# Sites of Collision for Arts Education, the Maker Movement, and Neoliberal Agendas in Education

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**Abstract:** This article draws on a 3-year empirical study of a public library system's arts-based maker program called *Bubbler.* In this article, I will introduce the maker movement and review literature on making. I will use discourse analysis of interviews and workshops with public librarians to highlight how neoliberal ideology collides with educational theories incongruent with this economic vision for how and why people learn and make. Finally, I will suggest possible implications for how learning through the arts can be undermined by neoliberal logics. This study contributes to conversations about learning through art making in educational settings across the United States.

Artists have always considered themselves makers; visual artists are makers of artifacts (paintings, sculptures, etc.), while performing artists are makers of experiences (dances, plays, concerts). In recent years, though, the term *making* has been claimed by what is coming to be known as "The Maker Movement" in education (e.g., Halverson & Sheridan, 2014). Propagated, in part, by for-profit companies (i.e., *MAKE,* Etsy) and mainstream literature such as Hatch's (2014) *The Maker Movement Manifesto,* the movement stresses that access to tools will enable the democratization of production. Many of the movement's most prominent leaders glorify Steve Jobs and hark on the myth that hobbies can be transformed into wealth-generating endeavors (Hatch, 2014). Furthermore, they often strip the arts and aesthetics from the core of what it means to do "making," focusing instead on entrepreneurial, production-oriented components of creating things.

Moreover, these makers do not come from a tradition of craft and artistry, but rather from a background in computation and engineering. In 1972, Stewart Brand published an article in which he popularized the term *hacker* as disruptive and creative, distinct from unimaginative technocrat planners, the white-collar workers following orders. For Brand, when computers became accessible, hackers could take over: "Ready or not, computers are coming to the people" (Brand, 1972, p. 1). To the maker movement leaders, this dream, beginning in Stanford's then-remote foothills near Palo Alto, has come: People are becoming "hackers" and accessible technologies and changes in economic conditions have opened the opportunity for "the largest explosion of creativity and innovation the world has ever seen" (Hatch, 2014, p. 8).

Research on the movement has defined making broadly as participation in the creative production of physical and digital artifacts (Halverson & Sheridan, 2014). As practitioners expand and diversify maker activities, the "revolution" has been critiqued as advancing a narrow, corporatized, gendered depiction of what counts, invoking images of young, White males and their fathers engaged with 3D printing and robotics (Brahms & Crowley, 2016). Concerned that the movement may align with corporate over social values, there is a burgeoning public counternarrative (see Morozov, 2014). Recently, alternatives to the "neoliberal rationality" have been put forward by Vossoughi, Hooper, and Escudé (2016). Yet despite the growing sophistication with which researchers understand the culture and culturing of the maker movement, to those looking to frame their educational programs within this trend, "making" has become a catch-all for all types of hands-on activities, including art making.

## Maker Education and Arts Education

Educational institutions are at the cross fires of varying ideological agendas carrying significant material consequences. Recently, the maker movement has begun to permeate the educational enterprise (Halverson & Sheridan, 2014). Public and private sectors, from Silicon Valley to the White House, claim making is a vehicle for education reform: a potential to build job skills in the science, technology, engineering, and math (STEM) workforce. The research arm of the Department of Defense has spent upward of 13 million dollars toward making with high schoolers, establishing TechShops for its agenda to stimulate innovation (Morozov, 2014).

Educational researchers see potential in the movement to offer more expressive tools to children (Blikstein & Worsley, 2016) and suggest that making provides playful and imaginative activities that can foster dispositional and constructionist open-ended learning (DiGiacomo & Gutiérrez, 2016). People are advancing their own varied educational agendas by self-identifying with the movement to attain the resources. This includes spaces such as museums and libraries, which offer opportunities to tinker and play (Bevan, Gutwill, Petrich, & Wilkinson, 2015).

