Factory, a union print shop and DPW’s main customer, stocks products to be embellished with custom designs. The Food Conspiracy Co-op orders custom tote bags, consistent with its mission to source locally and ethically, as well as to cooperate with sister co-ops. DPW also partners with the humanitarian group No More Deaths to provide “dignity bags”—large bags given to migrant deportees whose possessions have been taken in the deportation process.

To negotiate a price that will ensure fair wages for its members, the co-op meets directly with the buyer. This process elevates the concept of “fair trade” to an even higher standard, giving more power to the workers themselves. The products are exported with the help of U.S. volunteers who courier them over the border, where they find their way to the city of Tucson and beyond. Since the current international export and import system is not designed for such small-scale production, the volunteers based in Douglas, Arizona, provide critical logistical assistance for the cooperative, including support in ordering, transferring materials, and delivery.

The globalization of the textile industry makes the sourcing of quality, hand-sewn, humanely produced goods nearly impossible. Sweatshops produce almost all of the textile products sold in the first world, resulting in increasingly harmful working conditions for workers in developing nations. But purchase of fair trade products made by DPW offers a real-world alternative to this global problem. In this post-colonized town, the co-op members are agents for change, providing an example of how consumer choices can make radical differences in people’s lives.

As orders have increased, the sewing co-op has invited new women to participate and learn. “Here I feel like a different person,” says co-op member Trinidad. “I have a lot of benefits [and ideas] that I bring. I feel really useful.” The community center houses a sewing table, kitchen, and space for members and their families to meet. This welcoming space represents a stark contrast from other earning opportunities in Agua Prieta. Matilde, a member of the sewing co-op, says, “Here it is easier, because I can still [take care of my kids]. I can either take my work home or bring my kids here.”

The sewing co-op members also bring their skills home. They alter clothing for family members, make bags and children’s costumes, knit scarves, and make other crafts to sell for additional household income. The income generated from sewing and food production benefit co-op members as well as provide economic support for the entire center. Therefore, as the cooperative has become embedded in the lives of its members, co-op members in turn support the greater community.

Over the past thirteen years, DPW has taught and inspired many people on both sides of the border through the modeling and application of projects that build economic self-reliance. Despite the physical and economic challenges posed by the border—a rapidly increasing population of deportees, high unemployment, and health problems—the women of DPW are building a self-sufficient community. Trinidad reflects on the years of struggle and perseverance: “One of the things we have learned is that we don’t give up easily.”
We live entangled in both traditional perceptions of cultures rooted in place and contemporary notions of mobility. The configuration of the United States depends on the idea that people remain in a fixed location to live, file taxes, go to school. To this family-oriented society, home is identified with a physical site: a safe position from which to proceed. Simultaneously, we venerate movement as a means towards making progress in college, career, and the global economy. We assume agency in these movements, disregarding those who cannot choose how and where they move and overlooking those without a safe place nor an accepted destination. A system predicated on these notions of home and destination poses serious material consequences for those outside this schema. In relation to preconceived destinations, those who have “yet to arrive” are suspect: homeless, loiterers, immigrants, the unemployed, or unwed. Their mobility (or lack thereof) itself is a form of deviance.

Maker/crafter movements in the United States reside at the convergence of the domestic (home) and the modern (destination). Domesticity implies nurturing mothers and protecting fathers; security from deterritorialization, fragmentation, diaspora. Meanwhile, modernity seeks uncharted terrain: adventure unimpeded by tradition. Making/crafting are depicted as response to rapid changes and unknown futures. Everything from multiculturalism and globalization, to environmental degradation justifies a resurgence of anti-corporate do-it-yourself construction; nostalgia with how things were made; canning, pickling, etc. Concomitantly, such making promises a means towards technological innovation and the advancement of STEM. Computer programmers and entrepreneurs figuratively clash against housewives and school teachers: universal modernization versus local practice.

Increasingly, in an effort to stay relevant, libraries are identifying as educational institutions and adopting making within the modern framework of “21st-century
learning.” Libraries also imply domesticity, seen in the historical feminization of librarianship, lifelong learning, and so on. Libraries are both safe havens and entry points for mobility.

This chapter arises from a university-community research collaboration developing an arts-based maker program across a public library system for artists and patrons to “learn, share, and create” (bubbler.org). In the context of the library setting, sewing has an important significance symbolic of homemaking and gendered imageries of repairing and restoring (see Figure 24.1). Unexpectedly, sewing (and knitting) programs have become popular across the system, ranging from ongoing knitting circles, electronic-sewing, and drop-in community mending, to sock monsters, taught as family workshops or through prefabricated kits accessible system-wide. To illustrate a performance of portable place-making, I will focus on sewing within a division of programming for court-involved teens, ages 10–17, in a shelter home.

As its name suggests, the shelter home seeks to provide housing/logistics and home/belonging to juvenile offenders and youth who are in between placements: i.e. changing foster homes and/or transitioning after termination of parental rights. In the section below, the voice of the shelter educator is woven in using a different font, positioning the library as both home and destination for those who have neither, and locating sewing programs as sites of recognition to reinforce belonging.

Most of our students have never been into the library. They get a tour, a card, a place to return to . . . when you’re released, this is a place where you can be safe, learn new things, access all sorts of information.

During one of the shelter’s weekly field trips, an artist-in-residence led a workshop in backpack/pillow making. To a member of the county staff, this trip “expanded his whole realm of sewing.” This member started bringing a sewing machine to his shifts and leading sewing projects. Subsequent requests for classes on-site spawned an entire, regularly scheduled sewing program.

It shocks and surprises me that they’re so into it . . . it’s consistently been engaging to every student we’ve had . . . If you had asked me three years ago, I never would’ve been, like, “Sewing’s totally gonna hit it off the charts.” But now I’d be, like, “please don’t take it away!”

One reason for this popularity is that the participants can keep their handiworks to use in everyday life (backpacks are particularly useful as private storage for their belongings). In the lives of youth in our justice system, mobility is a perceived threat. Thus, restricting physical and virtual borders protects them and is perceived to protect society from them. For example, even for those in between placements, the Internet is highly supervised, with websites blocked.
Likewise, many projects use controlled materials that can’t be kept in their rooms. Pillows can travel with them and are theirs to own and recognize.

They don’t know where they’re going next . . . these kids are getting calls regarding their future placements. “Who are you and why are you jumping into my life and telling me where to go?” I think they feel like they don’t have the reigns on their lives.

FIGURE 24.1 Sewing materials for making justice in Madison Public Library, Madison Wisconsin, USA

Photo courtesy of the author
These practices of family-, home-, and place-making revolve around mobile items the youth consistently use in their lives. Further, the repetitive act of sewing and its resultant creations offer them the chance to participate in reciprocal nurturing: materials to create and objects to give. Not only something they can own, but something they can give—gifts to family and friends.

They’re soft, they’re cozy. The boys are, like, “I can’t wait to give this to my mom or I can’t wait to give this to my sister.”

This iteration of crafting/making shows the promise of not having predetermined ends conceived of in advance. No one predicted sewing’s success. It came from inviting artists and partners, supporting a multitude of options, and providing space for learners to determine what activities spark their interest. Evidenced by the shelter staff who introduced the in-house sewing machine, this demonstrates the potential importance in attending to learning opportunities in liminal spaces. Often forgotten in the educational landscape, these include the library, shelter home, and adults offering “after-hours” sewing activities. If life is supposed to be contained within a fixed notion of place, the spaces between become unwanted, and preconceived destinations emphasize product rather than process. The emphasis on home and destination, where you come from and where you’ll end up, negates the journey between. Yet, that is where both learning and life occur.

Acknowledgments

Dr. Rebekah Willett, Dr. Erica Halverson, Bubbler @ Madison Public Library, Britt Falbo @ Dane County Shelter Home, Institute of Museum and Library Services grant #LG-06-14-0174-14. This chapter draws on and is inspired by the scholarly work of David Morley, Lucy Lippard, and Tim Ingold.
Learning today often occurs in the informal, often crowd-sourced pedagogy of social media, and young women’s understanding of the world is often communicated through it. Contemporary Illinois-based artist Kathy Halper links the pedagogy of social media with that of women’s work through constructed embroidered narratives. Selecting random images from media culture and juxtaposing those with found Instagram and Twitter feed text, Halper’s work becomes a commentary on youth culture’s “endless search for instant gratification and self-recognition” (Giroux 156). Halper, a self-trained artist, began as a painter drawn to the figure as subject; the content of her early work celebrated the beauty of lived experience. With the influx of social media Halper began seeing images that were attractive in their expressions of vitality yet problematic when seen through her lens as mother. Moving from canvas and paint to cotton and thread, Halper’s medium both connotes history and entrenches content.

An artistic manifestation of life since ancient times, embroidery has long been both a teaching tool and a visual reflection of society. The sampler—a swath of loom-woven cloth onto which intricately patterned borders and various stitches are embroidered (Dillmont 1996)—dates back to 14th-century Egypt (Victoria & Albert Museum n.d.). Samplers range widely in size, patterns, and imagery, yet their role as a teaching tool has been consistent. For European women in the 16th century, samplers were a visual reference like modern printed patterns. In the 17th century, they became educative primers incorporating moral verses and religious maxims for proper behavior. As samplers continued to develop, the incorporation of the figure became more pronounced. In America, notes Mary Jaeane Edwards, the history of sampler making is deeply tied to the education of middle- and upper-class women, wherein one’s ability to execute fine needlework was de rigueur in a patrician woman’s well-rounded repertoire.
In disparity to the historical social network of embroidery circles, quilting bees, and other face-to-face settings in which aspects of daily life, normative culture, and expectations were communicated through needlework, Halper emphasizes the manner in which young people today post images of private moments that normalize sexual experimentation, drinking, and other social acts (see Figure 25.1). The temporality of the photograph, taken in an instant, then posted and shared sometimes without much deliberation on social media, further heightens the “collapse of the public into the private” (Giroux 155). In Halper’s painstaking, time-consuming embroidered drawings, an image of a performative act is both memorialized and questioned through the labor-intensive process. Halper invites us to ponder the enmeshed notions of the feminine, the relationship of privacy and spectatorship in current visual culture, and the prevalence of remixing constructed narratives. The works, based in reality, are morphed and

FIGURE 25.1 Kathy Halper, CrotchTag, 19.5 in. × 19.5 in., embroidered thread on cotton
Used with permission of Kathy Halper. Photo: William Bengston

In disparity to the historical social network of embroidery circles, quilting bees, and other face-to-face settings in which aspects of daily life, normative culture, and expectations were communicated through needlework, Halper emphasizes the manner in which young people today post images of private moments that normalize sexual experimentation, drinking, and other social acts (see Figure 25.1). The temporality of the photograph, taken in an instant, then posted and shared sometimes without much deliberation on social media, further heightens the “collapse of the public into the private” (Giroux 155). In Halper’s painstaking, time-consuming embroidered drawings, an image of a performative act is both memorialized and questioned through the labor-intensive process. Halper invites us to ponder the enmeshed notions of the feminine, the relationship of privacy and spectatorship in current visual culture, and the prevalence of remixing constructed narratives. The works, based in reality, are morphed and
re-presented as commentary on the ever-increasing cycle of narcissism celebrated by the public pedagogy of technological spaces.

Note
1 Please visit Kathy’s website at: www.kathyhalper.com

Works Cited
The Shanghai American School’s Innovation Institute in China incorporates a project-based interdisciplinary curriculum in which ninth and tenth grade students are positioned to grapple with some of the world’s most pressing issues, such as global warming, poverty, and pandemics. Through their Social Studies, Science, English, and Art classes, students investigate these challenges from different angles in order to approach them in greater depth. This chapter is focused on the work of the students in the Institute through the lens of the art program, but it is critical to understand that these classes are interconnected in such a way that it is impossible to parse out what we do in art in isolation. With our focus on engaging global issues, our ninth grade Creativity and Design and tenth grade Innovation and Design classes not only help students acquire foundational art skills but also help them develop key understandings about 21st-century media. Over these first two years of high school, in addition to their explorations of traditional materials, they investigate digital design, photography, video, and 3D design, and in our makerspace begin to understand the uses of coding and circuitry towards interactive design.

The inclusion of maker projects in the curriculum addresses the major concern of the STEM to STEAM movement, developing innovation in the sciences. The STEM movement by itself only functions to stimulate an engagement with the sciences. STEAM, however, looks to the arts to drive the creative processes and the functional design of the work, thus fueling innovation. Tiffany Shlain points out in her short film *The Adaptable Mind* that a more holistic approach to this process of creation is “SHTEAM” (n.p.). Hence in our iteration, we include the “H” of the Humanities to inform the theoretical and philosophical underpinnings of our work, as well as to consider the efficacy of its outcomes. The ability to look through these multiple lenses in integrated classes does more than give the
students a framework for a holistic understanding of the world—it demonstrates to them that any problem that we approach, whether conceptual, aesthetic, or scientific, needs to proceed through the same design process of ideation, iteration, and refinement.

Rooted in project-based learning, the core of the Innovation Institute’s philosophy is that the students must consider and respond to open-ended, real-world problems, and construct their own responses. This is perhaps the central reason that the makerspace has become such a central part of the program as it has evolved. The overlap in approach that is consistent between each class is brought together in the processes of project development at the heart of the maker movement. In this way, the constructionist pedagogy of the makerspace reinforces the constructivist pedagogy of our other classes. Therefore, the manner in which students prototype their physical projects through various iterations mirrors the ways that they develop their ideas through reasoning, debate, and rhetoric.

Specifically, in the makerspace, the students engage in the scientific process of experimental design. Through this process of inquiry, they examine their variables, establish controls for those variables, and adjust each variable independently. They then collect the data and examine their impact. When they assemble their electromechanical devices, for example, they use the process of deduction to troubleshoot the invariable problems. They will individually check their code, their circuit, the power source, and their component parts. This process not only helps them better understand the way these things work, it helps them establish a greater understanding of how these things work together. Furthermore, it helps them understand how to approach problems beyond the makerspace, to break an issue down into its component parts. If this sounds familiar, it is of course a similar process to how we might introduce students to any number of new art materials or techniques.

In the first year of the Institute, students are introduced to working in 3D virtual spaces. Using the CAD program Fusion 360, they design and 3D print a model race car to examine how the design of the car affects the physics of its movement. As students become more comfortable with the concepts and programs of 3D digital design, they embark on one of their culminating activities for the year, the design of an annex building for the Nanjing Massacre Memorial Museum. This lesson integrates their foundational making skills with a strong cross-disciplinary approach to understanding and addressing a driving question of the human capacity for good and evil. Within this context, their ideas must be expressed in both the exterior and interior design of the annex.

Over the course of two years the students become more confident and comfortable with a wide variety of our makerspace tools and projects. Early exposure to graphic design exposes them to vector graphics that can be translated into cutting paths for many of our tools. This gives them the ability to translate their digital work into an analog form in materials such as acrylic, vinyl, cardboard,
or wood (see Figure 26.1). The vector-based images can also be scaled up to work on a large format printer. As the students become more comfortable with the idea of this hybridization of the scientific and artistic processes in the makerspace, their projects become more complex. In the second semester of their second year, we begin to introduce them to coding, circuitry, and simple electromechanical engineering. These tools allow them to add depth and meaning to complex projects. For example, last year the students were challenged to create set designs for *Raisin in the Sun* that would reflect the themes of race and inequality that they discovered in the play. Their understanding of basic circuitry allowed them to incorporate lighting and movement to add depth and meaning to their ideas. One group added a bookshelf to their set, which when illuminated from the right angle cast a shadow on the wall that led right to the door. This, they explained, symbolized how the acquisition of knowledge is the path to freedom.

**FIGURE 26.1** “Take Out” mechanized board game made by high school students in the Innovation Institute

Students were asked whether human beings are more inclined towards collaboration or competition as a driving question for their game design project. This game, *Take Out*, is, on the surface, about ordering sushi. *Take Out* is a play on words—it is about getting food, but one of the winning conditions is to “take out” another player—by poisoning them with poorly prepared sushi. In the design of this game, students selected a combination of digital design and maker skills that they have developed throughout their coursework. Here, the board was designed in Illustrator, cut on a laser cutter, and operated by a mechanical belt that keeps the sushi belt moving.

Photo: Jerry Koontz
Perhaps it is with no small amount of irony that in the culminating project for the two-year course of study students are asked to consider what it means to be human in a technological world. Once they have become comfortable with the tools of the makerspace, they are given the opportunity to create an interactive art installation, using various sensory input devices and outputs that may include moving parts and lights. In preparing for this project, students looked at the relationship between humans and technology, comparing current readings on the trajectory of artificial intelligence, or AI, with a reading of Shelly’s *Frankenstein*. In this final investigation, their artwork must demonstrate a sense of empathy through a fully technologically automated interaction. In one of the more memorable projects, for example, an egg-shaped robot expresses happiness when you give it your smartphone, and then cries digital tears and shuts itself off when you take it away. Through this project, the students explored the idea of a technology that, made in our own image, is recursively dependent on itself.

In the conclusion of her video, *The Adaptable Mind*, Tiffany Shlain states that, “Empathy is at the core of our ability to communicate, to work together, to be a part of our rapidly changing world” (n.p.). It is our hope that our students graduate our program with these ideals—with the empathy to imagine the qualities of a better world, and the skills to work towards making them happen.¹

**Note**

¹ For more information about the Innovation Institute, please visit us at: saschina.org/innovation-institute

**Work Cited**

In many countries, crafts and making can be more often found in informal environments than in schools. However, in some of the North European schools, for example, craft is still a vigorous school subject that includes designing and constructing products using digital and traditional techniques, whereas in some countries it might be blended into nearby disciplines (e.g., the visual arts, design, or technology). Craft’s new approaches, like invention pedagogy, maker culture, out-of-school learning, coding and robotics, and interdisciplinary pedagogy (STEAM-based approaches, for example) are gaining ground in schools and curricula, encouraging students to innovate, collaborate in knowledge-creating, and learn by making (Blikstein, Seitamaa-Hakkarainen, and Hakkarainen; Karppinen et al. “Interdisciplinary Integration”; Kallunki et al.). Interdisciplinary pedagogy also highlights a variety of physical learning spaces, and use of what is locally available is welcome and recommended (e.g., Finnish National Core Curriculum; Wilenius 170; Lipponen and Rönöhl 64).

**Interdisciplinary Approach**

An interdisciplinary approach refers not only to learning themes across disciplines, but refers to their relationship with the real world and an understanding of connections. As early as the 1840s William Whewell introduced a concept of consilience, which means the “linking of facts and fact-based theory across disciplines to create a common groundwork of explanation,” i.e., to find what they share in common and then create a complete picture (Wilson 9). More recently, constructivists and socio-constructivists, primarily working from the thoughts of Lev Vygotsky, have discussed that learning is an active process where people construct their own understanding and knowledge in social interaction.
Today’s making-based pedagogy lays much emphasis on John Dewey’s “learning by doing” and Seymour Papert’s “learning by making” practices, and underlines collaboration, project-based, and inquiry-driven education, especially in the STEAM disciplines (e.g., Blikstein, Osborne, and Dillon; Viilo, Seitamaa-Hakkarainen, and Hakkarainen). Integrating making activity into a school curriculum offers a favorable environment for answering the challenges of the 21st century, multiliteracy, and engaging students in a meaningful making and innovation education. For instance, maker spaces like the FabLearn labs (Stanford University, United States) and Co4-Labs (University of Helsinki, Finland) support development of socio-digital invention pedagogy in schools and school-university cooperation. In addition, teachers need their own labs for in-service training (see, e.g., The Mind Lab/Unitec).

Maker Culture

Maker culture has created environments like maker clubs, makerspaces, and the maker movement for people to gather, share resources and knowledge, work on projects, learn about technology, solve problems, and build (ELI; Halverson and Sheridan). These kinds of making spaces nowadays have an increasing potential in schools. Maker culture that engages people in do-it-yourself (DIY) and do-it-with-others (DIWO) techniques and processes to develop unique products inspires students to become makers instead of just users. The value of maker culture has risen in the new millennium, which is overloaded with rapidly developing digital technologies and offers opportunities towards unrevealed invention and innovation.

