**Exchanging Communities: Towards a Contextual Paradigm for Fabrication**

Contribution to Making Humanities Matter

David N. Wright

When thinking about how fabrication might augment humanities scholarship, I often avoid confronting answers to the following general question: if I am attempting to recreate or fabricate objects, what responsibility do I have to the politics of that object’s exchange? The question emerges forcefully when we assess the motivations for fabricating in the humanities, motivations that echo those articulated by Devon Elliott, Robert MacDougall, and William J. Turkel: “We fabricate objects related to our own historical interests, and then we play with them, modify them, share them with other people, and use them to ground conversations about the past and our relationship to it.”[[1]](#footnote-1) While the trade, manipulation, and fabrication of objects—historical or not—is an important mode of critical inquiry, there are opportunities to be gleaned from the emerging politics of exchange brought on by online communities that support and create the apparatus for fabrication. Rather than working to "ground" conversations in academic disciplines, the objects uploaded by these communities and fabricated by others might serve to destabilize conversations and open new venues for thinking about how fabrication might trigger alternative critical narratives.

For those of us without the requisite technical skills to design and render three-dimensional objects in digital formats, the source files for desktop fabrication, particularly desktop 3D printing, are often accessed through online social communities for fabrication such as *Instructables*, *YouMagine*, *Autodesk123*, and *Thingiverse*[[2]](#footnote-2) among many, many others. All of these sites feature some form of social file sharing, where digitized or digitally designed objects can be uploaded, and then be shared, downloaded, and discussed in an online community of like-minded “makers.” The files can serve as examples for rendering techniques, or can be loaded into machines for fabrication. Each of these websites—or digital file archives, to be more exact—facilitates the exchange and, to some extent, production of fabricated objects using a variety of desktop technologies. These websites are communities of exchange and of practice, where objects—in digital form—are exchanged and modified, processed or produced.

While the online social milieu into which digitized objects drop would seem entirely democratic and might also seem to foreground innovative practices and corrections, it is not entirely without issue. Lost in the somewhat ad-hoc nature of these online social communities for sharing digitized objects is often the object's connection to a context, be it historical, social, economic, cultural, or others. Unlike the material trinkets and tangible spare parts so often remediated into digital format and uploaded, most of the objects found on these sites are disconnected from any tangible context, rendered mostly as examples for what's technologically feasible or as aesthetic experiments. The absence of context beyond feasibility or aesthetics is particularly true of objects that might be classified as having cultural value: geographical areas (topographic maps), architecture, people, museum artifacts—bowls, utensils, tools, fossils, and similar objects. These objects are often disconnected from their originals or borrowed from unknown origin without much in the way of a foundational context for understanding how they might belong in the world. Absent of any academic rigour or cataloguing, many of the objects or cultural artifacts float in a dubious space of unaccountability and lack of purpose, disconnected from any evident implication.

Despite this disconnection from academic paradigms, however, the objects do not necessarily lack significance. There are other ways of marking the object's importance. Successful print counts, number of comments, number of remixes, belonging to collections made by others, all serve as markers for the object's value. What's clear is that the value of the object is not determined by its position or significance in the world, but by the emphasis the online community places on its reproducibility, its aesthetics, or its cultural significance to the community itself. More *Star Wars* than disciplinary practice, fabrication technologies, and the infrastructures that support them, invite interesting questions about our motivations for reproduction, and in particular how communities determine aesthetic and cultural value.

Discussions about fabrication in the humanities ought to make an attempt to trace the shifting contexts that present themselves when objects are not “grounding” discussions, but rather uncoupling conversations from academic or philosophical paradigms foregrounding instead the industrial paradigms of manufacturing. As an example, consider the different intentions involved in, on the one hand, an academic approach to fabrication and, on the other, the more community-based models of an online archive such as *Thingiverse*. Scholars such as Elliott, MacDougall, and Turkel advocate for “matter as a new medium for historical research”,[[3]](#footnote-3) building their own digital files and using fabrication to explore questions of interest to them which are, presumably, born out of long immersion in the discipline. Alternatively, an online resource such as *Thingiverse* is representative of how “the proliferation of digital sources—both the born-digital and the digitized—has created an economy of abundance”[[4]](#footnote-4) where new questions might be asked, new objects discovered and revived. While both intentions have value, communities such as those represented by *Thingiverse*—communities that are not necessarily conscious of—or don't care about—academic methodologies for citation, dialogue, and recording—operate using a much different standard than “matter as a new medium for research.” Instead, they use the “economy of abundance” to shift contexts by creating mashups, and explore the ramifications of different versions, materials, and approaches that might destabilize the medium rather than enlighten discussions about the object—or the disciplinary dialogues that might be associated with its fabrication.