Meanwhile, the arts are being systematically excluded from formal education and increasingly offered through alternative organizations. As art education theorist Darras points out, art education is characterized by a constant struggle to convince the educational authorities of its necessity (2015, p. 58). Today, the arts are being incorporated into STEM through initiatives for STEAM (science, technology, engineering, *arts*, and mathematics; Honey & Kanter, 2013). Thus, making, as something that can check off all the STEAM boxes, becomes the nom de jour for all activities, including art.

Policy, research, and professional literature have begun to communicate the same trope: 21st-century learning requires not just the consumption of knowledge, but the production of new ideas and artifacts. This aligns well with the maker movement's position that makers produce rather than consume. Students both acquire and create knowledge using a variety of communicative tools. In negotiating new tools and activities, many educators are orienting their learning goals around a more active view of learning wherein knowledge production is prioritized over acquisition. This aligns with a prioritization on learning by doing, which has been prevalent in arts education. Important for this discussion, while art education is entangled in many perspectives and cultures, the basic premise remains: "Through art we learn" (van Heusden & Gielen, 2015, p. 11). From conservatories to studio art classes, many types of arts education embrace a constructivist perspective that people learn by doing.

### The Public Library's Bubbler

This study takes place throughout a vibrant library system. As a publicly funded site that does not turn a profit, a basic representation of social democracy, the library offers the potential for resources, access, and opportunities to make art. In the Madison Public Library (MPL) system, Bubbler (the arts and maker programming of MPL) serves the system's nine libraries and various outreach locations. In the system's largest branch there is a dedicated Bubbler room and media laboratory that house portable equipment such as circuit board kits, a large range of art supplies, and iPads, as well as permanent equipment, including a recording studio and up-to-date, powerful desktop computers. Bubbler promotes arts creation, engagement with digital and analog technologies, and hands-on making. This is achieved through artist-in-residency programs, monthly gallery openings, and workshops in activities varying from screen printing to poetry. Staff members frame their work as both arts education and maker

education, which has opened multiple collegial and funding communities. Bubbler has created a unique program, defined by one librarian as “the hippie cousin of the maker movement,” because, unlike many makerspaces, the program is free, is not set in one specific location, and is focused on the arts, rather than on science and technology. As part of a multiyear effort by researchers and library staff to understand how a systemwide approach to making might work, this article examines how library staff involved in Bubbler define and discuss making, the arts, and learning. MPL staff use the terms *artist* and *maker* somewhat synonymously and refer to art-making activities as simply *making.* Gaining insight into how learning in and through the arts is perceived at Bubbler provides a rich example of how discourse around making fits into current conceptions of learning through the arts. It is a fascinating and contested place where a blurring of frameworks is visible. Furthermore, as librarians seek to more thoroughly integrate theories of learning through making, libraries hold possibilities to provide unique learning opportunities. However, learning theories examined by the library staff in this study seem to have incompatible objectives, leaving the potential for underexamined influences to redirect learning goals in unintended ways.

## Research Methods and Analysis

This article is part of a collaborative project in which three researchers, along with core Bubbler staff, investigated a systemwide makerspace and the learning therein. This study is part of a multiyear ethnography and design-based research project. Design-based research encourages continued investigation of “designed innovations,” which include activities, organizational structures, artifacts, scaffolds, and curricula (DBRC, 2003). Unlike jointly negotiated research (see Bevan et al., 2015), we did not cocreate the research questions, nor conduct research with the librarians co-designing the programming. Alongside the librarians, we sought to develop sustainable systemwide programs. In addition, the researchers investigated the social, political, and educational contexts of the program. Throughout the project, to explore our questions and assess designs, we included a variety of data-gathering techniques including: participant observation and field notes of Bubbler workshops, team meetings, informal drop-in making sessions; work produced by makers during the range of sessions; documentation from professional-development workshops; and transcripts from semistructured interviews. In contrast to many linear methodologies in which projects begin with data collection and end with analysis, this style of research employs collection, analysis, and dissemination throughout. Below I describe in detail the data sources I draw on for this specific inquiry.