Invention Pedagogy and Making in School

Alongside digitization and technological development, crafts and making have gained new and interesting dimensions, equipment, and methods, such as 3D printers, laser cutters, robotics, coding, e-textiles, smart clothes, and wearable technology. These new tendencies have opened novel possibilities for making and innovating in schools, balanced with both sensible costs and resources (Karppinen et al. “Interdisciplinary Craft”). For example, a knitted cap with Bluetooth earphones combines traditional craft with new technology. A unique artifact can be created by combining sewing and embroidery techniques with coding using conductive metallic thread or a piece of fabric, LED Neopixel Ring, and a microcontroller (e.g., Flora or Gemma) for programming the LED lights (e.g., using Arduino) to change color in certain situations, environmental conditions, or acts (e.g., sound, music, gesture, knocking; see Figure 27.1). A simple way to light a single LED is to use a battery, a magnet, and electric wire, and all this can be integrated into an artifact. New technologies also enable participants to fabricate virtually any artifacts, and even young children can
construct complex controllable artifacts with hybrid material and virtual features (Seitamaa-Hakkarainen and Hakkarainen).

These types of making activities where creativity, sharing, invention, and imagination are at the focus describe today’s education in Finland (Lipponen and Rönnholm 30; Wilenius 169) and all over the world and may, in the best cases, increase students’ motivation in doing school work and enhance school satisfaction. Making culture’s initiation into schools could also be a response to Jonathan Osborne’s and Justin Dillon’s statement that students lack an interest in science education. Moreover, student-centered self-piloting and lateral learning, as opposed to a top-down model, is a much more authentic representation of how learning happens in everyday life.

Works Cited


FIGURE 27.1 Seija Karppinen, E-textile handbag created by Gemma microcontroller and NeoPixel LED-lights’ Ring

Photo: Veronica Dolhain


Dear Brahim,

As I write this letter, you are just beginning the third grade, filled with questions and excitement, but I envision you reading this as a high school student. I think often about the world you will inherit from my generation. I have worked hard as an artist and teacher to leave something behind that will help you to envision the world differently, to help prepare you and your peers for a future we can hardly fathom. With this in mind, I have developed an interdisciplinary arts curriculum highlighting 21st-century skills. As I type those words, I wonder what they really mean. What skills will you need in the 21st century? I identified the need for such a curriculum in response to the rapid changes in society over the past nine years, eight of which you have been alive. Since I began teaching in 2001, I have watched technology and the Internet assist and deteriorate social interaction, pulling children away from authentic interaction during unguided play and creative thinking, to seek immediate solutions. This fast-paced and sometimes alarming social shift has made me realize that the art room can be a counter-measure, a prime place for young people to learn the crucial skills they need to prepare for a future that will call for creative, sustainable problem solvers to build, craft, and make necessary innovations our world desperately needs, a place where you might consider how what you create will help the world.

During my seventeen years of teaching visual arts, the goals of imparting independence, experimentation, and choice have become increasingly important. By providing interactive models, sharing the teaching and learning responsibility with students to strengthen their self-reliance as they manipulate materials to tell
their stories, my peers and I have learned how to persist and trust. Reviewing each other’s projects, building interpersonal skills through meeting for art check-ins with peers, and holding conversational, student-led evaluations have sparked a shift in the power structure of education. As I have stepped back, students’ creativity and thoughtful agency have grown. Dialogue, student input, and stretching of ideas altered my focus as I began to value the process of student creation as much or more than the end product (which I had been conditioned to do).

The choices students make of what materials to craft from, conceptually and literally, often become launching points for discussions about current events at our school. Scholastic Magazines donated by classroom teachers to the art room and online Newsela articles commenting on social, cultural, and environmental issues often inspire the DIY-informed projects we make. Learning to use the “found,” cast-away objects from our consumer culture provide students with an evolving voice as crafters, makers, and creators who are also budding activists forming, sewing, and gluing together the change they wish to see in the world. Think back to the student work at our school. Student-made murals, civic engagement posters, and social and emotional themes imbue the projects we create.

As your mother, I am concerned about your future. With climate change and harsh environmental realities like the widening of the plastic garbage patch in the North Pacific Gyre looming, threatening the planet’s (and your) well-being, I feel obsessed with connecting meaningful, more eco-aware, sustainable practices through art learning. Responding to the growing environmental concerns my students have expressed, we repurpose in the art room with mixed-media art material drives; in turn, these students have become more invested in their work as they explore ways to re-form society’s discards. Our crafting themes are emergent. For example, in response to Chicago’s Plastic Bag Tax, students—eager to facilitate environmental action as earth stewards—crafted DIY t-shirt shopping bags. Last year, hundreds of students re-used computer cardboard packaging to craft “imaginary friend” effigies. Remember in Kindergarten when you searched the house for personal objects to glue onto your self-portrait?

To further provide you a repurposing mentor, in 2012 when you were only three, I first introduced students to Caine’s Arcade, a video filmed by Nirvan Mullick documenting a resourceful eight year old, Caine Monroy, who emulated the maker strategies I sought to impart in my classroom. Since then, I have focused attention on transforming students’ studio classroom into an art space full of research, experimentation, and Caine’s inspired, DIY-building techniques.

Caine and Nirvan started a maker movement that grew into their Imagination Foundation, aimed at organizing teachers and students with a shared vision. Witnessing Caine’s resourcefulness sparked my development of an innovative art/makerspace. Now, building on bringing innovative makers to life, Brahim, you and your peers regularly “free range” the studio for meaningful repurposed
textures to build sculptures that pivot, balance, and tell stories. Like Caine (who shares your current fascination with masking tape), students use design-planning sheets and cardboard building shapes to experiment with 3D adhesion choices. Now, our art room is an Imagination Foundation Chapter where we brainstorm, design, and foster trust. During class cardboard challenges, students take risks, reframing thoughts by regularly coaching each other away from “I can’t,” fixed mindsets, turning failure into necessary learning junctures in art. Remember the behavioral wheel of choice? When we meet frustration, count to 10. Mistakes are proof that you are learning.

I hope you aspire to contribute to create, imagine, and invent environments that your friends are invested in personally—repurposing while interpreting and facing new social and cultural challenges. I hope that as you choose how to participate in society and your self-awareness grows, you benefit from the social action-based units in our art room inspired by global issues, and that you continue to question biased constructions of identity and privilege.

Brahim, please rely on the wisdom found in these guiding art room models that have informed many of our socially engaged projects: Facing History and Ourselves, the United Nations Global Goals for Sustainability for 2030, the Universal Declaration for Human Rights, The Iroquois’ Seventh Generation Principle, the International Council of thirteen Grandmothers, and Bill McKibben’s 350.org movement. They can guide you and your generation as you weave together art, making, and agency for a more sustainable world. When in doubt amidst turmoil and change, turn to collective invention and creatively open up to those around you with trust and candor.

Love, Mom
As a nomadic culture that had a long history of felt-making, rug, and tapestry culture, crafts and crafters played a central role in Mongolia. While there are no written records of these crafters, archaeological findings of felt rugs dating to Xiong-nu (third century BCE to first century CE) nomads testify to the rich material culture produced by ancient crafters. One well-known felt rug from this period incorporates an ornate arabesque design and figures of battling animals and birds, created from collaged patches of silk and textile stitched together. This handmade appliqué tapestry was likely a part of nomadic material culture and used for practical purposes inside of a portable ger (yurt), yet its finesse and extraordinary quality have raised the question of a distinction between art and craft.

Roles of artist and crafter became distinct in the production of Buddhist appliqué thangkas (Tibetan Buddhist icons on cotton) in later centuries (14th to early 20th centuries). The artist, who designed and drew the outlines of the deities and the surroundings, was supported by one or several (depending on the size of the work) crafters, who then selected silk and textiles to cut the necessary shapes and stitch them onto the cotton surface. Numerous thangkas exhibit high levels of artistry and supreme skills of the designer and maker who teamed up in making these extraordinary, and often large, images.

Due to repression of Buddhism in Mongolia in the past century, the tradition of thangkas is no longer practiced, yet it influences contemporary artists. Among them is Nandin-Erdene Budzagd (b. 1981), whose medium of collage resembles historical appliqué. With her collages, she reflects on critical social issues of human trafficking and domestic violence that have taken place in post-socialist Mongolia. In the series of works titled Luggage (2008–2017), for instance (see Figure 29.1), she uses random journal and newspaper cuttings to construct a
human body completely distorted.\textsuperscript{2} With the aptly chosen medium of paper collage, Nandin-Erdene is able to show these disfigured bodies, representing silent victims shipped overseas to become organ donors.

Unlike appliqué, in this work and others by Nandin-Erdene, the roles of the artist and the crafter previously seen as distinct and separate are merged as one, with the theme of human violence dictating the medium of paper collage. With this artwork she references Mongolian traditions of the slow and precise work of appliqué creation using a new medium to reveal contemporary issues. Both traditions (appliqué and collage) reflect the culture from which they derive and represent a dynamic shift of materiality for the artist who crafts.

\textbf{Notes}

\begin{enumerate}
  \item Nandin-Erdene’s first exposure to the cases of domestic violence against children after 2000 left an indelible mark on her that motivated her lifelong search for art media powerful enough to reflect issues of social justice affecting women, children, and low-income families.
  \item This work was also shown in the international exhibition of women artists at the Fourth Triennale of Fukuoka Asian Art Museum in Japan in 2014.
\end{enumerate}
QUEERING CRAFT

Nick Cave

James H. Sanders III

Chicago artist Nick Cave’s work emerges from craft and popular culture, and fuses the rarefied worlds of fine art, fashion, conceptual art, dance, and the skilled workings of hand. In *As Is*, discussed here, Cave challenges both audience and participants to (re)consider the role each has played in producing the subjectivities of class, race, and sexuality. A staged spectacle in Shreveport, Louisiana, *As Is* was a socio-cultural critique aimed at transforming the lived circumstances of Shreveport Commons residents in which the craft of beading was at the heart of an 18-month residency. Nick invited me to write about this project, perhaps anticipating that although, through this initiative, lives and labors of populations making cultural contributions and benefitting the health and vibrancy of the city were recognized, national media would be unlikely to consider art experiences serving populations in sites distant from metropolitan cultural centers.

*As Is* conveys that all populations are worthy of experiencing the transformative power of the arts. A small army of artist-assistants from literary, visual, and performing arts backgrounds were commissioned by the Shreveport Area Arts Council (with NEA and private funds) to support Cave by teaching craft skill, collecting participants’ narratives, and sharing their own unique skills. This included pony-beaded woven blankets crafted in one of six participating service centers, each of which emboldened residents to reconsider their life experiences in Shreveport. Cave concluded his residency in orchestrating a metaphor-rich two-hour performance that cross-examined the narratives shared by resident collaborators and reflected the range of aesthetic sensibilities and expressions characterizing Shreveport Commons. The queerly crafted performances reenacted the creative vision Cave conceived as a community revitalization and soul-cleansing effort. And what do *I* mean by queerly? More deeply than the breaking of conventions, “queerly” troubles the differences that each of us displays and
doesn’t, that are recognized and overlooked, and are so often shouldered by communities that self-define as Queer/LGBTQ. Performing queerly challenges audiences to re-evaluate normative behaviors and thought patterns.

Participants’ stories, documented by literary assistants, demonstrated how craft manipulations freed the maker of inhibitions and psychic states that hinder candid exchange. Tales shared were subsequently transformed by spoken word artist PoeticX, accompanied by violinist Wild J Jeremy Brown, in the opening section of As Is. Actors in that opening scene included clients of a battered women’s shelter and an HIV/AIDS housing complex; agencies providing after-school programs, nutrition, and health care to children in need; and an LGBTQ youth services center. It is their stories that were recounted in word and earlier were stitched into the beaded blanket. Through the As Is performance, citizens outside the served neighborhood were invited to ponder accounts few may have considered beforehand. As Is thus advanced not only neighborhood economic development, but served aesthetic and spiritual needs of performing residents and audience alike.

Cave shouldered a massive golden bundle while walking the perimeter of the lower stage apron. Climbing a ramp to the main stage, he unfurled a beaded blanket and slipped beneath it so it became like a shroud. Two-by-two, residents then ritually crossed the stage carrying the blankets they fashioned in beading workshops and layered them over Cave’s motionless form. Spectators observing these actions were met by eyes looking out at them as they watched, thereby repeating the specter’s call for residents to reflect on their own actions and embeddedness in the tales relayed. With PoeticX relaying the tones and tenor of testimonials shared, the processional passage was repeated forty times as the violin wailed mournfully. The beaded burial shroud shifted patterns as tales were successively released and Cave’s form slowly disappeared. This performance of self-discovery was then extended to Shreveport residents who were asked to reckon with the painful narratives they or their ancestors helped produce.

The subsequently performed section entitled Up Right revealed how costuming of a “Soundsuited” dancer is accomplished. Through the costuming, observers were challenged to consider constructions of identities constituting the communities where As Is took place and, by extension, to revalue the diverse residents populating the Commons—those whose outcast status long had been borne with pride. To me it felt like peeking in on a drag performer’s dressing room—a staged extravagance that demythologized Cave’s signature form.

Cave mined the sediments of this Red River bottom community, exploring its rich diversity, and inverting findings in ways that queerly enabled self-reflection and contemplation of how the city’s further development could be facilitated. Turning multiple experiences of residents inside out and representing them to a diverse audience, a community was invited to reconsider difficult histories that many of its citizens historically endured. From participating in the simple craft of beading, the neighborhood was reinvigorated, with the beading
products grounding a performance that queerly unfurled at intersections of raced and sexualized bodies, classed labors, and dynamics across generations.

Arts educators and artists as activists can lead change initiatives by sharing their visions for more equitable public valuations and constructing more socially just communities, and by powerfully using craft as a metaphoric medium, as Cave does in *As Is*. Humble craft engagements can enliven self-understandings and our embrace of Others.

**Note**

1 Cave’s *Soundsuits* are sculptural costumes that are both worn and displayed as static sculptures. When used in performances, they act as costume and musical instrument.
Some time ago, during weekly conversations over *aniibiishaaboo miinawaa makademshkikiwaaboo* // tea and coffee, Anishinaabe elders shared with me that in our contemporary lives under capitalism, we have precious little time to visit. Even when we have time, we must call ahead or send a text or send a Facebook message to plan a time in which we are “free” and can visit. This is what it takes to get together with an elder or family member or youth. As an artist who works primarily in and with Indigenous communities, it was this teaching in mind that I commenced working in what I now refer to as the “Methodology of Visiting.”

From a Western and capitalist ontology, time is money and finding time—or money for that matter—is becoming exceedingly difficult in times of austerity. Under capitalism, a hierarchical system of organizing individual and societal time, we even name our non-working time as “free time.” Accordingly, we understand free time as those intervals of time spent—itself a capitalist term for exchange—without monetary remuneration. As artists and cultural workers, much of our time is unpaid, even if nowhere near free time.

Under capitalism, time is linear and moves forward in a developmentalist and unidirectional manner. For all intents and purposes, how we live our lives—whether Indigenous, settler, or arrivant—has been colonized by temporal and societal mechanisms. We envision that time is precious, not because it is fleeting or because our human-to-human and human-to-non-human relationships are essential; rather, time is precious because it has become monetized. Through deference or acquiescence, if not outright acceptance, we “spend” our “free time” in seemingly less significant ways because this labor is unpaid. Capitalist time does not liberate us, quite the contrary. Capitalist time imprisons us in real and imagined ways. In turn, by reclaiming our time outside dominant temporal structures, Indigenous artists work in ways that potentially serve to undermine capitalist temporalities.
For decades, feminist, queer, Indigenous, Black, Latinx, and Marxist critiques of capitalist labor-time have appropriately called the paid/unpaid dialectic into question, even while capitalism continues to expand in seemingly uncontested trajectories. Because Indigenous ontologies are never linear, they are capable of simultaneously moving backward and forward in time; migrating upward towards the skyworld and diving deep underwater into the realm of Mishibizhii // the underwater panther. Indigenous ways of being (and “working”) challenge and push mainstream systems beyond the centrality of capitalist notions of time and temporality. As a Wiisaakodewinin // Métis artist myself, I make these practices central to my own individual and collective practice.

I share these preceding dibajimowinan // stories, because they—like much of the simultaneously quotidian and profound knowledge that I have learned from, with, and alongside elders and youth—have left indelible marks on my own way of being in the world. Moreover, I believe that this particular dibajimowin // story-turned-essay likewise has implications for other artists—Indigenous, settler, or arrivant—as they likewise attempt to navigate capitalist and settler-colonial contexts.

As a human living under the conditions of capitalism and settler-colonialism, I am constantly reminded of the dialectic between knowing something—such as that knowledge shared with me by the elders—and actually making it happen. While I acknowledge that we visit less and less frequently, to date I have done little to create sustainable and long-term infrastructures that maintain these important quotidian spaces of teaching/learning. It is for this reason that much of my work as an artist has, as noted in the first paragraph, revolved around the “Methodology of Visiting,” a theory that I link back to those conversations with fluent Anishinaabemowin speakers: George Roy, Doug Debassige, James West, Alphonse Pitawanakwat, and others. In Indigenous communities, the profundity of elders’ knowledge is, by and large, not matched in non-Native communities. I work to integrate these teachings into my own practice as much as possible.

For gichi-aya’aag // the elders, time and our relationships to work and to other beings must not be confined by capitalist temporalities. I share this in writing because I believe that this has real-world implications on our practices as artists and activists who work in Indigenous and marginalized communities, or with any human and non-human collaborators. In Anishinaabemowin or the Ojibwe-language, words are not divided into genders, as they are in romance and other European languages. Instead, we—or rather the fluent Anishinaabemowin speakers—categorize words as animate and inanimate. What is considered animate or living does not directly correspond with Western categories. While most rocks are animate, some are not. If something is made of stone and is living, one would say asiniwii. Inversely, if it is inanimate, then the word asiniiwan needs to be used. To understand all of this, a complex and intimate knowledge is needed. Accordingly, one needs a profound knowledge of the natural world to be able to extrapolate if and when an object is aauvi (animate) or aawan (inanimate). As artists,
we may make an *aawi* or an *aawan*. As we work with community partners to build and make things, we should know whether or not they are animate.

I think about these epistemological concerns frequently and engage with others in conversations about these questions. However, due to various economically driven reasons, we individually and collectively have little time for unscheduled and—from the vantage point of capitalist developmentalism—unproductive time shared with relatives, kin, and other beings whom we may not yet know.

As an artist, scholar, activist, and *aya’aa* // living-being, I have made visiting a fundamental component of my practice. Visiting is what differentiates me—and us—from non-living and inanimate *aya’iin* // things. Employing knowledge from the *gichi-aya’aag* // elders, I think about the work we do as artists—or craftspeople or makers or whatever term you use to identify your practice—and not fall victim to capitalist ontologies which circulate around notions of productivity. We must be cautious to not focus on what is being made, but rather on the actual process of making and with whom we are doing this work. For me, employing and living the elders’ teaching about visiting allowed me to intentionally shift how I see my practice—or work if you use this term—away from its general focus on *aya’iin* // things and instead see how being together and visiting does the work of creating and maintaining community. Put another way, by just visiting—*mawadisidiwag* // they visit each other—we are already doing and making in important ways.

When I began listening to and employing the elders’ teaching, I began to think about the artworks I made collectively with youth—such as the dozens of lowrider bicycles I have made in my ongoing workshops for *Anishinaabensag Biiskowebshkigewag* // Native Kids Ride Bikes—not as the artworks, but rather as the leftovers or detritus of the actual work being done. The visiting and sharing and working together was the artwork. The bikes are material remains of visiting. Yet sometimes, there may not be material detritus left behind. This, of course, is equally important.

Under capitalism, labor-time is abstracted into commodities and therefore the *aya’iin* // things are commonly imbued with meaning. Many non-Native artists, especially feminist performance artists and artists-of-color, have worked in ways to disaggregate the centrality of the commodifiable art object, what Aimé Césaire would call “thingification,” from contemporary artistic practice (42). As Indigenous makers, we commonly think about process and whether or not our artworks are animate or inanimate. Does our practice create living or non-living things?

Accordingly, much of my work is about creating and maintaining social relationships within settler-colonial and mainstream arts institutions. As such, I am interested in the ways that artists and other “makers” can extract—to evoke a mining reference—from dominant institutions in ways that benefit Indigenous and other colonized communities. How can we work in ways that centralize
visiting and collective—particularly non-productive—work? At the core of my working with elders and youth is the phrase: *mawadisiwag miinawaa wiidanokiindiwag* // they visit and work together. In this phrase, there is nothing about making *aya’iin* // things. Rather, it is about being together with one another and collectively learning from, with, and alongside each other.

From an Indigenous way of being, the doing and being and making is far more important than what is actually made. In reference to the title of this book, the making and crafting and educating are far more important than those individuals that do this work or, more importantly, the objects that come from the processes.

**Work Cited**

FEMINIST VISUAL TACTICS

Ellen Lesperance

For the past decade, I have looked primarily to the creative visual tactics of various protest campaigns for artistic guidance and inspiration. For example, I frequently represent the garments worn by women protesters in my own work by sourcing images of the garments from archival images and film footage of women involved in Direct Action protest (see Figure 32.1). Direct Action involves forms of protests such as demonstrations and strikes instead of negotiations. Most notably I have researched the long-running, anti-nuke Greenham Common Women’s Peace Camp, a women-only activist campaign that ran for nineteen years (Berkshire, England, 1981–2000). This movement was significant for its ongoing Cold War political contributions, but women artists also contributed significantly to it throughout its various iterations. The question of this essay is whether that pertinent model can be both a civic model and a model for makers. Creative Direct Action is a category of creative making that provides powerful models for politically inclined makers, and offers a methodology that makes dissent visible in the public sphere. I will explore this model through the protests of women at Greenham Commons.

In an interview with art critic Suzi Gablik, performance studies scholar Barbara Kirshenblatt-Gimblett defines the artist’s role as one of turning value into form. Indeed, this was the practice at play at the Greenham Commons camps: developing a symbolic visual language through which to argue their particular ethic. In many cases the protest actions gained their effectiveness through creative components, as these components continued their argumentative role when reproduced as images in the press.

The women at Greenham Common faced incredible hardships, including those designed to erase their presence from the land. They were frequently evicted from temporary structures and arrested; their belongings were discarded;
FIGURE 32.1 Ellen Lesperance, *Oui Girls, Look!* gouache and graphite on tea-stained paper, 29.5 in. (w) × 42 in. (h), 2017

Image courtesy of the artist and Adams and Ollman Gallery. Photo: Rose Dickson
they were harassed by military personnel and townsfolk. Many were convinced that the more protest activity they generated, the more visible their dissent would become to the rest of the world. This need to make visible is a type of call for crafting visuals with impact, that in their form and content symbolize the ethos the artist stands for.

There was a type of visual language established at the camp that was specific both in its aesthetics and specific in its use of metaphoric symbolism. The two most frequently utilized symbols in the service of the Greenham women’s protest were the snake and the web. Both provided subtle but perfectly apt metaphoric language for the struggles they were facing. The snake is an animal that outgrows its skin and needs to entirely shed that encasement in order to move forward with its life. Within a web, each singular strand is a tentative, delicate thing; however, the network of interdependence achieved, the strength of the whole, would never belie this. The spider, as well, is willing to spin and repair this network tirelessly. Weaving woolen webs around the camp was the single most common creative act at Greenham. Web stringing was also utilized as a tactic for complicating access by the military and police to certain sites of protest, as they entered the sites regularly to arrest the women. This visible form of resistance also highlighted the storming of women into a literal and symbolic male bastion.

Because they lived outside and were exposed to the elements, the knitting of garments was also important, and these too were employed in the service of protest messaging. The re-patterning of their sweaters, many with knit-in text and feminist, queer, and pacifist symbolism, has fueled my own painting practice for the last decade.

The 2006 Artforum article “The Social Turn: Collaboration and Its Discontents” cites the “mixed panorama of socially collaborative work” (Bishop 179) as today’s artistic avant-garde. In these relational practices, collaboration between the artist/author and the audience is initiated and the atmosphere of democratic community-making is, in many instances, the construction. In many cases, these are controlled micro-utopias wherein it might be imagined that a palliative social encounter could cause some (albeit temporary) alignment to befall a community. Clearly, a social conscience is at play. In the Pacific Northwest, where I live and where a beacon Art and Social Practice MFA program is housed, food-based events are very common social practice events. This is because food provides a sort of baseline connectivity, whether it be initializing new micro-economies for food exchange, designing specialty beers for museum-goers, providing exposure to regional foods, or educating around ecological sustainability concerns. In these projects, social practitioners (artists/crafters/makers) will often align themselves with grassroots activist traditions and specific political causes, even while imagining that what they are doing is activist but different than activism, in that it is foremost an aesthetic event. While such primarily artistic events as responses to social issues gain cultural capital, the same is often not true for Creative Direct Action activists who employ similar strategies
but often forgo receiving the creative merit of what they do. Not doing so perpetuates the message of dissent while privileging the creative content.

In many cases, the raw, direct aesthetics and tactics employed by feminist artists and artist collectives such as The Guerrilla Girls, Suzanne Lacy and Leslie Labowitz, Women’s Action Coalition, W.I.T.C.H., and Feminist Art Workers make their work indiscernible from Creative Direct Action, yet artists and critics do not necessarily make the connection between these art and activism histories, thus leading to an imbalance in acknowledging the crafting of creative and artistic feminist activism strategies as employed by the Greenham Commons women activists. As artists and crafters of creative change, this is something to consider as we decide upon the strategies and ethics of our work and those we honor through it.

Note

1 “Art,” “artistic,” and “artist” in this essay are used inclusively to include makers, crafters, and arts educators.

Works Cited

MAKER CULTURE IN NEPAL

Making vs. making

Supriya Manandhar

The Maker Movement connotes an anti-establishment philosophy of self-agency in the creation of objects, against the backdrop of mass production and heavy industrialization. Although creating tools and products has been a human endeavor throughout history, the “making” of the Maker Movement has been defined within a specific Western and political framework. Despite the counter-cultural and grassroots impression that literature promoting the Maker Movement gives us at first glance, it too is not above government and corporate influence. Beyond being sites of community building and showcasing entrepreneurship, Maker Faires have also been places of recruitment for corporate employers. Institutions such as DARPA (Defense Advanced Research Projects Agency) and GE (General Electronics) have invested in the Maker Movement, and with such involvement, there are always strings attached. Similarly, though the Movement expresses an inclusive stance on participation, in practice that has not always been so (Ferreira). How uneven technological progress is exacerbating inequality, and whether we are “developing a moral and ethical framework as quickly as our technological capacities are evolving” (Tierney para. 16) are two important questions being raised within the maker community.

In light of this, it becomes all the more important to be able to problematize and critically explore the Maker Movement when it arrives in communities and cultures that are vastly different to those in the West. It’s difficult to pinpoint the beginnings of maker culture in Nepal, but from the late 2000s onwards, there were some early attempts by different circles to initiate DIY culture, promote basic workshops, and foster cross-disciplinary collaboration. The media collective Sattya, for example, offered workshops such as zine making, screen-printing, and cycle repair, and the Yantra program by the Robotics Association of Nepal (RAN) was an opportunity for artists and engineers to collaborate.
Individual makers or artist groups who created and sold jewelry, postcards and posters, or hand-painted T-shirts began to appear on the scene, but these were sporadic and autonomous. However, the Maker Movement in Nepal was more “formally” inaugurated through the Maker Faire in 2015. Held closely after the earthquake of April 2015, this Maker Faire had a humanitarian focus, with exhibits such as soldering, drones, solar panels, traditional wood crafts, and automated power cords. The number of initiatives today hasn’t increased significantly, but because of the “ice-breaking” of maker vocabulary by a few programs, making and maker culture are becoming more defined in the public imagination. There is potential for this to expand and have a constructive influence on the Nepali education sector, but at the same time, there are unresolved questions about which kinds of work are privileged as making and which ones are not; a Maker and maker dichotomy.

To explore the possibilities of making in Nepal, consider the work of Maker KT. Run by Pooja Joshi, Maker KT is a women-focused makerspace. In Nepal, gender roles discourage girls from tinkering with technology, and most girls and women must contend with preconceived notions of what they are capable of. There are domains of work socially assigned to women that are not as acknowledged for their value, and there are tasks where men dominate, which are more explicitly appreciated. For example, cooking, sewing, and crocheting vs. building furniture and fixing appliances. Aside from this, there is a global hierarchy of making that privileges power tools and new tech, and Maker KT works towards challenging these structures.

Maker KT has run primer classes on things like carpentry, motorbike repair, home electronics, jewelry, and kite-making. But more than the product, Maker KT has been about fostering the collaborative process of making. Women in Nepal rarely enjoy women-exclusive spaces, and being able to work in such women-only groups has allowed them to feel free about asking questions and engaging with their peers. Participant testimonials suggest strong self-esteem building, and Pooja herself identifies this can-do feeling of hands-on activism as the driving motivation behind Maker KT.

As invaluable as the social component of Maker KT and other groups is, their programming remains too basic to push for technological innovation. Here, it will be important for maker communities in Nepal to have pragmatic expectations of what making entails for them. For example, the U.S. embassy in Nepal has an Innovation Hub, and they have held events where they have let the public try out 3D printers. However, such tools are limited to being demonstration props rather than actual utilities that Nepalis can take up in everyday life. Even if there were to be generously supported maker programs with high-end tech gadgets, their reach and long-term feasibility would ultimately be limited, and might even perpetuate the privileging of exclusive, upper-class Making.

Before this becomes further reified, it is important to both continue to challenge the status quo—as Maker KT is doing—and open up discussion about
another set of makers of Nepal: diverse ethnic communities with their own Indigenous crafts and technologies. Whether it’s various food preservation techniques, weaving and crafts, intricate wood carving, or traditional methods of earthquake-resistant architecture, there are many traditional means of making and tinkering that have not received the respect and acknowledgement they deserve. Perhaps it is time to invite such traditional artisans into contemporary maker circles and into the slowly growing scholastic involvement of maker groups.

It is important for Nepal to critically assess what paradigms Nepali students are looking at maker culture through. By integrating homegrown techniques, by challenging gender norms about work, and by focusing on the collaborative philosophy of making, the average Nepali student participating in maker culture will not feel that they are working in an alienating and intimidating environment of unfamiliar tech gadgets and concepts. It could also create space to contemporize traditional arts and crafts, and bring more young people on board, allowing Indigenous cultures to preserve their heritage. In conclusion, by equipping makers with the community-building strategies of Makers, it is possible to develop a more authentic maker culture in Nepal.

Works Cited


SECTION IV

Cultural and Environmental Sustainability
IV. CULTURAL AND ENVIRONMENTAL SUSTAINABILITY

JACOBS-MORRIS
SACRED MAKERS

KOH
CRAFT IN SINGAPORE SCHOOLS

DICINDIO
SOUTHERN CRAFT IN MUSEUMS

ALEXANDER
PERUVIAN ARTISTS, CRAFTERS, MAKERS

SHIN
CRAFTS AS SANCTUARY

KAUR MAJITHIA
STORYTELLING IN DESIGN EDUCATION

SARASWAT
SUSTAINABLE HERITAGE CRAFT

HOUGHTON
CRAFT & ENVIRONMENTAL SUSTAINABILITY

KALLIO-TAVIN
FAB LAB WITH KOHTALA

COATS
DIY HOME COMMUNITY
Cultural and Environmental Sustainability visual map: Themes and emerging questions

Drawing: Elizabeth Garber
Dearest Grandma,

Thank you for being a maker. Thank you for wrapping me in the sacred works you created. I doubt you saw yourself as an artist but that is what you were to me. A phenomenally creative being that made things. Beautiful things. I still wear your creations with pride. We all do, all of your children, grandchildren, and great-grandchildren. Thank you for teaching me the power of my hands. Thank you for teaching me to honor the wool and cedar. Thank you for passing on our sacred teachings. Huy chexwa.

Love Always, Your Granddaughter

Making is sacred. It is the work of gifted individuals who possess patience, dedication, and humility. Makers and artists in my First Nation community are upheld and honored for their abilities. Without them much of our snwewêyalh (teachings) would be lost. These individuals have a significant and integral role within our customs and societies. They possess the knowledge and skills to create our ceremonial objects and regalia. Our distinctive clothing and adornment was in the past and continues today to be an indication of rank and prestige.

My Nation, Skwxwú7mesh (Squamish), is part of a larger ethnic and linguistic grouping known as the Coast Salish. We have familial ties across the Pacific Northwest, specifically British Columbia, Canada, and Washington, United States. Up and down the Coast one can witness similar cultural ceremonies and societal structures, which result in shared practices and techniques of making. The makers within my community know how to harvest and process materials such as wool and cedar and transform them into blankets, shawls, hats, and headdresses. While weaving and textiles are not unique to my people, we have
made some ingenious advancements to the practice. One in particular is known as Cowichan knitting.

The Cowichan are a group of Coast Salish people, specifically referring to those Cowichan Nation communities who trace their ancestry back to the winter villages of the Cowichan and Koksilah Rivers and Cowichan Bay of Vancouver Island, British Columbia. “The Cowichan people, already renowned for their weaving, quickly adapted to the art of knitting introduced by white settlers, and created what is now the world-famous Cowichan sweater, whose trademark is that it is knit all in one piece” (“About Cowichan”).

Cowichan knitting is an example of what anthropologists call the arts of acculturation (Meikle 3). “Acculturation is the process of social, psychological, and cultural change that stems from the blending between cultures” (Sam and Berry 472). Before contact with white settlers, First Nations utilized mountain goat wool, Salish wool dog hair, fireweed, and other fibers to create blankets, dance aprons, leggings, tumplines, and baskets. The wool and other fibers were spun together with a spindle whorl and the weaving was completed on a loom. After European spinning wheels were introduced, the Cowichans modified and created their own wheels. The innovative First Nation-designed spinner heads were “copied by manufacturers in the United States, Canada, and New Zealand . . . The specially-adapted spinning wheels are now known as Bulky or Indian Head spinners” (Meikle 11). After the introduction of sheep in the mid-1800s, most knitters began using sheep wool instead of mountain goat wool and unfortunately by the 1900s the Salish wool dog was extinct. Cowichan makers revolutionized their local practice through combining Coast Salish spinning and weaving systems with the Scottish Fair Isle knitting technique and European textile technology.

The materials and techniques our contemporary makers employ have been modernized but the use and meaning of the works they create are ancient.

Why do these Cowichan sweaters, essentially unchanged . . . remain popular? Certainly because they are economical, waterproof, serviceable, sturdy, beautifully patterned, durable, and locally-made for the coastal British Columbia climate. Still, other garments share many of these qualities. It is the distinctive Indianness of the sweaters that makes them particularly attractive to both British Columbians and tourists, and creates the strong attachments owners have to them. (Meikle 1)

The romanticizing of how and why Cowichan knitting came to be ignores the ugly truth of colonization and assimilation. I think the desire to possess something with a “distinctive Indianness” is rooted in the need to belong. With the exception of Indigenous peoples all North Americans are immigrants. Through the need to acquire something authentic, is mainstream society revealing the truth that the majority of the human race is a displaced people longing for a homeland?
Over a hundred years later Cowichan knitters are still proudly creating sweaters. Taking pride in the creation of objects not just for regalia but for all life activities is what my grandmother taught me (see Figure 34.1). My grandmother was a skilled knitter, crocheter, and weaver who created Cowichan knit sweaters and cedar bark hats. To me my grandmother’s knitted and woven work represents the ingenuity and resilience of our people.

Cowichan sweaters are thought of as “visual statements, symbols of the West Coast, readily identifiable Canadian dress” but to me they represent a long history of makers who used their hands and hearts to ensure our Indigenous ways of knowing would not be lost (Meikle 1). To ensure n’chu7mut (oneness) is still honored and practiced. To safeguard all that my Squamish ancestors fought for and uphold who we are and where we come from.

Works Cited

35

THE (RE)MAKING OF CULTURE

Annotations of Practices in Secondary School Art in Singapore

Bee Kim Koh

This chapter is an account of the developments of three traditional crafts, namely batik, papercut, and pyrography, within the secondary school art curriculum in Singapore. It is based on my personal experiences and conversations with peers, both as an art student and an educator. I explore the idea that the maker movement provides art educators with avenues to rethink the teaching of cultural practices in the Singapore art curriculum.

Concepts of making in art and the maker movement embody constructivist notions of learning and creating new knowledge through interactions with ideas, people, and experiences, and particularly, through doing (Halverson and Sheridan; Martin).

The art curriculum in Singapore schools embraces a wide range of art, craft, and design practices reflecting the makeup of Singapore as a multicultural migrant society. At the secondary school level (i.e., grades seven to ten), this translates into curricular inclusions of a spectrum of practices covering arts, crafts, and design such as batik, tie-dye, papercut, collage, pyrography, painting, ceramics, sculpture, assemblage, installation, mixed media, digital art, design, and digital media.

Art educators in Singapore often reach out to prominent local cultural associations to make culturally relevant connections between arts and crafts taught in schools, and local cultural communities. For instance, batik printing is primarily associated with Malay culture, papercut with Chinese culture, and pyrography is seen as a traditional craft but with unidentified origins. Batik is an art of textile making with alternating layers of wax resist patterns and coloured dyes. Papercut, as the name suggests, refers to designs cut out of sheets of paper. Pyrography, or wood burning, refers to the burning of marks onto wooden surfaces with a hot iron to create images.
Notions of Making

In art making, the ideas, resources, and tools can be either original or derived, and the nature of making tends to be more reflective and characterised as inquiry and meaning making (Walker). The product of art making, that is, the artworks, tend to be viewed as expressions of the artists’ views and ideas, as interpretations of their experiences, and as expressions of their insights gleaned from the making process. Thus, artworks tend to enjoy certain leeway in terms of their physical form and ideas.

Making in the maker movement has links to a myriad of activities such as tinkering, do-it-yourself (DIY), digital fabrication, crafts, and hobbies, and emphasises “designing, building, modifying, and/or repurposing material objects” (Martin 31). The purpose could be for “playful or useful ends, oriented towards making a ‘product’ of some sort that can be used, interacted with, or demonstrated” (Martin 31). Making in the maker movement also “often involves the use of digital technologies, either for manufacture . . . or within the design” (Martin 31). Concepts of making in the maker movement embrace notions of building or modifying products for specific purposes, which appears to contrast with the freer form of expression of art making.

However, these notions of making, in the art and maker worlds, are not necessarily opposing or exclusive, and offer interesting counterpoints in discussions about art curriculum in Singapore. This is particularly true for artistic practices that have roots in aspects of daily cultural life. Practices like batik, papercut, and pyrography are often seen as crafts and/or decorative in nature due to their associations with textiles and cultural fashion, or festive/domestic ornaments. However, Singaporean art educators can demonstrate that creative processes such as idea generation and development, and expression are characteristic not just of art and maker processes but also of crafts.

The dual positioning of these practices as both craft and art is concurrent with the increasing emphasis on creative processes, not just products, in Singapore art syllabi. Over the years, this has led to innovations in how arts and crafts are taught. For instance, batik printing in our schools has moved from teaching about traditional linear patterns such as block or half-drop repeat patterns, usually used in commercial batik textile craft in Southeast Asia, towards a mandala-like design which is more innovative and inclusive of more conceptual forms of art.

Papercut in secondary schools has similarly evolved into an artistic form that incorporates multiple layers of coloured paper, instead of the more traditional single-layer monochromatic hues, typical to the craft. While the physical look of pyrography works had remained fairly similar over the years, the subject matter and images of the works are now more illustrative, reflecting greater originality in content generation and style.
Adaptations, Borrowing, and (Re)mixing

Such adaptations and evolutions of traditional crafts as described above involve borrowing and mixing aesthetic and design approaches from art practices like painting and illustration, as well as experimenting with and inventing alternate techniques, tools, and working processes, as characterises the maker ethos. Students also draw from online resources, such as trending sites and images that they are more familiar with, for ideas for their designs, rather than working from more traditional processes and motifs. These adaptations, the borrowing and (re)mixing of art forms, has led to craft works taking on designs and expression associated with paintings and illustration, and away from the aesthetic and cultural function of the original form. However, in my opinion these adaptations have not gone far enough, as beyond the initial break with traditions, such artworks have quickly settled into their new conventions and norms and have done little to change the look of the final products, which appear to continue to conform to certain preconceived expectations in the use of materials and techniques.