For this article, I focus on *formal and informal interviews* conducted with 24 library staff aimed at understanding how MPL staff was defining *Bubbler, making* and *learning* in regards to perceptions about the program, and the maker movement more generally. The first round of unstructured interviews began 18 months after Bubbler was officially launched. Then, through an emergent process, the research team collaborated on a semistructured protocol for a set of scheduled standardized interviews to better analyze across participant responses. These 20–45 minute interviews were conducted, recorded, and transcribed over the next several months. I also collected documentation from two *professional-development workshops* (conceived of collaboratively in accordance with our designs). In all workshops, Bubbler staff have paid time to participate. In one of the workshops, participants were asked to explore their own definitions of making. During the first hour, participants had time to write personal definitions of making before and after reflective group exercises. The workshop design sought thoughtful articulation using prompts based on interviews and popular definitions of *making.* We used techniques from process drama such as spectrum of difference, in which participants arranged themselves in

a spectrum from "agree–"disagree" in response to statements such as "all making is hands-on." Participants explained where they were on the spectrum, inciting dialogue about their views. These sessions were videotaped, and participant definitions were collected. In the second workshop, participants mapped out the role of learning in Bubbler. Responses were created via group diagrams on a large whiteboard. This session was audio recorded and photos were taken. After this, the documents, videos, field notes, and transcriptions were analyzed through the same coding processes. Findings were compared to the interviews, looking for commonalities among making and learning, and discussions ensued about the relationship between making and learning. Evident in the discourse of Bubbler staff regarding the purpose for maker programming (see Table 1), there were incongruences between learning and making. This article will focus more exclusively on making, but for an extended explanation of data collection and methods of analysis, as well as an analysis including how participants discuss learning, please see a version of this article published in *Journal for Learning through the Arts.*

| Learning | Making |
|---|---|
| Disposition<br>For well-being, enlightenment | Skill<br>To make money, *be* a career |
| Ongoing<br>Toward no predetermined end | Finite<br>Intended for a specific outcome |
| Social<br>Process oriented | Individual<br>Product oriented |

*Table 1. Librarians' comparison of learning and making.*

## Make and Making

As I analyzed, I noticed that participants talked about "learning by doing" and cocreating learning dispositions such as "feeling excitement about learning." Making, on the other hand, was described by participants, not as something you experience, but as something you do through methods such as being "taught," "told," or "shown" a skill. This contrast in the language around "learning" versus "making" gave warrant to further analysis. Thus, this article takes a closer look at the incongruent relationship between learning and making to provoke "big picture" thinking regarding this discourse and its wider sociohistorical context. The following section focuses on the way participants discuss making.

When talking about making, the activities became "events where participants learn a skill and leave with a final product." What delineated these activities were the tangible outcomes. Making was defined as "a project that will result in an object" (such as a screen-printed T-shirt) or "putting elements together to make a finished thing" (this could be sonic or digital as well, such as a musical album). In the workshops, the concept of "make-and-take" was referenced, a program design where people come to participate in activity where "you make something, you take it home, you have it." This emphasis on the outcome categorized making as "about the end product" and turning "an idea into a format you can consume."

In this analysis, I found that participants switch from dispositional to skill-based learning with a focus on product: "working on a skill to have an end product." In conversations about making, open-ended processes are pushed to the margins and what becomes important is making *something*, a means to an end. The power is given to the object. Moreover, the language of the participants implies that participants see making as an individual and linear process that begins cerebrally and then is imposed by the individual on the material world. It is a personal endeavor "about using your own skills" where patrons take an "idea that's in your head and turn it into a reality." This stark contrast from the rhetoric

of learning led me to apply a critical lens to investigate their discourse about making and its resonance with the broader sociolinguistic patters in the maker movement.