My conversations with teachers over the years indicate that teachers’ attitudes towards traditional craft tend to focus around technical qualities and less on concept or function. While more experienced teachers tend to evaluate students’ work primarily based on the execution of a range of technical skills—such as the extent of fine and detailed mark making for batik and pyrography or type of cuts for papercut—younger teachers tend to hesitate to include these crafts in an art curriculum due to limited knowledge of the technical details.

Cultural Practices as Collectives

The reverence for technical skills and conformity to norms of these crafts forms could be tied to their perceived function in the preservation and transmission of culture. Underlying such attitudes are essentialist notions of culture that also carry certain beliefs in the fixity of cultural practices. However, what we often refer to as discrete ethnic categories in Singapore—that is, the Malay, Chinese, Indian, and Eurasian—are not unitary and homogeneous entities in and of themselves but collectives of diverse origins (PuruShotam). These cultural art forms are also not exclusive to Asian cultures. Batik, for example, has iterations beyond the Malay Archipelago, such as in parts of Africa and China. Chinese papercut may be recognised as one of the oldest but certainly not the only form of paper art. Many cultures in the past and present have also created different types of art forms using not dissimilar cuts in paper. An interesting case in point is the practice of pyrography. While situated as one of many traditional crafts, no one can say what its cultural roots are. Semblances of pyrography can be seen in tourist memorabilia across various parts of Asia but there is no specific culture of origin per se. Hence what were held as traditional practices are, at best, constructions from across different geographical, historical, and technological contexts (Koh).
Learning (Re)Making

Drawing from notions of tinkering, hacking, and repurposing in the maker movement, the teaching of cultural arts and crafts becomes a precursor to (re)making cultural practices as students experience and engage with them. The focus will then be on exposing students to the diversity and changes in these art forms across various cultures, and the various strategies, purposes, and products that students can use to adapt, borrow, and (re)mix ideas, materials, methods, and products in ways that acknowledge the cultural antecedents and connections. In fact, the pedagogy is one that is purposefully transgressive (Koh). The focus shifts to the cultivation of a shared, culturally collaborative space for students to tinker and make. Learning cultural practices should not be ends in themselves but, instead, a way to open up opportunities and spaces for students to explore and (re)make these practices as relevant to them, and for the nurturing of an open and learning mind.

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In his 1934 book *Art as Experience*, John Dewey criticized museums for separating art from life and experience, writing, “art is remitted to a separate realm, where it is cut off from that association with the materials and aims of every other form of human effort, undergoing, and achievement” (2). Indeed, similar sentiments have been reflected in visitor responses to crafts on display in the Georgia Museum of Art, where I was curator of education for six years. Students often told educators that the ceramic pots and woven baskets there could no longer be a part of a household and were relegated to positions in cases and on pedestals. Adult visitors expressed sadness that display drawers could not be opened and textures of quilts could not be experienced firsthand. This expressed desire to handle objects that were part of the museum’s collection was focused almost solely on this gallery. The comments reflect the visitors’ familiarity with these types of objects that held place in their lives, objects not found in other parts of the museum.

The crafts that occupy one of the galleries at the Georgia Museum of Art represent a wide variety of objects from the American South that include historical examples and works by contemporary artists who continue to combine contemporary aesthetics with cultural heritage and tradition.1 The vernacular objects in this gallery were used in typical households in the region and are recognizable to many museum visitors. Southern artists of early objects consistently drew their materials from the resources of the region, oftentimes in innovative ways, originally out of a necessity for the function of the object rather than display (Bonner and Curtis Pennington). Georgia red clay can be used to make folk pottery, including face jugs, a vessel with a face modeled on it that is popular in the region, and scraps of material are sewn to create patterns on a quilt. Sweet grass along the coast of South Carolina and Georgia is used to weave the baskets.
of the Gullah and Geechee people, and natural pigments from plants color threads of embroidered textiles. With ingenuity and resourcefulness, the materials mark these objects as distinctively Southern and demonstrate the creativity of the maker who finds ways to produce art using the resources of his or her surroundings.

The materials are not only culturally identifiable, but often personal to museum visitors who, in many cases, grew up in these same environments. Hooper-Greenhill discusses how objects can provide a sense of comfort through “recognition of familiar shapes, textures, and colours” (110). She argues that the “power of meaning given to objects is grounded in their material character,” relating to the body and senses (115); understanding objects is based on what can be seen and experienced physically. Through these recognized materials and objects, new visitors can find ways in which they connect to the museum. Simon writes about the importance of relevancy through the familiar in museums. Because familiarity requires less effort than exposure to an entirely new concept, we are more likely to try something novel that relates to experiences we have had before. For new visitors without a background in art, Southern craft is accessible and can help them to see ways that they are reflected in the museum. When the museum becomes relevant to them, visitors are receptive to new experiences.

This is not to say that Southern crafts at the Georgia Museum of Art are not complex in their incredible forms, materials, and designs. Yet with these objects, the museum can create entry points through familiar materials and personal connections to resources. Museum educators can expand the horizons of visitors by considering the relevance of these objects in the lives of museum audiences and building experiences around them. Hood and Kraehe discuss our relationship with objects and materials through the lens of new materialism, writing about the “thingliness of things” (33). The authors argue for opportunities to focus on physical materials in art-making in the classroom and in the museum, “assuming that all forms of matter–human and non-human, people and things–have material vibrancy and agency” (33). Such forms of engagement help visitors not only to understand the physical materials of an object, but to make connections to art through sensory experiences that focus on the act of making rather than on the skills necessary to make.

Finding opportunities to touch and to create affects visitors’ experiences with such objects. Encouraging not only children but also adults to feel the textures, weight, and materials of these objects, and to simply be with the materials, offers them direct connections between the works of art on display through sight and the other senses, as well as their own environments. Likewise, activities designed to bring objects to life, either through embodied responses in which visitors physically take on the facial expression of a face jug or physical gesture of a basket or ceramic pot, or through voice by talking or writing from the perspective of the object, give the work an acknowledged presence and help visitors to gain insight into the physicality of the work of art and the space it occupies in the
museum. As Hubard notes, even when museum visitors draw an object with a pencil and paper, they follow the path of the artist, connecting with the artist’s actions, giving them the opportunity to reflect on the difference between the materials of the artist and his/her/their pencil (see Figure 36.1).

FIGURE 36.1 Giving visitors the opportunity to draw in the galleries helps them to make connections with these objects

Photo: Author
Although not all museums have designated spaces for making, most have spaces to make. By incorporating these opportunities in the galleries to understand and directly respond to craft, museum visitors are given access to these works of art in new ways. For new visitors, these activities create new paths to understanding works of art through accessible, familiar materials. Thus, Southern craft can serve not only as an anchor of familiarity, but also as a source of inspiration. Dewey argues that we must “restore continuity between the refined and intensified forms of experience that are works of art and everyday events, doings, and sufferings that are universally recognized to constitute experience” (2). Drawing from Dewey, Maxine Greene wrote of the importance of reaching out to the object “through an act of consciousness that grasps that which is presented” (30) for it to be truly realized. Through personal connections with Southern craft, visitors can see themselves as part of the museum. In turn, they activate these objects in their engagement and responses, giving them voice in the galleries of the museum.

Notes

1 For this discussion, the South, of which Georgia is a part, refers to the southeastern portion of the United States, extending west to Texas and north to Maryland.

2 The Gullah and Geechee people are descendants of enslaved people from West Africa who have inhabited the Sea Islands of Georgia since the 1700s and continue to live in the region between Sandy Island, South Carolina and Amelia Island in Florida. Gullah refers to people living in South Carolina, while those in Georgia are recognized as Geechee. For more information, see Sumpter’s “Geechee and Gullah Culture.”

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Introduction: Technology, Consuming, and Making

For thousands of years, humans have been innovating as a means to adapt to and monopolize our natural surroundings (Smithsonian), and while technology has been advancing rapidly we have also witnessed a surge in economic growth, globalization, and consumerism. Currently we are witnessing a doubling in computer processing speed and digital electronics every 18 months (Moore). With economic growth, the United States, in particular, slowly became a throwaway society (Life Magazine). Increased consumption demands excessive production of short-lived or disposable goods (Packard). The growth in convenience and cheap consumer goods has taken priority over mindsets of the past advocating for stewardship, resourcefulness, and thrift. These contemporary economic contexts of globalization allow for one to compare making as a production technique in the United States to other countries such as Peru. In the United States, we have seen a decrease in vocational skills to work in a trade, craft, or as a technician; we have limited our K-12 shop classes and home economics; and we tend to cut arts and crafts when budgets are tight (Hambek; Horwitz; Tucker). One could argue this trend is due to our consumer, throwaway culture—people purchase their goods and throw them out instead of making and repurposing, as in the past.

People in the United States have started pushing back against consumer, throwaway culture by re-envisioning and re-enlivening more equitable, sustainable systems and developing ideas like do-it-yourself (DIY) and do-it-together (DIT). They are using advancements in digital technologies coupled with sharing ideas on the Internet through sites such as Pinterest, Thingiverse, and Make. Awareness that the exorbitant consumer-driven system is not sustainable is spurring change (Costello; Hatch).
For some time, the push back against U.S. consumer, throwaway culture has continued to evolve and there is much literature on the subject (see, for example, Costello; Lang; Hatch). However, there are few articles, within this discourse, on the similarities of craft and maker culture and what is happening with these movements in international circles. This essay highlights, through a study of Peruvian artists-crafters-makers, how the distinctions between making practices of artists, crafters, and makers have not been as sharp internationally as in the United States and have consistently held tight to ideas of stewardship, resourcefulness, and thrift. Like the United States several decades ago, the distinctions are sharpening and traditional artists-crafters-makers’ goods are beginning to disappear.

**Peruvian Artists-Crafters-Makers**

As a U.S. citizen living in a society disproportionately weighted towards consumption and who has also lived and worked for more than fifteen years in Peru, I continuously compare customs and practices of the two countries. Until recently, I would not have categorized Peruvians as heavy consumers of stuff. Traditionally, they farmed; grew their own gardens; raised their own animals; made their own yarn, fabric, and clothes; and many made utilitarian goods and wares for use in their homes and selling. Much of the making culture came from long generational lines of knowledge, which was passed down from parent to child. There was little reason to purchase goods because people tended to be self-sufficient. Many artists-crafters-makers could be considered stewards of their own culture and environment who skirted mass production and globalization by cutting out middlemen, much like makers are now trying to do in the United States.

This making culture is embedded as a way of life for Peruvians, but it is also partially due to historical context and slower economic growth. Peruvians lacked access to readily available, cheap goods and Peru was listed as one of the poorest countries in South America. However, economic growth in the country has been on the upswing. According to the World Bank, per capita income has increased from $1,967 in 2000 to $6,549 in 2014.

Until the year 2000, Peru’s economic growth had, since the 1960s, been flat. This newfound growth was due to exploitation of natural resources, especially mining. Now when traveling to Peru, one can see commercialization abound. There are strip malls, big mart stores, and readily available cheap goods in some of the most remote areas. This growth was taking off while in the United States people were looking for change—a way to counteract the consumer, throwaway culture.

In some regard, the United States and Peru are slowly moving in cyclic patterns—circling around to each other’s points of view. Many U.S. citizens are seeing the negative aspects of living in a consumer, throwaway culture, and Peruvians are, to a certain extent, beginning a newfound love of cheap,
ready-made goods. The growth in Peru has also had other impacts—for instance, it has brought about better access to digital technologies. A large percentage of Peruvians, even those in remote areas, now have cell phones that provide access to communication. Many also have home computers, and for those who cannot afford home computers, there is a plethora of Internet cafés with digital hardware and software.

Although people in Peru continue to repurpose, be resourceful, and make crafts as their livelihood (see Figure 37.1), in today’s world this life can be difficult, bearing little profit. However, what might happen if Peruvian artists-crafters-makers could gain access to tools that we now see popping up in fab labs across the United States? Would this help to skirt the growing consumer, throwaway culture that is building in Peru? Or perhaps an educational campaign might facilitate thinking about the negative impacts of throwaway culture?

Conclusion

As my work with Peruvian artists-crafters-makers progresses, I am looking to merge the old and new—crafting and making technologies. Supporting artists-crafters-makers with new technologies might facilitate more self-induced sustainability to reduce the whirlwind commercialization across Peru, which is disturbing, disrupting, and destroying environmentally, socially, and culturally.
friendly ways of living—something we have already witnessed happening in the United States. Now is the time to curtail the ongoing disappearance of valued ways of crafting and making through education and access to U.S.-based maker technologies and knowledge, not only in Peru but also around the planet.

**Works Cited**


CRAFTS AS SANCTUARY FOR KOREAN IMMIGRANTS

Ryan Shin

Living as a Korean immigrant in the United States, I have often found myself considering my Korean ethnic identity. As a researcher, I have realized that my contemplation of Korean identity and ethnicity often starts, or is triggered, when I come across Korean images and objects, such as flags, decorative motifs, clothes, gifts, or travel souvenirs, in various contexts of the United States. When exploring the display of such objects in my home and other immigrants’ homes, I have found that crafts are among the most displayed and cherished objects. Craft objects are collectible, portable, displayable, and sharable. When removed from their original cultural contexts and displaced in new contexts, the objects take on new functions that are different from their original meaning. In what follows, I describe what crafts and other tourist objects can mean to Korean immigrants whose home is in the United States. These descriptions are centered around three themes: objects relating to stories that are associated with their owners’ former Korean life; objects that serve nostalgic purposes for what no longer exists; and objects collected versus made, and when they are made, adapted and not made in traditional ways.

First, crafts objects carry stories, typically associations with Koreans’ lives before moving to the United States. Many people bring with them craft objects when they leave their homeland, ranging from half-century-old furniture and utilitarian objects, to decorative displays, such as folding screens, chests inlaid with mother-of-pearl, and wood carvings. These objects carry for their owners personal associations that are loaded with connotations of home, family, and the neighborhood that they left behind. For example, we keep the gold rings that were specially presented as a gift for my oldest daughter’s first birthday. She was given eleven rings during her birthday celebration, just six months before leaving...
Korea. The first birthday celebration in Korea is called Dol, during which family and parents’ friends come to celebrate and wish for a good and healthy life for the baby. It is a long tradition that party guests present a gold ring to the baby. When my wife and I see our daughter’s Dol rings, it is an iteration of our personal and cultural memory. These objects are treasured because they embody these stories (Witcomb 41).

A second theme is that Korean crafts serve as memorabilia of life before immigration. The designs, forms, and symbols in many craft objects represent the traditional lifestyle and culture of the country (Shin 50). Crafts in immigrants’ homes represent the time and place the immigrants occupied before they left their homeland. My wife, Heeok Hwang, brought with her a bedding cover, gold jewelry, and ceramic dolls. To our family, they are much more than literal materials and cannot be replaced nor purchased. They are personally valuable and a reminder of how we lived in a typical Korean house two decades ago. When I visited Korea in 2015, many of my relatives and friends were living in Westernized apartments or yangok (a Western-style house), not in traditional Korean houses. Their home decorations reflect modern aesthetics that appear Westernized to me. I realize that my picturing of my homeland has been fixed in the 1990s when I left for the United States.

Third, I find that most Korean immigrants are not involved with craft making, even though they enjoy having a small Korean gallery in their home. Most do not have the resources—such as authentic materials, paints, and tools—to make craft objects. However, they enjoy crafting objects using materials that are available and accessible in their community whenever it is necessary. For example, when my daughters’ Korean dance teacher needed new outfits for traditional dance performances in Tucson, she designed and made them using commonly available fabrics at a local craft store, not materials used in Korea. When I taught a Korean mask workshop with U.S. students in Wisconsin, I adopted available art materials, rather than sticking with the traditional wood. When my family wants to play with Yut, a traditional Korean board game played during New Year or Chuseok (the mid-autumn festival), I make Yut sticks out of a one-inch diameter branch of a musket tree and also draw the playing board on cardboard, variations, respectively, on the traditional chestnut or birch wood and on the board made of cloth. The design and function of the objects is enough, despite the lack of authentic materials and tools.

Korean crafts are often seen by non-Koreans as cultural symbols of the country. This is partially true, but they also build what could be called a sanctuary to remind their owners that they are Korean, helping them reconnect with their past and origins. Craft objects help generate a momentary break from American-ized immigrant life and create a place of refuge that takes immigrants back to their childhood and neighborhood, awakening their intrinsic Koreanness, and invoking nostalgia of the present.
Works Cited


Humans are innate storytellers. Over centuries, stories have been one of our most fundamental forms of communication. As Hamilton and Weiss tell us, “storytelling is the oldest form of education. Cultures around the world have always told tales as a way of passing down their cultural beliefs, traditions, and history to future generations” (1).

The shift toward an attention economy, which posits human attention as a social and economic asset, encourages telling great stories in a way that will make audiences not only want arts facilitators to engage with them but to share and even repurpose them. “We all have ever shorter attention spans and compelling images and visualisations are the key to making your story stand out from the crowd.” (CommStart, para. 4). Furthermore, we can interpret from Berlo’s model of communication (Communication Theory) that cultural storytelling, authenticity, and craftsmanship are in demand as we return to local sourcing and manufacturing.

In today’s world, technology is redefining the ways we communicate. Social/cultural context, traditional art forms, gender roles, social positions, power, politics, and other factors are being renegotiated and stereotypes are being questioned. There is also a growing importance of creating powerful and memorable experiences that people find authentic, relevant, and shareable. Stories stand the test of time to show us the way forward. We need creative and diverse minds that can navigate through the chaos, uncertainty, and adventure of our present-day society. Starting from an understanding of people and their concerns, design education is now concentrating on improving human experience by putting emphasis on crafting innovative content through storytelling.
Learning to Craft Innovative Content

Design education teaches students to take on complex real-world problems. Communication designers, in particular, are adept at stimulating and educating the human mind by harnessing their skills to change behavioral patterns and, possibly, the more complex human mindset.

Storytelling and content design are two modules I teach to Communication Design students at Pearl Academy in Delhi, India. These offer students an opportunity to learn how to create powerful content and take design solutions in new directions. We do this by encouraging them to follow their curiosity, setting a situational context and selecting appropriate mediums based on factors such as client, market, contemporary needs, environment, and community that influence possible solutions. Having studied these modules, students are expected to formulate a persuasive story for these situations using design solutions. The project outlined below demonstrates one of our explorations revisiting traditional Indian craft forms in contemporary communication contexts.

Phad Paintings as Animated Storytelling

Phad painting is a craft form from India that has been around for over 650 years but is now slowly fading away. The craft form is from Rajasthan, a state in western India. The paintings can be up to 30 feet long and 5 feet wide and were originally made of colors sourced entirely out of vegetable dyes; more recently they are made of natural earth colors. The paintings are made on cloth or canvas, called the phad, and all characters face each other rather than the viewer/audience of the story being told. Phad paintings traditionally tell stories of deities and gods and have been called traveling temples.

One of the students explored the opportunity to bring together the traditional art form of phad painting with animation as a medium of communication in this project. It pushed the students to meet contemporary craftspersons and artists and investigate the rich tradition of these paintings. The animation film produced by the students, in the style of phad paintings, was primarily targeted at school-going children between the ages of 13 and 17 and adults who have an inclination towards art and crafts.

Selecting the right story was important. An interesting thing that emerged while looking for a story for the project was that there were a number of Indian and international folktales that were exactly the same, except that the names of the characters in the stories were different. After exploring several options, the student chose a story of Mughal emperor Akbar and his wily courtier and advisor Birbal called “The Precious Relics” (proving that belief is more powerful than the almighty), due to the strong moral behind it and its relevance in today’s world (see Figure 39.1).
The final look and feel of the animation was inspired by the phad paintings, which have a two-dimensional, flat, textured style. The colors in the project acted as codes to differentiate between characters, mainly because in phad paintings all the characters resemble each other. The color palette consisted of natural colors such as those used in a phad, namely orange, red, blue, green, yellow, and black. The characters were designed with a strongly defined anatomy prevalent in traditional phad style, along with richly colored and textured costumes. Backgrounds were also flat, vivid, and communicative. The architecture used in the background was inspired by the Mughal era (13th to 17th centuries CE) and special attention was given to the backgrounds to make sure they resemble the ones commonly seen in phad paintings.