**How do librarians' understandings of making, the arts, and learning interface with neoliberal agendas for education?** The concept of creativity acts as a bridging construct between making, the arts, and neoliberal agendas in education wherein neoliberalism and dominant educational philosophies reside in our conceptions of creativity. Neoliberalism aims to liberate "entrepreneurial freedoms and skills" (Harvey, 2005, p. 2) through "self-sufficiency" by weakening the power of labor, deregulating industry, and advocating for profit making through free markets (Harvey, 2005). The 1970s marked a contemporaneous rise of neoliberalism and constructivism in education. As these theories collided, creativity became not only identifiable, but teachable and mediated through sociocultural factors. Neoliberal rhetoric *feels* logical, and its hegemony in discourse has widespread effects on the "common-sense way many of us interpret, live in, and understand the world" (Harvey, 2005, p. 5). Moreover, creativity offered a potential attribute to succeed in the market.

In arts education, scholars argue that neoliberalism has "replaced the arts with 'creativity,' understood in terms of technological and economic – entrepreneurial creativity" (van Heusden & Gielen, 2015, p. 11). Founded in the belief that anyone can, and should, achieve success by competing in the marketplace, arts education can become co-opted to build "industry creatives" rather than provide opportunities for open-ended or reflective experiences (van Heusden & Gielen, 2015). In informal educational settings creativity is now categorized as a marketable skill. Yet, as Blikstein and Worsley argue, this economic rhetoric is "fundamentally incompatible with a culture of democratic, equitable, and deep learning" (2016, p. 65). Learning to attain a career turns computer programming, for example, from an expressive tool to a way to "get kids into computer science" (Blikstein & Worsley, 2016, p. 67). Similarly, many arts education theorists, however unintentionally, promote an implied opinion that arts education's main objective should be to produce young artists.

The contrast between learning and making found in this analysis illuminates how art education can be discursively placed in relation to a neoliberal ideology, exemplified by a disproportionate orientation toward economic benefits, individuality, and outcomes. When asked about the reason for art in Bubbler, the manager of the program conjectured,

> Art has changed my life and how I see things and do things. I think it's really important for people to kind of slow down and create things just as part of their own kind of mental health and well-being.

Yet even if art is thought of as exploratory and looking toward well-being, this set of values is not integrated into language about making across the system. When I asked about the role of the maker movement in public libraries, answers instead exemplified dominant neoliberal discourse, such as:

> I think it's incredibly instrumental for libraries to offer maker-based programming just mainly because we are kind of living in an age where people are graduating from school, high school, they're going to college, they're learning skills and a lot of people aren't necessarily knowing how to apply certain skills to a viable workforce.

**Making toward career.** In the context of making, participants shift from dispositional qualities to developing certain skills, often justified in economic terms. Arts-based learning is for well-being, but making is to enhance marketable skills. In several interviews, maker programs were described as useful, because, as one participant said, a patron may "discover something new" and "make a career out of it." The narrative of discovering a future career appeared several times. More than one person rationalized

access to art making as valuable because a patron might become a successful artist. One interviewee mentioned an ideal hypothetical patron's saying, "I wanna be a filmmaker; I wanna quit my day job and go be a filmmaker" which would "be awesome and great." Another interviewee shared the following anecdote:

> One summer there was free theater in the park. A father, hesitant to take his child, assumed the kid would be bored. Yet because it was free and convenient, he decided to go. [The interviewee is drawing a parallel to Bubbler, also free and convenient.] The child had a wonderful time and it became a regular family activity. Years later the child became an actor.

Following from the logic in this analogy, success from a Bubbler program would be a patron discovering what he or she wants to *be*.

The fact that the achievement in the story is that the child became an actor is telling. Alternatively, the experience may have sparked wonder, provided practice stepping into a hypothetical world of possibility, or even provided space each summer to feel love from his father and appreciate being in the outdoors. Furthermore, this ideal of discovering a career as the best outcome for learning in an arts program undermines the rest of the experiences, for example, having an enjoyable time or even discovering a hobby outside the economic realm. In the neoliberal paradigm, future is conflated with an individual's economic future. This may be well intentioned as educators strive to take the future into account. In this version of preparation, educators often lose sight of learning through experiences as opposed to acquiring skills for future ones and value individual advancement in lieu of well-being. Moreover, even if a patron does want to become a professional, career goals direct learning goals toward economic success and solving problems. To embrace the artistic culture of problem posing, not problem solving, it is irrelevant what you want to *be* if arts education aims to teach *how*.

**Making as finite.** As discussed earlier, participants aligned with social constructivism emphasizing learning as "not by yourself," but about "connecting" and "interacting" through relationships among humans. When speaking about making, however, tools were rarely discussed in the context of learning by making, or from a constructionist perspective. Tools were used in service of a product, potentially to practice a skill, but not as materials with which to play. Making was characterized by "individuals tinkering," providing people with the opportunity to "figure things out for themselves." Socializing applied to human processes; tools and materials applied to finished products. Throughout this project, interviewees reiterated that people make on their own yet they learn together.

As opposed to an ongoing process, many participants depict making as something that invites a learning process that is linear, finite, and cerebral. Making happens when something "pops into my head" and is carried out. However, researchers warn that creativity may be suppressed if a process is inflexible and made of stages assuming "a linear progression from start to finish" (Martinez & Stager, 2013, p. 46). To participants, this predetermined outcome is cerebrally conceived and then executed. Yet rushing ahead to solve a predefined problem undermines open-ended exploration.

As participants emphasize artifact production, material production is left out entirely. The interviewees embrace the do-it-yourself, artist-as-entrepreneur ethos, but they never mention thinking critically about how work is shared through digital platforms and the ways in which they participate in that market. Hatch's *Maker Movement Manifesto* (2014) emphasizes reclaiming the tools of production, invoking a Marxist egalitarianism; yet here we see people provided with tools to make but not provided with ownership of what is produced. Neoliberalism claims what is created in common spaces as private

enterprise, and in this case, there is no space for critical thinking in regard to this tendency. The artists create the music, but the question of learning about who owns that music is out of scope.

In the interviews, “originality” and uniqueness can be conflated with successful art making. Indeed, researchers at the Exploratorium’s Tinkering Studio observed that to museum facilitators, learning was visible when they saw a child create something different from his or her peers (Bevan et al., 2015). This aligns with ideals in artistic modernity (i.e., the avant garde), which have proceeded from romantic individualism to embrace originality and critique (van Heusden & Gielen, 2015). Yet these concepts have been appropriated in the dream of individual financial success. In our current economic climate, it is not unreasonable that library staff/interviewees think that *original* means *marketable* and that a “free program for the community to help them like with entrepreneur stuff is super awesome.”

**Making as something new.** Many staff are excited about the program’s newness: “We’re on the cutting edge.” However, newness/excitement implies an oldness/dullness in past programming. This led to tensions among staff who saw their previous programs left behind—for example, the knitting circle. As one participant said: “I’m a little bit miffy about the word *maker* because I’ve been doing this when this was something Grandma did.” Most staff describe the program both as something completely new *and* something done for years, referencing craft artistry as “something humans have done forever.” To some, making ideals seem tied to self-sufficiency characterized in doing-it-yourself ways such as “fixing your own clothing” or “canning your food.” Bubbler aspects that work with new media are referred to as on the vanguard, but individual craft programs are part of a traditional canon, a nostalgic return to cottage industry.

Participants made few references to external influences leading to this rhetorical paradox. However, unlike the rest of the staff, managers recognized the neoliberal logics as outside their own programmatic goals, but they excused the use of neoliberal justifications to get what they need from top-down forms of support (interview, September 12, 2016). Managers were aware of the juxtaposition between the language used to promote and rationalize the maker programming and the language they use to speak about learning outside of that context, and one even expressed fear that this might slowly undercut the program’s commitment to arts education in the service of STEM or robotics (interview, October 3, 2016).

In this hierarchical system, the managers interface directly with funding and mediating the pressures of neoliberalism (Barniskis, 2015). When asked why this was called maker education as opposed to arts education, the manager who oversees programs across the system candidly confessed,

> I don’t know that it [Bubbler] would have been able to take off in the same way. Because it’s all about framing, and if we were just like, oh, we are a visual art program and we do artist in residence … was that going to get the grants … the smart thing was to align it this way.