Facts distract, bore, and confuse; stories excite, stay, and sell. It is interesting to observe that the influence of storytelling goes beyond mere passing on of knowledge and information to include the shaping of cultures and businesses, marketing strategies, motivating individuals and teams, helping organizations to become more agile, teaching new concepts, personal development, improved communication skills, social connection, and much more. The experiences lived through these stories draw upon our memory stores of the past and move us, make us feel alive, inspire us, and help build shared knowledge and understanding based on our needs, wants, values, culture, education, environment, and personal experiences.
Works Cited


Craft could be any activity that requires a particular set of skills (usually empirical in nature), celebrates existing knowledge systems passed on generation-to-generation, employs knowledge of materials and mastery of tools and techniques, and aims at a unique and customized end product. In the context of India, “Shilpa Shastra, the ancient Indian Science of Shilpa (art and craft), recognizes sixty-four techniques and thirty-two fields of knowledge for art and craft” (Kramrisch 281). Craft embraces creativity and emphasizes the holistic development of practical, aesthetic, and thinking skills. It encompasses almost everything that surrounds us. This is what makes craft practices sustainable. Owing to these attributes, craft has a global presence, and has been at the center of many socially driven initiatives. Documenting the living craft traditions, developing strategies for their preservation, promotion of Indigenous skills, and their integration into contemporary design education and practice are the focal points of several policies and schemes emerging in the craft sector and being recognized as a priority by many countries.

Craft is endowed with an extraordinary locus in the fields of visual arts and design, which is extending to space-making and interior architecture. According to Coles and House, interior architecture employs the rigor of architectural thinking together with the sensory understanding of interior design. It encompasses the outer envelope of a building as well as its interior environment. It is a coherent term used for architecture and interiors, and needs to be understood in the milieu of current architectural education and design practices. Space-making crafts may be defined as crafts that are directly or indirectly related to interior architecture, a definition I’ve adopted based on several research works and publications I have completed at the School of Interior Design (SID) Research Cell and Design Innovation and Craft Resource Centre (DICRC), both at
CEPT University, Ahmedabad (which is also being taken forward at The Indian Institute of Technology in Roorkee through varied research projects). They are more popularly called architectural or building crafts, which could also be defined through materials such as wood, stone, or metal—for example, stone carving, wood carpentry, and metal casting. In contemporary tech design contexts, revolutionary hybrid models combining craft, interior architecture, design education, and design practice are evolving. These hybrid models are demonstrating a paradigm shift from the conventional singular approach to a pluralistic, integrated approach that has led to the emergence of a new vocabulary with terms like design, space-making, space-making crafts, de-crafts (i.e., design-crafts); de-art (i.e., design-art), and interior architecture (Saraswat). This shift is the result of a slow revolution dating back to the international Art and Craft Movement, one of the most influential, profound, and far-reaching design movements of modern times, which slowly spread to different parts of the world, including India.

New explorations combining traditional craft processes in commercial space-making (interior architecture) applications are also gaining attention (see Figure 40.1). Craft, design, and interior architecture have been included in the list of UNESCO’s “creative and cultural industries” (Florida; Howkins; UNESCO), and are generating employment and contributing to the world economy (United Nations) and Gross Domestic Product of many nations (EY). Craftspersons’ knowledge and modeling skills are being linked to cultural and creative industries, entangled with new design perspectives, and applied to prototyping, especially in space-making applications. DICRC, CEPT University has classified craft as a) SMC, space-making craft (structural), b) SNC, surface narrative craft (non-structural), and c) artifacts and objects of use. Interior architecture is an industry by itself in terms of the construction industry, and it is being strongly practiced and recommended to involve craftspersons in projects at varied levels—be it structural, surface, or decorative—and to facilitate their contributions to space-making. The traditional residences of Uttarakhand in India demonstrate such involvement and contributions exceptionally well. Another example of recent origin is Heritage Hotel Udai Vilas in Udaipur, which recognizes local craftspersons and values their skills, knowledge, and material sensibilities that have contributed in the creation of piquant and quality spaces. This contemporary architectural marvel proudly flaunts Mewari architectural elements, traditional lime-plaster that requires up to eighteen months of preparation and is known to last centuries without any maintenance, domes with floral paintings on gold leaves, applied decoration like mirror inlay and mosaics, Déco-style furniture and other period pieces, and vivid accent colors in the interior spaces that resonate with the textiles of Rajasthan, all impeccably crafted by several craftspersons who worked hand-in-hand with interior architects and designers.

Craft has largely been understood as a personalized occupation which is cultural, mythologically significant, ritualistic, narrative, and utilitarian. But now,
there is an added layer to it. It contributes to a wider economy—food, tourism, heritage, design, space-making, planning, technology, prototyping, and participatory projects generating big money. This has resulted in creating craft ecosystems that focus on the synthesis of social, cultural, and historical values along with innovative ideas, leading to a new dimension that is promising and sustainable. But, it is of utmost importance to endure a rigorous thought process for exploring the future road maps that focus on the symphony of tradition and continuity without losing originality and identity.

Note

1 The UNESCO website (unesco.org) defines cultural and creative industries as “sectors of organised activity whose principal purpose is the production or reproduction, promotion, distribution and/or commercialisation of goods, services and activities of a cultural, artistic or heritage-related nature” (para. 1). According to the Convention on the Protection and Promotion of the Diversity of Cultural Expressions, “Cultural industries refer to industries producing and distributing cultural goods or services” (Article 4, para. 4). Howkins’ creative economy comprises advertising, architecture,
art, crafts, design, fashion, film, music, performing arts, publishing, R&D, software, toys and games, TV and radio, and video games (Howkins 88–117). According to the United Nations, the term “creative industries” is of relatively recent origin. While there are obvious connections to, and continuities with, cultural industries, such as the performing arts and handicrafts, the designation marks a historical shift in approach to potential commercial activities that until recently were regarded purely or predominantly in non-economic terms.

Works Cited


When people discuss crafts they can be referring to many things, but the most likely is the studio strand of the crafts, which emerged during the twentieth century. Its practitioners work in a variety of crafts, some of them almost obsolete, and put an emphasis on the autographed work of the maker, originality, and design. Their work might be exhibited in galleries, albeit usually at lower prices than paintings, drawings, prints, and sculptures (Harrod). Although there is generally a good deal of handwork, these practitioners aren’t averse to using contemporary technology as well, such as an electric kiln, power tools, computer-aided design, or even on occasion, computer-aided manufacture.

This strand of the crafts used to co-exist with four others, albeit in delineating these, one has to ignore any overlap at the edges. The first is artisanal and tradesmen’s crafts (it was once almost always male). This strand covers a wide range of activities, most of which were, and sometimes still are, regulated by guilds, examples being joinery, plastering, and upholstery. The second is heritage and rural crafts, necessarily associated with pre-modernity, albeit sometimes surviving as a vehicle for the preservation of a traditional culture and sometimes as tourist crafts. The third is women’s crafts, which concentrated heavily on textiles in the home and, from the nineteenth century, the workplace (although traditional weaving and tailoring were usually the preserve of men). This tradition has engendered a mixed reaction from feminist historians, some of whom regard this as an example of how women were kept in an excluding, textiles ghetto, while others seek to celebrate this tradition (Parker). The final strand is industrial crafts. This is the least known of the strands, and the fact that industrialisation always requires skilled craft practitioners has been consistently overlooked. Perhaps this is because of its low status and the anonymity of its practitioners, as well as the fact that knowledge of the whole process is distributed among the practitioners
Most of all, it is probably because a common discourse portrays industrialisation as the antithesis of the crafts. This is false. The demonisation of the machine and more recently of robotics hides the fact that the crafts in this strand are dynamic and forever changing. They don’t preserve a particular way of making or set of skills but constantly embrace the new (Micelli).

This discourse is wrapped up in a historiography of the crafts, with the British Arts and Crafts Movement as a reference point and medium of propagation. Ideas were borrowed from Romanticism, including nostalgia and an association of the crafts with the rural. It also bequeathed the idea of the crafts as a vehicle for social improvement and human welfare. This was sometimes abetted by Marx’s notion of alienation of labour but reached beyond the lot of the worker to see actual craft products as also contributing to social well-being: ethics and aesthetics were inseparable (MacCarthy). So dominant is this narrative that the crafts have often been conceived as being in opposition to modernity.

Indeed, the crafts are often presented as being oppositional. The majority of crafts activity has not taken place in ivory towers but through active engagement with society, not least because the results are utilitarian. Where this engagement has taken a political form, it has sometimes been through a desire for conservation and retrenchment, all bathed in an anti-modernist nostalgia and sometimes a forward-looking, radical attempt to bring about social change (Ings). These two positions have not always been mutually exclusive, as logic suggests, but it should be noted that crafts activism has often been on either end of the political spectrum. In this, as in so much else, the crafts mirror the discourse of sustainability.

Sustainability is a social and political initiative that puts forward the view that there is an imperative to meet the basic needs of all humans now, without compromising the needs of those in the future. There is an array of narratives about what this entails, often broken down into two parts: the environmental and the social. Some add a third dimension: the economic. Like the crafts, sustainability sometimes clothes its rhetoric in a nostalgia borrowed from Romanticism, in this case one that idealises (the concept of) nature. It is also sometimes deeply conservative and in opposition to modernity. On the other hand, it also has adherents who consider that the solutions as much as the problems lie within the mechanisms of modernity; if technology got us in this fix, then technology can also get us out of it, as long as it is used responsibly.

Studio crafts have a rather tangential relationship with sustainability. The discourse of the crafts might make these practitioners feel themselves sympathetic to its aims, while the very nature of their practice often limits how far they can actually go. For many working in ceramics and glass, for example, there is a need to heat a kiln to very high temperatures, while others’ practices are unsustainable in the use of materials. At the edges one finds people working with recycled materials, certified forestry products, organic textiles, or conflict-free precious stones. It is the same for artisanal crafts, which tend to change only when
regulations make this necessary. It is in the other strands that sustainability is having a greater impact.

Heritage and rural crafts often fit comfortably into a narrative of sustainability, especially where that narrative resists the processes of modernity. Almost by definition this strand of crafts favours the local and vernacular and often presents a sanitised and idealised view of the past. Meanwhile, the tourism with which it often connives and depends is rarely sustainable. The oft-repeated slogan of sustainability: think global, act local, hides the fact that many of the biggest ecological and social problems can only be tackled by acting at the international level. All the same, the junction between this strand and sustainability includes a vehicle for political engagement among Indigenous and other oppressed populations.

The women’s crafts strand meets sustainability through craftivism. This movement builds on many of the ideals inherent in the Arts and Crafts Movement, which began in England in the 1880s. It combines this with ideas from feminism. According to this view, the crafts are a vehicle for resistance and social change and a means to bring about a more just society. Because it celebrates the hidden strand of women’s crafts, it is centred on textiles. Among its manifestations is yarn bombing, when objects in public spaces such as railings or lampposts are wrapped in colourful, crocheted or knitted textiles. This goes along with the prevalent view among craftivists that they are part of a gentle revolution that takes what was the medium of women’s confinement in the home and uses it to promote their agenda of social justice in the public sphere.

Industrial crafts are where the greatest challenge to sustainability lies but also where most of the solutions can be found. If nothing else, this is because of scale: it dwarfs all the other strands. It is also because it is dynamic. Sometimes this happens due to regulations from governments and sometimes simply because it makes economic sense, for example, when it becomes cheaper to recycle. Sustainability is above all about future societies and the environment that will be passed on. It has to be forward-looking and it needs to embrace the mainstream. Only industrial crafts can do this.

**Works Cited**


If Fab Lab is the Answer, What Is the Question?

Maker Culture as a Method for a Sustainable Future

*Mira Kallio-Tavin*

With this interview, I explore Cindy Kohtala’s ideas on the maker movement and sustainability, based on her doctoral dissertation completed at Aalto University in Helsinki, Finland. I was particularly curious to know how maker culture might act as a tool for cultural change. My inquiry was guided by these questions: how might community workshops for digital fabrication build a sense of community? how inclusive can the spaces be? and, how does peer learning function as a form of pedagogy in these spaces?

Mira Kallio-Tavin (MK-T): In your writing you differentiate fab labs from other digital fabrication access spaces, such as hackerspaces and makerspaces, based on their commitment to open access for the general public. Where does the need come from? Is it a need gleaned from the general public?

Cindy Kohtala (CK): Perhaps fab labs are a reaction to the digital, and while they are completely about digital fabrication, they also offer contact with materials and with understanding about how things work and how they are really made. The hands-on aspect is truly important. People want to be able to have that contact. Also, there are a lot of people who want to feel like they belong to a community. People want to contribute. I see that in my research all the time. There is an idea of reciprocity and community building. In many cases, entrepreneurship has a lot to do with it, but very differently than how it is understood in Silicon Valley, the technology hub in California.

MK-T: Do fab labs offer something that people do not get elsewhere?

CK: For example, during my travels to India I have heard local colleagues discussing their concern about the Indian school system. They feel
the students need to *unlearn* what they have learned in schools, so that students can start fresh and learn how to set design questions and set up the design space. It is about confidence and aspirations, and fab labs help people in the process to unlearn and gain confidence. This is the opposite of traditional teaching, where knowledge is supposed to be transferred over to the learner. In fab labs, the idea is to have the confidence to do something or make something by just trying and failing. Actually, failure is an important part of the process. The maker has to be brave enough to set things up for her or himself, and to know in the back of her or his mind that there is no safety net.

MK-T: Based on your dissertation, how would you describe maker culture as a method for a sustainable future?

CK: On one hand, I would emphasize the social fabric and the experimentation, and on the other hand the ongoing projects on renewable energies and recyclable materials and processes. Maker culture has this thinking that people—citizens—and civil movements are also allowed to generate knowledge. Maker practices become embedded in people’s routines, and in people’s understandings of what these technologies really mean. So, it is not just dealing with techniques, technologies, and materials.

MK-T: Sounds to me that the labs are quite special places.

CK: As designers we often overemphasize that these practices and spaces are all new and we forget that there is also a history. In fact, there have always been shared working spaces for people to come together and make things together. What is new in these spaces is global sharing and communicating via the Internet. People share their designs and instructions online and at the same time connect with local communities. Biohackers are an even better example because they are really dealing with local living materials and organisms, while acting globally.

MK-T: So how do makers co-create a more sustainable paradigm through collaborative and explorative activities?

CK: Good examples are sustainability groups and maker activist groups like Dodo in Helsinki who, for example, make greenhouses and gardens and other real and physical things. They are always under the radar, building knowledge together. So if I need to learn about solar energy and I have a little solar panel that I am trying to connect to a circuit, I need to actually know how to do it. I need to know how to make that circuit. Then I start to actually understand energy in a completely different way. People who are growing gardens have to get dirty and they have to make mistakes. It is an embodied and physically engaging process, not an abstract or theoretical issue. A person then really experiences what sustainability is. And I think that is the absolute key to the sustainability opportunity of the maker movement.
MK-T: What types of methods for learning have you seen in practice in fab labs? You mention peer learning and knowledge sharing as an important key for innovation and creative problem solving. How does peer learning happen in fab labs?

CK: Peer learning is really integrated into the whole philosophy and the operation of the labs. Fab labs are not spaces where people would get service and things done for them. They learn how to do it and when somebody comes after them and does not know how to use the machine, they are expected to help them. Not knowing about electronics, energy, or circuit building, but wanting to learn fast and wanting to complete the project might sometimes be very frustrating. Some people think they can walk into a fab lab, press a button, and something will pop out of the 3D printer. But it just does not work that way. Instead, it requires patience, learning the dynamics of the space, the laws of thermodynamics, the laws of how machines work, why programs are the way that they are, and how to design on a screen. It demands slowing down, learning the basics, and starting to experiment hands-on. And it is curiosity that gets people talking within the space: what are you actually doing and why are you doing it in that way?

MK-T: And, how accessible do the spaces manage to be?

CK: Accessible does not automatically mean inclusive. The labs often have to make the effort to be inclusive. There are good examples, one being in Umeå, Sweden, where they managed to get elderly women to visit a lab on a regular basis. Some of them got addicted to the idea of e-textiles, building circuits, and using conductive threads in their embroideries. The manager described seeing a sixty-year-old woman doing her e-textile sitting next to a twenty-year-old male engineer, who is really the typical fab lab user, communicating about their respective designing issues.

In reflecting on my conversation with Cindy Kohtala, I find that although hands-on contact with materials and technologies is an inherent part of fab labs, perhaps the most engaging dimension of the labs is the possibility to gain confidence as a producer by being part of a community. There is a need to encounter community members face to face and to share, guide, and teach others, hence contributing to the community as well as learning from others. Curiosity and the culture of helping each other in the labs are the key factors in peer teaching and learning. Furthermore, sharing problems and solutions globally is a crucial component of the activity. In the fab labs, cultural change happens through coming to understand how technologies really work. Fab lab users’ daily routines slowly change and the choices that support a sustainable future are being developed through makers’ own experiences and personal involvement.
Notes

1 Biohacking, according to Trochetti, is a social movement around do-it-yourself synthetic biology and/or monitoring of one’s own body functions or the surrounding environment. It can entail gene sequencing and other biology experiments.

2 Dodo is a Finnish environmental organization founded in 1995. Dodo addresses environmental issues societally, including global environmental issues. See more at dodo.org.

Works Cited


The Walls Tell the Story

Making as Collective Force in the Evolution of an Earth Home Community

Cala Coats

Creative Potential – Material Vitality

We walked out of the bedroom onto the covered patio. Sam directed my attention to a line that followed the bend in an arching gray wall. It marked the joint where the new straight exterior structure met with the original large dome. The line was a darker gray than the rest of the cement wall. Sam told me that transition points are always the hardest to blend. “He has a technique he has to use to build transitions and blend these two worlds together. We try to preserve the history as much as we can, but we need to expand and grow,” added his wife, Nancy (personal communication, January 29, 2013). Sam had developed a blending technique through years of work on the dome houses. Balancing history and growth through perpetual social, environmental, technological, and political change has been central to the DIY ethos of the community of makers at Whitehawk (see Figure 43.1), who are unified through a collective force entangled with the materiality of their homes and their relationship with nature and each other over the last forty years.

Sam was an artist who worked in construction and had decided not to continue studies at the local university. When he bought the home in the late 1990s, it was comprised of two separate cement domes: one served as the living room and bedroom, and the other as the kitchen and bathroom. Sam initially saw the potential for creative freedom in the dome structures, and the open landscape and physical requirements of chopping wood for the stove and getting water from a well appealed to the kind of lifestyle he envisioned.
FIGURE 43.1 Entrance to Whitehawk community with sign above gate shown as a shadow on the ground

Photo: Cala Coats
Becoming Family – Becoming Change

“So this wall here is going to come out. It’s temporary—everything is always temporary,” remarked Nancy.

(Personal communication, January 29, 2013)

In the twenty years since Sam moved in, the house has remained in a perpetual state of becoming, echoing the community at large, as rooms and walls have moved, merged, and grown. The initial significant transformation to the house happened during Sam’s first winter there. The original slab in the larger dome sloped at the door and water pooled when it rained. To cross to the bathroom dome in the rain at night, Sam laid down some wood from an old fence as walk boards. One night, the boards iced over and he slipped and fell.

I was cursing and so mad. It started there, motivated by my anger. I started using recycled materials because I was very poor. One of my friends was redoing his patio cover. I disassembled it, cleaned it all up, and used it to cover the area between the domes. It looked like something out of shantytown. It was necessity.

(Sam, personal communication, January 29, 2013)

When Nancy moved in with Sam, the house began to change dramatically. Sam connected the two domes, built a kitchen in the larger living room, and used the smaller dome as a full bathroom. When one daughter was born, that new kitchen was split into a kitchen and small bedroom and then two bedrooms as they welcomed a second daughter. With each new change, Sam expanded his vision as well as his design and construction skills, while still working with limited materials and financial resources.

Sam and Nancy’s response to a growing family was a common refrain in the history of the community. The first group who acquired the land wanted to live “off the grid,” so the homes and community had no utility infrastructure. It was the early 1980s, and the community was using oil lamps and wood burning stoves at a time when personal computers were becoming increasingly common in urban and suburban homes. As people married and families grew, some felt that electricity was necessary while others resisted, so they compromised by burying the power lines as a way to visually blend the transformation out of respect for original intentions while still welcoming change.

Collective Assemblages – Entangled Learning

“An actant never really acts alone” (Bennett 21).

Sam was the first of the younger generation to join the community. As Sam and the others moved in, they looked to the original members to learn how to
construct the homes, live in harmony with the community and the land, and thrive without many of the conveniences of a more suburban lifestyle. Sam explained that the community comes together for a “mud party” when someone changes their home. He showed me exterior and interior walls where the cement was blended inconsistently. The hand of each individual becomes visible through his or her blending style in the cement, and some styles are more desirable than others.

Watson and Shove describe “craft consumption” as a skillful posthuman engagement with tools and technology that sustains “hybridized and distributed knowledge systems” (80) with other practitioners, where the assemblage of tools, individuals, and materials become entangled in an autopoietic DIY process. The uniting of Sam’s community through collective work on the houses operates in this way. Change is triggered by a variety of catalysts bringing the group’s combined knowledge, resources, and labor together. The houses become assemblages of human and non-human energy.

Over time the generations have blended, with the work of the land keeping them together. Nancy explained that there is always someone in the community who is forty or fifty changes ahead of you. They evolve through “a practice in which learning as responsiveness to matter and to space–time mattering occurs within contingencies, differences, and diversity of life” (Hickey-Moody and Page 15). Sam explained that sometimes he and Nancy will not see people for a while, but as soon as the well goes down or the road is damaged, everyone comes together. The work unifies the community, demonstrating how processes of making are active forces moving with energies of nature, policy, economic systems, technology, and cultural politics.

**Note**

1. Pseudonyms have been assigned to protect participants’ privacy.

**Works Cited**


SECTION V

Labor and Leisure
V. LABOR AND LEISURE

PINKMOUNTAIN
SUSTAINABLE CREATIVITY

WALDMAN-BROWN
GRASSROOTS ARTISANS IN GHANA

BUSSARD & MCCLEARY
WOOD CARVING IN MALAWI

KAMPANI
TAXI FABRIC: WE THE LIVING

ZAMORA
POP UP BUSINESS IN OAXACA

REID
COLLECTIVE LEARNING ARTS SPACE

WILSON
CREATIVE SCOTLAND

BAUMSTARK
SOCIAL UTOPIA: CRAFT & PROGRESS

MASON
SKILLED KNOWLEDGE

BALAGUER
LEISURELY IMPERFECTION

DAVIES
ON BEING INCONSEQUENTIAL
Labor and Leisure visual map: Themes and emerging questions

Drawing: Elizabeth Garber
As a teenager, I had two passions: music and political activism. I started college in 1990 and split my time between playing free jazz and protesting the first Iraq War. I eventually decided that I was more cut out for creative work than organizing, but with the implicit belief that creativity and politics are fundamentally interwoven. I saw pursuing a positive, constructive, non-commercial endeavor (such as making, crafting, or teaching) in the context of a cynical capitalist society as an inherently radical action. It’s an attempt at living the embodiment of humanist political values.

It’s also a very difficult thing to maintain in a society that doesn’t necessarily support those values, so I discovered it was necessary to develop a set of tools in order to keep a creative practice going over the long haul. For inspiration and insight, I returned to the grassroots ideals I had been exposed to in my early political work, drawing on the notion of sustainability from the worlds of agriculture, energy, development, and planning.

As makers, we each have the choice to focus on short-term yield, profitability, chasing the whims of the market, adding substances and chemicals to try to hotwire our natural processes, grinding away with the same habits and techniques until we run dry. Or, we can choose a sustainable model: one that connects us to networks of community and support, one that is adaptive enough to grow and respond intelligently to the chaotic changes around us, one that diminishes our dependence on commercially motivated institutions, one that can be integrated into our personal lives, fostering self-betterment and improving our relationships, and most importantly, one we can enjoy.

Through individually practicing sustainable creativity, we could collectively move the world towards the creative, sustainable solutions so desperately needed. What follows is the list I’ve developed to sustain my making practice.
1) Forge an Army

Or a team or family or peer-to-peer hyperlinked digital network—whichever works for you—but community is the most important resource you’ll ever have as a maker. Share best practices, support each other’s work, and sob over a bottle of red. You’re the hungry, Wi-Fi-enabled art-wolf. Being part of a pack will increase your creative survival rate exponentially.

2) Redefine Virtuosity

Capital “L” Listening (accompanied by Observing, Looking) is the only technique you need to make great work. It’s the best way to stay engaged with your process for the lifelong haul, and it also empowers you to shut down your device and embrace natural chaos (perhaps the single most abundant source of continually renewable inspiration). Pay extra special attention to the avant-garde. Openness to the full spectrum of possibility is a Fountain of Youth-type quality for artists.

3) Get Great at Being Good

Nice guys finish last . . . with the richest, most satisfying body of work, among family, friends, and lifelong collaborators in a warmly lit room surrounded by raised glasses and beaming smiles. Being good and generous with others will manifest in them being good to you, which will ultimately nourish and sustain your practice far more than competitiveness, drive for success, or even innate talent. Cultivating empathy for the struggles your “opposition” might be enduring (critics, curators, maybe even some part of yourself?) will help carry you past the inevitable pity spirals, fits of envy, bouts of disbelief, rage, and comparisons that are nothing but roadblocks along your creative path.

4) Ask Not What Others Can Do For Your Work, But What Your Work Can Do For Others

If you’re seeking money and adoration, there are much easier ways to get it than making, crafting, or teaching. If you’re interested in growth, humility, and spiritual development, there’s no more direct or rewarding path. Approaching creativity as a service (rather than something others should reward you for) will provide clear and vitalizing motivations for your ongoing practice.

5) You Are a Bottomless Mine. DIG!

Through the harrowing and bloody work of plumbing your own psyche, you’ll figure out what you truly need, what you can sacrifice, what your optimal conditions for creating are, while discovering some universal truths along the way.
that will deepen your work. Acquiring the mental, emotional, and physical tools to make quality work over the course of a lifetime means knowing yourself first.

6) Get Stupid and Stay Stupid

It’s guaranteed that if you weren’t having fun while making your work, no one will have fun experiencing it. Finding and maintaining the ecstatic unknowing of invention and discovery will keep you perpetually engaged and rejuvenate your practice. Experts know, but beginners grow.

7) Join the Slow Art Movement

Make things by hand whenever possible. Instead of texting or emailing, talk or post a letter. Build an audience one person at a time. Be transparent in process and in public. Loaf. Let ideas simmer and finished products “relax.” Log off. Not only will you learn about yourself (see principle 5), but your work will embody a unique, living presence. Patience, pacing, open space, down time, mindfulness, and deliberate actions are crucial components of any long-term endeavor and are practically mandatory for makers.

8) Be the Self-Doubting Narcissist

In order to invent from scratch you have to access messiah complex-grade narcissism. In order to turn what you’ve invented into something interesting, you need to find your inner ice-veined, nay-saying critic. These two must never be in the same place at the same time. If there’s also a third, humble civilian in there who returns phone calls and maintains oral hygiene, you’ve got a chance at landing a boyfriend or girlfriend some day. Fostering balance in this psychological high wire act will not only improve your work, but also enable you to be a decent community member (see principle 1). And remember, without community, you’re toast.

9) Detox, Cleanse, and Go Natural

Sacrifice and some relative degree of clean living is, fortunately or unfortunately, part of the recipe for creative longevity. Cut dependence on intoxicating chemicals, emotional extremes, impossibly perfect working conditions, and high-ticket items, and prepare to make stuff into your late 90s.

10) Write Your Own Rules

The King is Dead. Long Live the Infinite Plurality of Non-Gender-Specific Autonomous Zones! In other words, the consolidation of creative industries is
on its way out, but the new models enabled by radical changes in technology have yet to be fully established. And they never will be. We’re entering an altered landscape where no two creative paths will look remotely the same. This is both nerve-wracking and tremendously liberating. It may be difficult to construct the foundation for your totally unique sustainable practice from scratch, but doing so will reinforce its durability a thousand-fold.

11) Be the Lightning Rod

Structuring your entire life so that you can drop everything and make work if and when inspiration strikes will become inconvenient if you eventually want to eat something other than cup-o-noodles. It’s hard for lightning to hit a moving target. Instead, hunker down on a rooftop of your choosing, be patient and consistent, and lightning will come to you again and again. There are more than enough ideas out there to last each of us a thousand lifetimes. Our job is to let them find us.

*Please note: I use the word “maker” to mean anyone engaged in a creative practice or seeking to actively incorporate creativity into their work and life. That of course includes writers, dancers, actors, musicians, crafters, etc., but also educators, business executives, parents, scientists and anyone who invites creative solutions to challenges within their field.
ENGAGING WITH GRASSROOTS ARTISANS

Anna Waldman-Brown

Suame Magazine, a sprawling community of over 150,000 salespeople, artisans, and auto-mechanics in ramshackle workshops, declares itself “the center of indigenous African creativity” (SMIDO n.p.). Located in Kumasi, Ghana, and named after a defunct military armament, the Magazine is among the world’s largest artisanal clusters—and provides all the refurbished delivery vans for Ghana’s mass transit system.

Many of the Magazine’s largest companies started with the Suame Intermediate Technology Transfer Unit (ITTU), an initiative between engineering professors at the nearby Kwame Nkrumah University of Science and Technology (KNUST) and highly skilled but undereducated artisans. Among the most successful is Musa’s Foundry, where young men load busted engine blocks and other scrap into furnaces. Waves of heat roll from the foundry as the brawny Moses Musa, owner of the foundry, sits on a bench, sharing a bag of mangoes and explaining how his business expanded.

Before 1990, West Africans imported all their grinding disks for use in corn processing and gold extraction, but they required replacement every few months. Aware of the potential business opportunity, KNUST’s engineers developed a metallurgical formula for turning scrap metal into durable cast iron. ITTU then initiated a program to train Magazine workers to build and manage small-scale foundries. The Togolese Mr. Musa was among the first to establish his own company. He saved up his money to build a coal-burning furnace, and set up a supply chain across Suame Magazine to collect scrap iron. Mr. Musa melts this scrap into grinding disks to sell across West Africa (see Figure 45.1).

Thanks to ITTU’s training courses and financial loans, there are over a hundred small-scale foundries in Kumasi—and hundreds more throughout Ghana. Current ITTU manager Hormenoo Crossman calls this the “rippling effect of
FIGURE 45.1 Piles of scrap vehicle parts and old grinding disks outside Mr. Musa’s furnace

Photo: Author
ITTU.” ITTU’s initial programs proved so successful that the Ghanaian government established dozens more workshops nationwide. Such initiatives likely created hundreds of thousands of new jobs, and introduced dozens of new industries from 1980–1995 (Powell).

The elegance of the ITTU model lies in its ability to disaggregate the scale of production (small batch size) from the scale of overall impact (large market size). Mr. Musa may only produce dozens of grinding disks daily, but the combined efforts of hundreds of ITTU-inspired micro-foundries provide enough disks for all of West Africa. Despite the technological simplicity of grinding wheels, this model of networked craft production bears many similarities to the notions of 3D printing enthusiasts who predict a new era of redistributed manufacturing. It is important, however, to distinguish hobbyist makerspaces that specialize in one-off fabrication from microfactories such as Mr. Musa’s that are designed for sustained production runs. While makerspaces have demonstrably facilitated access to invention and prototyping, they have yet to prove scalable enough to democratize manufacturing.

To date, the most successful examples of networked craft production use traditional rather than modern manufacturing methods. The Nairobi-based jewelry company Soko demonstrates how a network of over 2100 microfactories can produce fashionable, high-quality jewelry in bulk through distributed, parallelized manufacturing—combining artisans’ traditional bronze-casting techniques with an enterprise resource planning system and mobile app for coordination. India’s decentralized model of milk production, supported by the national government, follows a similar model: over 75 million households nationwide, with an average of 1–2 cows each, bring their milk to local dairy collectors—which transport milk in bulk to centralized processing plants (Hemme and Otte). Several organic farming companies in the USA employ a similar network of smallholder producers.

Why haven’t makers and crafters been able to replicate the historic success of grassroots initiatives with modern technologies? Among the most successful fab labs is Vigyan Ashram in Pune, India, which began as an intermediate technology transfer center in the same tradition as ITTU. Unfortunately, newer makerspaces tend to view their state-of-the-art technologies as enough of a magnet for local artisans, and fall short on strategies for grassroots support and engagement. Yet many informal artisans consider modern machining equipment too fragile, complex, and expensive to be useful (Waldman-Brown, Adebola, Wanyiri, Chege, and Muthui). In the 1990s, ITTU trained Magazine artisans on lathes instead of hand tools and even provided loans for purchasing—though artisans remained uninterested until ITTU could point to a profitable lathe-turning business. Then, everyone wanted their own lathe (Powell).

If we truly want to democratize access to tools and manufacturing, we must engage with grassroots artisans. Across emerging markets, the craft industry is the second largest source of jobs and a significant majority of non-agricultural jobs
come from the informal sector. Sadly, we seem to have abandoned the grassroots in a top-down attempt to replicate the high-tech successes of Silicon Valley—but without the requisite educational and institutional infrastructure. We view the informal industrial sector as a holdover of old-fashioned, uncompetitive cottage industries that must either formalize and scale up or disappear altogether, rather than an economic force waiting to be unleashed.

Given the contemporary backlash to globalization and the impending threat of automation, industrialization and job creation have become top priorities in emerging markets. New opportunities may emerge for development strategies that value local jobs and local value-creation over dramatic increases in GDP, especially as the informal sector tends to build its own infrastructure rather than waiting for government or industrial support. Networks of ramshackle firms may never substitute for large-scale industrialization—but informal artisans like those in Suame Magazine could play a key role in creating a more inclusive model for global development.

Works Cited


CREATING A WOOD CARVING TRADITION IN MALAWI

Emma Kelley Bussard and Ann E. McCleary

Tucked away down a rugged dirt road in Dedza District in Central Malawi lies the old brick Mua Mission, established in 1902 by the Missionaries of Africa, or “the White Fathers,” as they are commonly known. Just past the mission is the Kungoni Centre for Arts and Culture—a museum, library, art gallery, showroom, lodge, and restaurant. This center has become a creative hub attracting a local and international audience as it showcases a variety of handmade arts and traditional performances. It is also the birthplace of a specific style of wood carving that has evolved into one of the most well-known crafts in Malawi today.

A decade after Malawi gained independence from Britain in 1964, many relief organizations, largely church-based, initiated relief efforts by promoting craft as an opportunity for self-help. German missionaries established the Bangwe Weaving Factory in 1975, partnering with Malawi Council for the Handicapped to provide training to people with physical disabilities. The Anglican Church sent missionary Christopher Stephens to establish the Malindi Pottery in 1979. The church hoped that this income-generating project of its “Community Living Program” would “help people develop their own style of living” and thus contribute to “national development” (Tengatenga 90–91).

It was around this time, in 1976, that Father Claude Boucher established the Kungoni Centre of Culture and Art at Mua Mission. Boucher came to Malawi in 1967 as a missionary with the White Fathers, after becoming interested in African art displayed in a small museum at his home church in Montreal. Boucher held a deep passion for, and brought considerable experience in, all kinds of art including painting, drawing, sculpture, and theater.

At his first mission assignment in Malawi, Ntcheu Mission, Boucher received commissions to undertake various artworks in wood and plaster. With the majority
of his time spent on mission work, he decided to spend what free time he did have training others. He saw this art as a “self-help” opportunity for men to make money but also to develop the arts, discovering “what is inside.” The training was free, but the men had to acquire their own tools. He began this effort with one local carver who made mortars (for mortars and pestles), slowly teaching him how to create other shapes, including humans. This woodcarver developed into one of the most senior and experienced sculptors at the center.

Realizing he was not sufficiently prepared to carry out his work, Father Boucher pursued cultural training as an anthropologist in Uganda and London, eventually earning a master’s degree. In Uganda, he also studied batik. When he returned to Malawi in 1976, Boucher was placed at Mua Mission where he still resides. The men he trained followed him to this new, nearby location, where he founded the Kungoni Centre. Here, Boucher has continued to promote a variety of arts for over forty years, but his most well-known legacy is wood carving.

Traditionally, wood carving in Malawi was a functional craft performed by men. They produced utensils for food preparation, including long-handled cooking spoons for stirring thick nsima porridge and mortars and pestles for pounding various foods, as well as drums to create rhythms for rituals and ceremonies. Men also made masks for Gule Wamkulu, a secret society of spirits who would occasionally reveal themselves in elaborate costumes, and carved wooden masks to share stories and convey important messages to the people.

Boucher’s intention was not to create an unsustainable project seen as owned by or brought in by him. Instead, he sought to improve upon traditional skills by teaching the artists new styles of wood carving. Previously, wood crafting in Malawi had not included human figures, so he encouraged them to begin by carving a risen Christ for the church. Many of the early carvings produced at Mua Mission reflected religious content—crucifixions, nativity, and biblical scenes.

Soon, these artists began to produce scenes that they saw in everyday life—women carrying water or performing other household tasks, children playing games, and men engaging in brewing beer, planting, and harvesting—as well as community ceremonies (see Figure 46.1). They also created representations of their surrounding ecosystem including waterfalls, rain, rivers, mountains, and scenes with an array of animals. And they made small masks and other more ornate sculptures to sell to tourists.

Father Boucher encouraged the men to be creative, to develop their own individual and artistic style. He taught the emerging artists about form, shape, perspective, and composition. Boucher offered drawing lessons. He taught the men to produce art. And he also made sure to preach the concept of intention.

Boucher emphasized sustainability, not only by teaching through the apprenticeship model where local masters trained novices, but also by encouraging them to consider using available resources. As exponentially increasing deforestation rates
haunted Malawi’s forests, he encouraged the artisans to use wood from naturally felled trees and to evaluate whether the product of their labor was truly worth the sacrifice of a natural resource.

Over time, the work that these artists at Mua Mission produced transformed from a functional tradition that provided necessities for daily life into an artistic outlet to make money in a growing tourist economy. Wood carving from Mua Mission artists is now found all over the world, in churches, craft shops and “curio” stands, and museums across Malawi, Africa, and on other continents.
Boucher and other master craftsmen helped train over 220 artists who now live and work throughout Malawi, and they proudly boast about their training at Mua Mission as a badge of pride. Even travel guidebooks highlight the workshops and curio stands where visitors can find artists trained at Mua Mission. Today, Malawians and tourists alike see it as a true representation of Malawian craft culture.

It took Boucher falling in love with a culture, a group of dedicated artists, a place, and a concept to inspire the expansion of wood carving from an endangered traditional craft into a distinctive art form in a developing and globalizing world.¹

Note

¹ Please visit the Kungoni Centre of Arts and Culture website to learn more about this program: http://kungoni.org/

Work Cited

Taxis and autorikshaws (better known as autos) in Mumbai, India are a convenient form of transport iconic to the city’s culture. While taxi and auto drivers often embellish their vehicle to distinguish it from its competitors, the fabrics that cover the interiors are often dull and forgettable. Taxi Fabric is a collective of Indian designers who address the value of design to add character and individuality to the iconic vehicles of the city by designing the fabric of the vehicles’ interiors, showcasing innovative imaginings of artists and designers visualizing India in an accessible public forum (taxifabric.org).

As of 2017, 36 Taxi Fabrics have been launched. They range from narrating stories ranging from Indian Freedom-Fighters to Bollywood’s heroes, and depicting imagery locally iconic to Mumbai. Some have a social message and educative value. Simply put, Taxi Fabric is all about narrating local stories and issues through a contemporary lens. Affirming its educative and advocacy impact, each taxi or auto is fitted with an identity label that tells anyone who rides in the taxi or auto about the designer behind the Taxi Fabric, the story of the design, and also how to get in contact with the team for collaborations or commissions.