In this regard, another manager acknowledged the influence of the maker movement in garnering support, saying,

> We have to focus on what we can win. Maker stuff can be powerful in that landscape. Or if we could talk about maker as part of job creation, or that you’re learning about skills that are important for entrepreneurs, you know, workforce development. … We need to be mindful of how, like what opportunities there are at a national level, with respect to advocacy and also funding.

Like Barniskis's findings, this study reveals a "struggle between inclusive discourse and what they believe funders want to hear" (2015, p. 1). In this study, managers articulated their choice to take on neoliberal rhetoric as strategic; however, at no point did they mention that it may undermine or contradict other goals. While there are incongruences with artistic, open-ended learning and this version of making, an understanding of maker discourse as strategic is the first step toward deeper awareness of this language, its impacts and effects, and how to move beyond this toward a consciously anti-neoliberal framework that promotes alternative values.

## Economic Discussion

Advocates of the maker movement proclaim that the movement is concerned with democracy and anticonsumerism, and authors champion that greater access to tools may diversify participants (Peppler, Halverson, & Kafai, 2016). However, for those hoping that the movement will be economically revolutionary, the predominance of this "access-to-tools mentality" without questioning political and social structures is likely ineffective (Morozov, 2014). Furthermore, the iconoclast makers seem to align with a neoliberal agenda of decentralization via privatization. While they fear that the movement's institutionalization may suppress the emergence of entrepreneurial spirit, they seem unconcerned about the control of private corporations. While access to tools may provide opportunities for more people to participate in production, that is not the same as sharing the economic benefits. Thus, concerned that the movement may align with corporate over social values, there is a burgeoning counternarrative. Recently, alternatives to what Vossoughi et al. (2016) refer to as "neoliberal rationality" have been put forward by calling for sharper focus on equity-oriented pedagogies.

In line with Vossoughi et al. (2016), who assert that prominent voices in the U.S. maker movement "describe the artifacts young people make as 'products'" (p. 224), the participants' language about making echoed this tendency, an indication that the struggle between the dominant incompatible narratives underscored in this study of how people learn and why they create is indicative of globally powerful structures. Figures such as Dale Dougherty promote making as part of an "exceptional element of American identity," invoking "U.S. power and control … characterized by economic growth" (Vossoughi et al., 2016, p. 208). This confluence of nationalism and the regime of truth brought on by free-market economics is inherent in mainstream versions of making. Thus, while it seems unintentional, participants mirrored language of this concept of making, tapping into a broader sociocultural phenomenon that determines what types of artistic engagements are encouraged and deemed worthwhile. Furthermore, implicitly economic narratives also became apparent via the value placed on by-products. For example, in the talk about making, creativity became part and parcel with a view that creativity meant entrepreneurial ingenuity, a myth naturalized in the business community. In arts education, learning goals demand complexity. Therefore, if we strive to foster creativity, we need to examine its meaning and purpose to promote making that matters beyond the boundaries of capital.

This study looks to questions of discourse around learning and making in informal arts education, examining educational theories and corresponding conceptions of learning and making. It seeks to understand how those who enact arts education talk about learning and making, and the ways in which neoliberal discourse veils contradictory views from those often engaged in arts education. As the maker movement increasingly becomes a conveyer for artistic activities, there is great potential to foster important transferable dispositions, social awareness, an understanding of becoming, and an appreciation of the material world. Yet as this study suggests, neoliberal doctrine embedded in the maker movement may fragment and distort rhetoric about learning toward economic instrumentalism. This

could, in turn, lead arts education to squander its most promising feature: the facilitation of comfortable risk taking, which supports creating personally meaningful and constructive responses to the world.

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## Acknowledgments

I would like to thank my collaborators Erica Halverson and Rebekah Willett, the participants, and the Institute of Museum and Library Services. For an unabbreviated version of this article see "Public Libraries as Sites of Collision for Arts Education, the Maker Movement, and Neoliberal Agendas in Education," 2018, *Journal for Learning through the Arts*, *13*(1). doi:10.21977/D913133234