“We the Living”

The rickety structures made of bamboo sticks tied together with jute ropes, found on construction sites dotting every urban landscape in India do not call for a second glance by most passersby. They are simply signs of “work in progress.” My Taxi Fabric design, titled *We the Living* (see Figure 47.1), is composed of a single photograph repeated to form a symmetrical pattern. It reads these structures as speaking to survival in a metropolitan city. The rigidity of the scaffolding
FIGURE 47.1 Jatin Kampani, *We the Living* for Taxi Fabric

Photo: Neville Sukhia. Copyright: Condé Nast India
represents the stereotypical mindset of the upper and middle-class people stuck in a race to own a home in the city. For most people in Mumbai, a home is a desirable symbol of success and livelihood and I see the crowded rise of construction sites across the city as the perfect example of such stereotypical thought, a race to attain symbols of success.

While the architecture of this image symbolizes a rigidity of thought and aspiration, the light-hearted butterflies hovering about the scaffolding add an element of fluidity to the firm structure and suggest freeing one’s mind from these; encouragement to make one’s own view of life. Just as the butterfly escapes from the cocoon into the sunlight, I hope that people will attain freedom from a conventional mindset.

As a photographer, my experience of designing a fabric for the rickshaw was interesting and challenging as it was an exercise in a different type of making for me. Surfaces of an auto-rickshaw can be really tricky to design. Mapping the design to the scale needed to wrap a taxi seat and getting the placements right was both stimulating and demanding. However, with help from Sanket Avlani, the founder of Taxi Fabric, and his team of designers and craftspersons it was much easier.

When we, as Indians, look back on our history we can see art and design embedded in it. We are a deeply visual culture: from our ancient architecture; traditional textiles; beautiful, intricate sculptures in temples and palaces; and art and crafts to our love for decoration and embellishment in everyday visual culture as seen in our homes and selves, streets, and vehicles. Recently, we seem to have lost our appreciation for charm in designing and crafting the character of public spaces. That needs renewal in both our education system and our way of life. We have an inexhaustible design resource in our cultural diversity and it’s up to us to be able to tap into its potential.

Initiatives like Taxi Fabric show how this renewal might happen as it provides a platform for up-and-coming designers and textile-based craftspersons. It gives us (designers/crafters/artists/photographers) a new stage on which to narrate a story, convey a social message, create art and design awareness, while educating commuters through informal engagement. This collaborative project is a notable contribution to making Mumbai more beautiful, meaningful, and mindful while creating an opportunity to acknowledge and appreciate the impact design can have in public life.
CREATING AND MANAGING A COMMUNITY EDUCATION SPACE FOR ARTS AND CRAFTS IN OAXACA, MEXICO

Soledad Zamora

In the early years of the 21st century, the city of Oaxaca in southern Mexico, a vast storehouse of traditions, cultures, languages, gastronomy, and endemic natural species, seemed to be forgotten by the world and left desolate. Young people had migrated, in waves, to the United States or to large cities like Mexico City or Puebla that offered more jobs, and opportunities, especially in education. The city shrank. By the year 2006, a socio-political conflict between the government, social leaders, public teaching unions, and teachers caused Oaxaca city to explode into strife and violence. Protests were based on concerns about teachers’ working conditions, the economy, and lack of job and education opportunities. Even after the conflict was over, the international image of social conflicts and violence persisted, resulting in a collapsed economy, due in large part to a drop in tourism that has long been crucial to the state’s economy.

One of the positive outcomes of this people’s revolution in Oaxaca was the recognition and appreciation of art and culture. Such art and culture helped shape a new vision of the city as people came to believe in the powers of culture, art, and handcrafts for healing and moving beyond the violence and conflict. Through the creation of important community programs developed by a wide range of professionals, artists, artisans, and private family businesses, within a decade Oaxaca converted itself into a platform for creators, educators, artists, designers, crafters, filmmakers, chefs, and worldwide tourists.

It was in this atmosphere that I started my own family business in 2010. My mother was a partner, along with two other people who later withdrew. The main objective of my store, called Kiddos Store Ropa & Rock n’ Roll, was to support local women’s work, fair trade, art, and education. This shop was designed to promote an environment of caring, equality among boys and girls, the participation of male parents with their children, the support of Mexican
designers and artisans, and the creation of a new wave of art collectors. Our designs and ideas were developed in collaboration with a variety of designers, artisans, and artists, including emergent individuals from different parts of Mexico.

The shop was just 350 square feet and required a lot of daily hard work. The first step of this project involved fixing the whole place by cleaning; fixing the main door to the shop and the bathroom facilities, windows, and floor; painting walls; and creating our own mannequins and furniture. The second step consisted in having fluent capital and investment, as well as developing innovation and creativity to strengthen our knowledge of administration and logistics. The third step involved promotion in Mexico and abroad to identify international clients and export to other countries around the world.

Our shop offered a wide range of prices, products, and utilitarian furniture for babies and children. We supported a project called “Miku Meko,” a women’s design collective located in Oaxaca, by promoting and selling their products such as cooking aprons for boys and girls, slippers with colorful Mexican designs, and didactic toys. The aprons were a big part of our goal in encouraging gender equality among children, but especially among their parents. The didactic toys favored a child’s creativity and cognitive skills. Miku Meko had a series of self-created monsters and animals that children assembled by choosing different colorful parts of a body made of a soft fabric. These were stitched with help from their parents, resulting in a funny self-made toy created in collaboration with family members. Another of our projects was developed in collaboration with Walfred Rodríguez, a visual artist from Oaxaca who created a unique series of mirrors for babies’ and children’s rooms. These were created with the idea of jump-starting a new generation into becoming art and design collectors.

Keeping in mind the artisans’ production choices and care for the environment, our shop carried toy handcrafts made from wool in Zinancantán, Chiapas, Mexico: different animals or characters that could be used in children’s rooms as play gyms or as puppets to tell stories. An assortment of Mexican jungle animals were represented in different colors and sizes. One of our products was “Choco-Solar,” organic local chocolate ground by biking and processed by employing a solar energy stove. Paper bags were used for packing, and the product was sold in ecological markets and our shop. Popular workshops developed around ChocoSolar involved fun, educational activities that facilitated children and parents spending time together.

I provided the initial capital, promotion, input, and contact with artists and designers while my mother, Lupita, took on the responsibilities with clients, customer services, sales, and logistics. Our routines were always hectic and full of activity that involved clients, artists, designers, artisans, and people in our neighborhood. The majority of economic support for the shop emerged from my two jobs. On weekends, I pursued studies on entrepreneurship and business.

At the beginning, establishing Kiddos Ropa & Rock n’ Roll seemed an impossible goal but through a lot of effort, work, and much love, we achieved
It. It served as an initial foray into bringing together regional crafts, art-making, and active engagement for locals and tourists and led to a deep interest on my part in teaching Mexican arts and culture and creating personal change through social experiences. It was a self-made, DIY model of entrepreneurship that involved handcraft and social engagement with local artisans and designers, educational activities for clients, and concern for sustainable activities.
DEVELOPING A COLLECTIVE LEARNING ARTS SPACE

Implications for Art Educators in Diverse Settings

Natasha S. Reid

Incorporating a new learning model into a curriculum can be challenging, as the needs of the students and the constraints of the institution may not entirely fit with what is envisioned. When incorporating new approaches, a flexible mindset can be beneficial. In what follows, the author shares the challenges and solutions associated with an independent art center’s efforts to develop a collective learning space, loosely inspired by Art Hives.

Collective Learning

The Visual Arts Centre (VAC)—a cultural space in Montreal, Canada, that is comprised of an independent art school, a contemporary art gallery, and an outreach program—has always supported collective learning. The VAC first began as the Potters’ Club in 1946, which was a collective run by a group of women artists. This collective offered a highly creative space, which placed both teaching and shared learning among peers as high priorities. Since its inception, the VAC has offered an Open Studio Program for ceramics students, within which they work on their own projects. The Open Studio places a large emphasis on collective learning, creative engagement, and an ethic of care and genuine interest in the practices of fellow students. Through the Centre’s outreach program, this spirit of collective learning is diffused into communities across Montreal, with a focus on at-risk populations. The program offers art-making opportunities to individuals who would not typically have access to and participate in the arts and aims to bring art to a more central position within society.

As the VAC has placed so much emphasis on community, informal learning, and creative engagement, it is natural and fitting for the Centre to be inspired by various collective learning spaces. Art Hives (*Des Ruches d’Art*) offer one such
example. As described by Polak, Art Hives are free community art studios, filled with typically donated or recycled materials for making art without formal instruction. Complimentary snacks are provided to participants, creating an environment of sharing. Janis Timm-Bottos, the founder of Art Hives, expressed that La Ruche d’Art (an Art Hive in the St. Henri neighborhood of Montreal) “operates as a third place and relationships are created through art making, informal conversations and gardening, which act as stimuli for citizen inquiry” (107)—a catalyst for positive social change.

**Adaptations for an Independent Art School**

When planning an art course that would incorporate some of the spirit of Art Hives, we were mindful of the particular constraints that we have as a non-profit, independent art school. For example, we do not have room to permanently house a new collective learning space; our stability is very dependent on student tuition; and our students crave instruction from our educators. Furthermore, since this is a new endeavor, we do not yet know if our population will have a strong interest in actually attending such a program. We are certain that our community will think the course is an interesting addition to our curriculum, but we ask ourselves, will they sign up?

It became clear to us that we needed to pilot a course that contains elements of Art Hives that fit with our needs. Janis Timm-Bottos has offered advice to those interested in starting a Hive: “Dream big; start small”; “Ecosystems thrive on diversity”; “You don’t have to buy stuff”; and “Food is a way of connecting people across cultural divides” (Polak n.p.). Additionally, she mentioned the importance of creating a warm and welcoming environment. We looked at this list and interpreted it in relation to our context.

We developed a four-week, two-hour course with a reasonable fee. Typically, our courses run between eight and twelve weeks, so this shorter format may be appealing to those who are not sure they would like to commit to a full semester, both in terms of time and finances. During the course, students gather around a collective arts table filled with creative materials. These materials are primarily comprised of items we already have in our school, as well as collected recycled objects. Students are also welcome to bring their own materials. With the hope that food will help stimulate a relaxed atmosphere, we encourage participants to bring bag lunches. During each session, an educator offers an optional theme, short creative activities, and guidance that helps students deepen their artistic skills. Learning between and among diverse students rests at the center of the course.

**Championing Flexibility**

This pilot project may lead to the creation of a course (and, potentially, a space) that is further aligned with Art Hives. With external funding and sufficient
student interest, we may be able to offer such experiences free of charge, use a drop-in format, move away from introducing themes, and provide the food, creating an even more collective and welcoming atmosphere. Additionally, we hope to be able to incorporate such collective learning spaces into our outreach program. In other words, we are following Janis Timm-Botto’s suggestion to “Dream big; start small” (Polak n.p.).

Art Hives foster communities grounded in openness, experimentation, collective learning, engagement, and a sense of belonging—all of which support imaginative thinking, an essential precursor for social change (Greene). These powerful spaces can offer inspiration to many arts organizations, as their ethos deeply connects with the mandate of various arts learning locations. However, not all organizations can create Art Hives, or incorporate other innovative learning models, in their common formats due to a number of constraints. These constraints do not have to manifest into an impenetrable barrier. Centers can identify creative ways to infuse some of the characteristics of these models into their locations. When incorporating new learning models into a curriculum and location, they can and should be adapted to the each organization’s particular context to maximize their potential for positive social change.

Works Cited


Dundee was recently chosen as the first UK UNESCO City of Design,¹ and with the Victoria & Albert Museum opening an outpost at the waterfront in 2018, the city is experiencing a cultural transformation. The Visual Artist and Craft Makers Awards (VACMA) is a programme of small grants schemes run by Creative Scotland in partnership with City Councils to support artists and makers in their creative and professional development. These partnerships were devised to offer funds² to support practitioners at all stages of their careers who have demonstrated a commitment to developing and expanding their practice through new work, new skills, or new opportunities. The Dundee City Council programme has been running for over ten years and demonstrates the city’s commitment to social change. If we consider these awards as gifts—and part of a gift economy³—the following examples of jewellery artists (whose contribution to cultural change is much neglected) demonstrate how the programme benefits not just the artists themselves but importantly the wider community.

Rosie Kimber works part-time as a lead tutor at Art Angel,⁴ a project run by and for people with mental health difficulties. Rosie secured funds to attend a summer workshop called “Attraction and Repulsion,” run by internationally recognised jewellery artist Marta Mattsson at Idar-Oberstein in Germany. This was an opportunity for her to learn about a different design process as well as to experience another culture and learning environment, and to network with a mix of artists from across Europe. Art Angel participants have also benefited indirectly from this award as Rosie has been able to share her new skills with them through workshops promoting positive self-expression.

Elizabeth Armour’s⁵ award was for a new body of work that bridged traditional techniques and new and emerging digital tools such as 3D printing. She works with a 3D haptic modeller (Anarkik3D) that gives the user physical feedback

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¹ UNESCO City of Design
² Small grants schemes
³ Gift economy
⁴ Art Angel
⁵ Elizabeth Armour
when touching a virtual object and incorporates micro-electronics in her jewellery. She produced a collection of LED brooches for the Dare to be Digital Festival Ceilidh in 2014 that enhanced a traditional social experience by using software that tracked the light as people were dancing so that they themselves became an aurora borealis projected onto a six-metre screen. She is now working part-time as a science communicator at the Dundee Science Centre creating art and design learning resources.

Islay Spalding⁶ is a maker of kilt pins who secured an award to learn about casting techniques. She was subsequently invited to be artist-in-residence during the first Dundee Design Festival held in the Ward Works building in 2016. She was inspired by the architecture of the building to make a brooch that was then auctioned off for the Archie Foundation for sick children. For Islay this was a chance to promote how much work goes into making a piece of jewellery—opening up the process for the public to gain a greater understanding of the value of the handmade.

These examples reveal the social capital created through skill sharing, creating new technological experiences, and promoting the value of creativity. This is an important, long-lasting, and unpredictable effect of the programme. Through the lens of the gift economy we can recognise artists and craft makers as important agents of cultural change and the Creative Scotland VACMA programme as an important cultural asset.

Notes
1. For an insight into why Dundee was chosen, see vimeo.com/205188001
2. Awards are between £500 and £1500.
3. A gift economy can be defined as a mode of exchange where something is given without an explicit agreement for future rewards, often contrasted with a market economy where goods are exchanged for the financial value received.
4. artangeldundee.org.uk/
5. www.elizabetharnour.com/
6. www.islayspalding.co.uk/
Despite the late March rain, the c3: initiative in the St. Johns neighborhood of Portland entertains a rowdy crowd. Inside, the crashbang! of broken ceramics is followed by free shots. Viewers wander between premade urns, performances and collaborations, artworks produced by students for the elderly. Originally conceived as an exhibition for NCECA—the largest ceramic gathering in the world—Social Objects features a series of craftworks that challenged, intercepted, interrupted, re-routed, and transformed relationships between people. Between objects. This craft is alive, and passive viewership is firmly eschewed in favor of risk, potential, and participation.

Early craft theorists John Ruskin and William Morris, and education theorist John Dewey all imagined spaces like this, in which the process of utopia could unfold within the careful, engaged work of skilled makers, believing “that the utopian experience is crafted and is thus a matter of practice” (Freeman-Moir 22). Contemporary craft has certainly retained many of its socialist and progressive roots, as seen in the fiberworks of prominent craftivists, their origins in the work of Faith Ringgold and Judy Chicago, the continuing push for diversifying fine ceramics by artists like Theaster Gates and Roberto Lugo, and other ongoing projects like Potters for Peace, the Welcome Blanket Project, and the Yarn Mission. Despite a fraction of the field’s radical optimism, our current patriarchal-capitalist-colonialist-white supremacist hegemony problematizes the supposed “goodness” of craft, particularly as craftwork becomes more expensive, gentrified, and co-opted by the networks it claims to resist.

Rather than imagine our “utopia” as the end of a progressive campaign, an elusive city on a ideological map, or a blueprint for functioning society, the exhibition Social Objects transforms utopia into an enacted moment in time. We cannot hang our well-intentioned hats upon craft’s mere existence, but must
instead redirect our energies towards its radical potential. Rather than assigning “goodness” to the hand-making of objects, we ought to push and complicate those objects to become tools of the common good. Utopia becomes a tactic, a gesture, one to be used within existing economic and artistic frameworks for the disruption and transformation of social relations.

An emerging field, socially engaged craft (SEC) is commonly defined as crafts-based facilitation of social engagement. SEC bears similarities to socially engaged art (SEA), which takes, as its subject and material, the interstices of human relations that Bourriaud refers to as “relational aesthetics” (14). Simply put, it’s not enough to merely “engage” a public; an artist is ethically bound to consider the social, moral, and aesthetic ramifications of their interventions within a particular community. Renowned craft curator and scholar Namita Gupta Wiggers writes, “Unless re-situated, destabilized, or disruptive of social systems and norms in some way, any object remains a socialized object, not a social object” (17). The “social systems and norms” disrupted in the exhibition—stigmas around menstruation and abortion, social disconnection, fear of death, society’s impact on water systems—are systems that, when confronted, reveal utopic potential, as we actively fund abortion access, facilitate dialogue about watersheds, or make our own urns. Each project constitutes a “tear” in the fabric of the status quo, beneath which lie alternatives, rejections, and alterations to the present: social objects in utopian practice. Both symbol and catalyst, these objects facilitate a brief, tactical resistance, one that is sustainable in its ethical production, voluntary use, and physical presence.

Social Objects, an exhibition of work by the Socially Engaged Craft Collective (SECC), asked in the form of actions, the world to be different, if only for a second. These moments of enacted utopia, while small, temporary, and unstable, offered both respite and potential. Social Objects made no claims that craft is utopia, that craftwork could save the world. Rather, the exhibition suggested that in the process of dismantling worlds that we cannot live in, it’s necessary to construct objects through which we thrive, whether through education, play, conversation, acceptance, or advocacy. While Social Objects was populated by a number of socially engaged craftworks addressing issues of play, communication, reproductive justice, and even death, I can only speak confidently about my own. I encourage readers to seek out other works within the exhibition, either through c3, the SECC, or individual artist websites.

Social Objects premiered The Menstrual Cup Project, an experimental, performance-participatory artwork where I carried cast, ceramic, menstrual cup-shaped shot glasses brimming with a bright red cocktail featuring an Oregon raspberry vodka. I offered shots to everyone (of age), free of charge. Participants kept the menstrual cup, decorated with written missives, offering information like “trans men menstruate, too,” or “menstrual fluid is non-toxic,” or “menstruators often miss work or school during bleeding” (see Figure 51.1). The written declarations on the porcelain cups aimed to lay plain the harm that
menstrual stigma costs us: bodily, socially, and economically. Proceeds from the project, raised through selling special edition menstrual cups or donations, were given to Transition Projects to buy clean underwear for menstruators facing homelessness. Each of the project’s components—the shot glasses, the participatory performance, and the fundraiser—supported a utopic tabletop, where drinking rituals were interrupted by awareness, galleries became sites of peer-to-peer education, and monies assisted those in need.

I hoped to combine the celebratory *whoo!* of a free, novelty shot with difficult conversations about bodies and stigma. The gallery quickly filled with laughter, comparisons of new menstrual products like absorbent undies or menstrual cups, and peer-to-peer education as menstruation intersected with personal experiences addressing fertility, pregnancy, autoimmune disorders, menopause, and queerness. The crafted, functional shot glasses became the catalyst for a moment of menstrual utopia, where bodies weren’t stigmatized, education was accessible, and periods normalized. *The Menstrual Cup Project* was reinforced by the work of thirteen other artists (please see “Socially Engaged” for a fuller view).

*Social Objects* demonstrates that, rather than a peace-filled oasis, utopia is messy, and loud. Upending traditional gallery-viewer relationships, c3:initiative visitors were encouraged to touch and play with cultural constructs, to literally climb into sculptures and fling ceramic waffles at a foam toaster. Viewers participated in

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**FIGURE 51.1** Mary Callahan Baumstark, a special edition of cast *Menstrual Cups* raised funds to provide menstruators facing homelessness with clean underwear

*Photo: Author*
performances, imbibing and bantering with artists, or quietly sitting to watch artists chat with one another during art-making. Undermining power dynamics through inversion, empathy, and voyeurism, utopic relationships were negotiated and voluntary; leaving was always an option.

Utopia isn’t a place, or a journey, but an action, a disruption, a stumble. Utopia is in progress. Our ideals and world-building must be tactical, potent, and brief. It won’t be realized by sweeping action or singular vision, but through the micro-collaborations, participation, and representation of creative thinkers and engaged citizens. These small moments, enacted by creative thinkers like the SECC, demonstrate the utopic potential of social and crafted practices. Craft, itself, isn’t utopic, but the actions, people, and moments that surround it could be.

Notes
1 The c3:initiative, a physical platform for “critical inquiry [and] social wellness [through] contemporary art and integral conversation,” connects makers and thinkers with communities through programming, partnership, and resources, in Portland, Oregon (“about c3”).
2 NCECA is the acronym for the National Council on Education in the Ceramic Arts, an arts organization that puts together the NCECA annual conference, typically hosting more than 5,000 participants in different US cities (“NCECA history”).
3 Visit the following for more information on these projects: www.pottersforpeace.org, www.welcomeblanket.org, theyarnmission.com/acout-us-2/.
4 SECC is an expanding network of artists dedicated to the practice and promotion of Socially Engaged Craft (“about”).
5 Transition Projects is a non-profit dedicated to the transition from homelessness into housing in Portland, Oregon (“About Transition Projects”).

Works Cited
This chapter is about craft knowledge. When I refer to “craft” I am not talking about specific kinds of materials or objects, but about making skilfully in any material. I do not understand craft as a defined practice, but as a way of thinking through practice. Craft knowledge is central to art and design pedagogy.

Craft knowledge is skilled knowledge, understood as trained practice that necessitates practical understanding of materials and tools (e.g., how aluminium bends when it is bent and paint behaves when it dries). As such it requires both declarative and procedural knowledge—knowledge of facts and of how to do something (Mason and Rae). Tool use requires the exercise of bodily kinaesthetic intelligence. As Ingold has pointed out, it is not just a matter of bringing a tool into contact with materials with an appropriate degree of force—a spectrum of adjustments to position and force are necessary as it moves. Planning to make something also requires the ability to visualise in the mind and anticipate what an object will look like while the material is being worked on and formed.

Craft knowledge embodies the ideal of crafting—making things beautifully and well. According to Sennett, craft expertise is founded on abilities to attend to sensory experience (localise); question (dwell psychologically in and investigate the local); and open up (make intuitive leaps and draw together unlikely domains). Pride in one’s work is at the heart of crafting. A good craftsperson is motivated by material challenges, like working with the resistance of materials or managing ambiguity, and the difficulties and possibilities they throw up.

How is Craft Knowledge Acquired?

In my extensive, two decades of research on crafters and makers, I have found that studies of craft learning in traditional societies has resulted in widespread agreement that:
• Craft knowledge is transmitted via apprenticeship of a novice to an expert. Skills training is effected tacitly through observing the expert at work and learning in practice. The method of instruction is indirect and relies on gesture. For example, the expert employs demonstration and touch, not words, to show rather than tell how something is done.
• Trial and error is a basic principle of learning in practice. The scenario of practice sessions necessary to improve skill is prepare, dwell in mistakes, and recover.
• Learning by doing requires concentration, repetition, and attending to something in depth. A lengthy period of practice is necessary to master a panoply of ways of doing something, and ensure that bodily knowledge becomes embedded and an integrated part of the person.
• Craft quality emerges at the higher stages of training in the judgments learners make based on tacit habits and supposition.
• Repetition and embedding are essential processes in the early stages of skills development, but technique ceases to be mechanical as the skills expand. At the higher stages of expertise there is a constant interplay between tacit knowledge and self-conscious awareness. The tacit knowledge serves as an anchor and the explicit awareness serves as a corrective and critique.
• Craft knowledge is acquired in the context of the workplace and embedded in the cultural life of a particular community. Traditionally, the expert-teacher (“master craftsman”) stood in loco parentis to the apprentice.

The Troubled History of Craft in Formal Education

The traditional apprenticeship model of craft training fits uncomfortably into formal educational contexts. Schools and universities are not workplaces; they favour intellectual not experiential modes of learning, deliver standardised curricula, and pursue general not vocational educational goals. Once craft training became institutionalised along the lines of state education it was afforded low status and faced a theory–practice divide.

Although art and design education originates in the apprenticeship model it has different goals and methods now. Instructors are expected to deliver a broad understanding of the field as well as to guide learners in the production of artifacts; and they employ explicit instructional strategies like lectures, written handouts, and critiques. The slowness of craft training that is essential for securing craft competence—a suggested 10,000 hours, according to Sennett—is difficult to accommodate within formal institutional structures. Whereas traces of the old model persist (for example, in the importance attached to learning from expert practitioners in the studio environment), concern with skills training and craft knowledge has declined. Fortnum, Houghton, and Sims argue that current values in studio teaching and learning include a preoccupation with idea development over and above practical training and transmission and acquisition of craft skills.
Similarly, Lindström complains that art and design pedagogy prioritises designing and problem solving over making and teaching for creativity at the expense of teaching techniques.

The emphasis on fostering creative dispositions over and above practical training is misguided. According to Marchand, creativity in art and design rests on technical craftsmanship in that the use of tools in certain ways organizes imaginative experience with productive results. There is no hard and fast line separating creativity from craft knowledge, or imagination and expression from technique. Likewise, emphasising idea development over making marginalises bodily knowing.

**Implications for Curriculum Planning in Art and Design**

On the one hand, interest in scholarly literature in learning through making and apprenticeship in general education is increasing at this time. On the other, current values in studio teaching and learning in schools downplay the concept of craft. The impact of new technologies on the field notwithstanding, the time is right, in formal education systems, to reinforce the artisanal structures on which the discipline is founded, to prioritize bodily learning, and to challenge the theory–practice divide.

The key structures that support bodily learning are (i) student practice, (ii) expert demonstration, and (iii) individual student mentoring. It follows that in designing curricula art and design educators should:

- Prioritise action-based instructional modalities in which they and their students engage directly with technologies, materials, and tools.
- Afford sufficient studio/workshop time for students to learn through trial and error; hone craft skills; and train eyes, hands, and minds.
- Schedule extended periods of student practice to secure acquisition of skilled knowledge through individual problem solving.
- Ensure that expert demonstrations (understood as practical exhibitions and explanations of how motor actions are performed) feature as a prominent instructional device. These should consist of live representations to the whole class and representations embedded in student practice.
- Adopt the role of facilitator rather than impartor of knowledge.
- Co-participate in and mentor individual student learning in practice through guided action.
- In so doing they should deploy a range of interactive strategies to scaffold particular patterns of movement for students to assimilate and use.

According to the Crafts Council of England, the global financial crisis in the late 2000s (among other things) has led to increased public interest in craft. At the beginning of the twenty-first century, craft skills, material knowledge, and
the maker’s way of thinking have been recognised as important factors driving innovation and success. Art and design education should engage with this positive reappraisal of the relevance and value to society of skilled knowledge and craft.3

Acknowledgement

My thanks are due to John Rae and Kryssi Staikidis who collaborated with me on the empirical research that informs this chapter.

Notes

1 Ekstrom et al. define guided action as being characterised by:
   • guiding a learner’s manual action in the production of an artefact;
   • both parties being reciprocally attuned to each other and the developing skills, and continually calibrating their actions so as to respond to each other and the developing situation, based on problems the instructor perceives.
2 At the present time the jury is out as to whether skilled interaction with technology is or is not craft based. I subscribe to the view that it is, so long as it is driven by personal enquiry, technology is approached playfully and poetically, and decisions about quality are embedded in practice (see Bunnell).
3 For an in-depth exploration of ideas presented in this chapter, please see my forthcoming book, Skilled Knowledge, Pedagogy and Craft.

Works Cited

Richard Sennett describes craftwork as an innate human impulse to achieve perfection in manual labor and equates pursuit of excellence to fulfillment in a job well done. This fascination with craft’s emotional economy of self-improvement seems to suggest an antidote to machine-age anxiety. It posits the ultimate goal of the craftsperson as maximum perfection wrought within the limits of human flaw. It may be inferred that humans are just as valuable as machines because we can achieve organic forms of perfection unattainable for artificial intelligences. Humans are softer machines, our value steeped in seemingly opposed notions of virtuosity: virtue in the Romantic sense of John Ruskin, attached to the acceptance of flaw as beautiful, as well as Denis Diderot’s enlightened reverence for technical virtuosity, as close as possible to (machine) perfection and thus an expression of the sublime in human nature (Sennett 114–118).

Sennett positions himself in the more human(e) center of this argument. He focuses on craft as active labor, centered on the notion of work and practice to develop skill, yet allows imperfection to exist within the aesthetic standards that constitute a skilled product. Still, the error—and its close relative, pause, which often comes as the result of an error—is valuable because it directly leads to (or even is in itself) immaterial labor.¹

The mistake forces the worker to strategize for the improvement of her skill, providing a problem to solve or a moment to reflect upon strategies for solving problems (296). What is unexplored, however, is the idea of mistake as conduit to leisure time, of rest as an integral component of the craft labor system itself. That a worker could move from error→rest/leisure→quality of life→satisfaction/energy→motivation is not fully comprehended within the valuation of error as labor.²
FIGURE 53.1 Two-harness loom, threaded with polyester fiber, at Tubigon Loomweavers Multi-Purpose Cooperative

Photo by Czar Kristoff
The social landscape for Philippine workers is influenced by a variety of opposing forces, Eastern and Western in nature. The neoliberal government of a young democracy built in the image of Western (U.S. American) ideals, mistranslated and hiccoughing. A far left discourse trickling down from the archipelago’s hills and mountains—where communist guerrilla groups hide and resist—into urban academic spaces and civil society as the alternative to exploitative, oligarchic agendas. A social value structure built upon tribal kinship relations persisting after 400 years of colonization. In this diverse cultural biosphere, the ground is fertile for new social forms to emerge.

Tubigon Loomweavers Multi-Purpose Cooperative (TLMPC) is a rural loom weaving cooperative operating in Bohol Island, Philippines. When observed over a ten-week period in 2015, members of the cooperative manifested two distinct concepts of work motivation aside from the obvious economic imperative (see Figure 53.1).

The first sector of weavers were motivated to weave fabrics that implied higher skill levels and thus larger economic return. They derived emotional fulfillment from perfecting more and more complex maneuvers. This was almost completely the realm of a younger worker set, which had the peculiarity of including an almost equal number of male and female weavers, subverting stereotypical conceptions of weaving as women’s labor. This (Westernizing) social innovation is significant in the rural Philippines where heterosexual gender roles are dominant, static, and conservative.

In contrast, older women weavers resisted taking on these more taxing fabrics woven on wider looms, sometimes with four instead of two pedal harnesses. Their motivation to work was more social in nature. Though the elder weavers had become members of the cooperative for the steady source of income it provided (the cooperative serviced steady clients of both local and international markets), they preferred cheaper raffia-only fabrics for a peculiar reason. The raffia warps broke more often. This meant workers had to stop the mechanical task of shuttling and pedaling the horizontal weft to repair the broken warp, looped vertically along the loom. The break allowed them to stretch their legs, socialize, eat, maybe take an (anti-capitalist) nap on hammocks attached to their looms. The task of winding the warps to begin with, a preparatory step in the weaving process, was also more complex with the polyester fiber (preferred by the younger employees) than the natural raffia. Polyester tangled easily and, because the fiber was very thin, was more difficult to thread onto the loom for those with poor eyesight. For the elder cooperative members, their differing level of physical fitness and stamina made high-impact skill sets more stressful, less desirable.

The payoff described by younger weavers from the higher intensity prep was exactly the opposite. Once the demanding task of winding fiber and threading the loom was done, warp threads snapping less meant their labor from then on
was methodical. They could perfect their technique uninterruptedly, leading to higher output and wages, plus they had the pride of executing a luxury-feel product. In this equation, the capitalist conception of the ideal worker—geared towards excellence, productivity, and personal identification with high skill acquisition—is covered. The older, more traditional weavers are easy to label as lazy, unmotivated, or non-ideal members of the workforce.

But what the elder weavers’ preferences reveal is a more humane concept of labor, where rest and quality of life are just as important as skill certification or even raising income. The older group was fine with earning less—more precisely, with earning what they considered enough—if it meant more time for social engagement with peers and self-care. This is not to say that the fabric woven by the elder weavers was of low quality or that among them there was no drive to innovate with patterns or design applications. Though it is true that the raffia-only fabrics produced by the elder weavers were more rustic, even after quality control, this aesthetic is not without its appeal. The ghost of an erring hand gives the products a nostalgic patina not lost upon today’s consumer. More and more, the quality of imperfection in terms of irregular dye bleeds, limited and muted colors from natural dye processes, tiny flaws, and unpolished finishes are attractive because they are signifiers of the unique and of time spent in creation. These qualities command a higher price. Whether or not one agrees with this commodification of human imperfection and the wage labor model, identifying marketable differentials for their products is, at the moment, key to TLMPC’s survival.

This identification of two different but concurrently existing motivational urges in the workplace—to excel upward/in motion and to excel in place/at rest—seems important. Also interesting are the implications of how leisure time mediates the human-machine power dynamic and how allowance for rest impacts the craft workshop formula to accommodate workers with different abilities. This concern is of import to developed countries whose workforces are ageing rapidly and where cultures of excellence and exceptionalism may be forcing laborers of different ages, needs, and aptitudes into a one-size-fits-all set of expectations. They could turn to supposedly developing countries for sustainable and progressive insight into the acceptance of social rather than purely profit motivations for the worker.

The notion of crafting as a pursuit of excellence in (dogged) labor should not exclude the notion of craft as an escape from the (capitalist) pressure towards constantly ascending productivity. Craft can be understood as a place of error, delay, leisure. As self-improvement through one’s labor in a finite rather than endless process, performed in a space where the boundaries of professional and domestic blur naturally instead of exploit. Craft as the personal freedom to live, slowly, while there is still time, with time enough to catch your breath, oxygen easing the anxiety of inevitable human mistakes.
Notes

1 Marginalized laborers—the lesser adept by choice, the followers by nature, the differently abled, the elderly, the underdeveloped for lack of stimulus and resources—are often considered as “able to contribute” to the advancement of skill when their vernacular knowledge proves itself as technically advanced (or aesthetically valuable) as formal professionals. Beating the machine or the formally educated at their own game is the offered way out. Only in imitating the standards of power can we, on the resource peripheries, be included in the notion of development.

2 Arrow affectation copied enthusiastically from Hillel Schwartz, *The Culture of the Copy*.

3 The basic postulates of social organization are based on kinship ties, wherein the nuclear and extended family occupies prime importance, alongside debts of loyalty to friends of the family. Respect for elders, modesty in speech, obedience to the leader, self-effacement and politeness, as well as maintaining cisgender ideas of dignity, are key values for understanding Philippine society. Japanese anthropologist Yasushi Kikuchi specifically describes nine social behavior postulates and their corresponding corollaries in his 1989 publication (21–25).

4 For further reading, consult Rafael.

5 All insights on TLMPC were observed during a residency hosted by the author at The Office of Culture and Design. See Balaguer, Baum, and Jehng.

6 Sleep, according to Crary, can be a protest against capitalist exploitation.

Works Cited


ON BEING INCONSEQUENTIAL

Making, Craft, and Liquid Leisure

Sarah R. Davies

When a colleague and I first started studying hacker and makerspaces, and the people who used them, we were struck by the seriousness, even profundity, of talk about them. Our interviewees spoke about the life-changing effects of becoming part of the maker movement, and the ways in which they had found community, identity, and purpose through it. During the first phase of our fieldwork we toyed with the idea, eventually rejected, of using the literature of the sociology of religion—conversion narratives, evangelism, the construction of higher purpose and meaning—to analyse involvement in hacker and makerspaces.

Public policy and academic discourse has also treated making and hacking as deeply significant. The maker movement is framed as important, both to individuals and societies. Famously, Chris Anderson suggested that it will result in a “new industrial revolution.” The Obama Administration proclaimed a National Week of Making, saying that, “Since our [the United States’] earliest days, makers, artists, and inventors have driven our economy and transformed how we live.” Even the fact of this volume marks a shared assumption that making activities are, at least in potentia, significant, impactful, consequential.

It is this assumption that I want to play with in this short chapter. To do so I will focus on the commonalities of making, hacking, crafting, and DIY; these can all, for my purposes here, be understood as forms of active leisure. They are leisure in that they are primarily experienced as ways of occupying one’s time outside of the sphere of work (or education) and family. Indeed, many hackers and makers explicitly frame their activities in terms of an idea of the “third place,” referencing Ray Oldenburg’s work on “Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts” (see also Moilanen). Such active leisure practices differ, however, from so-called casual leisure activities such as watching sports or taking a walk in the park (Stebbins). Being a hacker
or crafter—or engaging in other forms of “serious” leisure—does not always bring instantaneous rewards, but instead requires long-term commitment and involvement. Active leisure is driven by a desire to take some control over one’s surroundings, and by the patience to learn the skills necessary to do so (Davies, Hackerspaces).

It is also, it seems, increasingly experienced as an important part of one’s identity. Crafter Faythe Levine writes about how the “DIY ethos” meant that she “found [her] people” (ix) and became part of a movement that now defines her life. One hacker that we spoke to during our research told us that for him the movement was about enabling people to “be able to do things, to be powerful and self-actualize.” Others talked about finding their “home,” or “family,” or “community.” Hacking and making was a culture that affected everything you did, and therefore an identity that you took on. In these respects such practices chime nicely with Tony Blackshaw’s argument that we are in an age of “liquid leisure,” in which traditional distinctions between work and leisure—and the meanings attached to each of these—break down. For Blackshaw leisure is becoming the principal way of “satisfying our hunger for meaning and our thirst for giving our lives a purpose” (120), to the extent that it can be understood as a “devotional practice” (142–146). Even in cases where leisure activities are ostensibly focused on a wider social good or goal (as in many volunteering projects), we should, as Ravenscroft et al. write in the context of community farms, “be careful in seeing this as more than a convenient alliance that allows each person to pursue their own project: themselves” (632).

So we are back to the significance of active leisure, and to the devotional aspects of how practitioners may approach it. I want, however, to complicate this story with reference to another notion from contemporary leisure studies, that of—as Ken Roberts puts it—the importance of being inconsequential. Roberts argues that despite the potentially profound identity effects of participation in serious leisure (and indeed other important effects on well-being more generally), the very presence of these effects is in fact tied to the inconsequentiality of leisure choices. In other words, active leisure is only meaningful as an identity-building project if other choices are available and possible. “The absence of societal consequences . . . is functionally related to the relative freedom afforded to people in their leisure time” (17). Leisure is leisure exactly because there is no coercion involved, and because we are free to focus on the pleasures and projects of the self rather than wider social benefits. Even where such social benefits are part of the narrative of leisure (as in volunteering, or where active leisure develops skills that might be professionally useful), work done on self-identity is primary in that there will be relatively few consequences if an individual leaves a particular leisure practice.

This inconsequentiality is again familiar from my fieldwork with hackers and makers. While our interviewees shared the widespread sense of excitement about the potential consequences of the maker movement, in practice their activities
were not focused on innovation, entrepreneurship, or wider social change, but on self-actualisation and the personal benefits of a small, close-knit community (Davies, *Hackerspaces*). While there have been claims that making will produce better employees, transferable skills, and economic consequences (e.g., Anderson; Hamilton and Schmidt), these individuals were, by and large, hobbyists, with little interest in living out the world-changing impacts they also believed in.

This is not, in my view, a problem. The maker movement is what it is. But the notion of inconsequentiality points to an interesting tension that might bear further reflection. If enthusiasm for making—and other forms of active leisure—is in part related to the wider consequences the movement is expected to have, what does it mean that for many practitioners those consequences are almost solely experienced in terms of identity construction and self-actualisation? The personal effects of involvement in active leisure do seem to be profound, while innovation and economic impacts are currently more hazy. What we might suggest, then, is that the maker movement is important because it is not very important at all.

Notes

1 My fieldwork in hacker and makerspaces was carried out in 2012 with Dave Conz, a colleague at my then institution, Arizona State University. Tragically, Dr. Conz passed away soon after that fieldwork ended. This work, as with everything else I have written on the maker movement, is incalculably in debt to his participation in it.
2 The research is written up in more detail in Davies, “Characterizing Hacking,” and *Hackerspaces*.
5 Blackshaw’s term liquid leisure is itself drawn from Bauman’s notion of liquid modernity.

Works Cited


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