In the emerging apparatus that supports desktop fabrication, source files are often corrupt, the software used to make those files sometimes dubious, and the desktop fabrication technologies themselves prone to misalignment, failure, or a technical misreading. As the still nascent activity of desktop fabrication—3D printing, laser cutters, and millers—finds legs, the practices and principles that guide fabrication are born out of a community of hobbyists or transient professionals. As a result, there is little in the way of context offered beyond the community of practice, which is not yet fully attuned to the potential signification that the fabrication of objects might yield.

The object fabricated through an online community of exchange carries with it a different kind of intellectual and practical synthesis, one that might arouse jealousy in current academic discourses about social knowledge and open resources. The object born from the infrastructures of desktop fabrication is at once part of the collaborative community at large, with individuals creating, adding to, and manipulating it—while at the same time represents a concerted and collective effort to analyze, choose, refine, and finally fabricate according to the set of desires inherent in the successful rendering of the object itself. While attention may be diverted from the object’s disciplinary signification as cultural artifact, it is nonetheless focused on the aesthetic, practical, and technical concerns of fabrication itself. A context for understanding the value of a fabricated object is not set by the object's cultural significance, but rather by how “makeable” it is. The context for understanding the value of an object—as aesthetic, process, or even ethical representation—is embedded in its successful re-making by others, set by the communities that strip it of its original context(s). The object is not quite set free from the historical, cultural, economic, or social narratives that govern the pre-fabricated or original context from which it was copied or created, but it is unlinked from narratives that might govern the ethics of its reproduction.

There is an opportunity here to advocate for these communities of exchange harboured outside the confines of established cultural discourses that position objects so that, as John Durham Peters suggests, they “mark human meaning and intention.”[[5]](#footnote-5) Communities such as *Thingiverse* rarely linger over questions of historical reconstruction or cultural value, preferring instead to ground conversations about the object in discussions about the object's successful fabrication (or re-fabrication). Disentangling the process of fabrication from the errors, corruption, and failures inherent with new technological procedures often creates a sufficient “wow moment” to signal an endgame. The result of this endgame is that the critical conversation moves quickly toward issues of production rather than grounding or revealing narratives, such as those that might serve as the foundations for disciplinary discussion and interrogation, or as methodologies for analysis, that might be set off by the reproduction of the object. Such transgressions of established intellectual practices prioritizing philosophical reasoning and scientific recording are a rich source for new questions about—and readings for—how the fabrication of objects might be unduly connected to reverence and scarcity—the museum artifact, for example—or neglected by abundance—the trinket or conversation piece.

One gets a very clear sense of how fabrication technologies disrupt intellectual processes when the objects to be reproduced become ethically, morally, or culturally uncomfortable. Elliott, MacDougall, and Turkel use fabrication to ground disciplinary conversations because “there is an element of play to this kind of research. In fact, one of the main reasons that we do it is because it is fun.”[[6]](#footnote-6) In this instance, fabrication allows academic motivations to shift from grounding questions through academic rigour into grounding the search for such answers in playfulness. However, the kind of play that academic discourse prioritizes is not the kind of play that motivates the open communities of *Thingiverse* and other apparatuses of support like it. Academic play tends to rely on controlled instances, where there are specific questions being asked and answers are—whether surprises or not—expected. As Elliott, MacDougall, and Turkel's nod to research in the statement above suggests, there's a hypothetical objective to the play; it's not just for fun, but because it makes doing research fun.

Communities supporting desktop fabrication technologies show the weightless affect of abandoning the rhetorical underpinnings of play that inform academic approaches to fabrication. These online communities of exchange do not account for the permanence of the physical object that, once produced—even as an error or partial attempt—cannot accept changes or show the marginalia/evidence of its transformations—where little remains to mark cultural, economic, and aesthetic contexts. In fact, the communities actively dismiss such resonance, moving quickly toward making something else, or mashing different objects together without accounting for the fractures those collisions might create in those who might encounter such a distorted object.

Tim Sherratt suggests that "The process of recall is unpredictable and sometimes disturbing--memories are often triggered involuntarily. Within a society memories are contested and contradictory."[[7]](#footnote-7) Sherratt's introduction of unpredictable triggers indicates a space where online communities of exchange falter, and where some impetus toward a stable paradigm for fabrication is needed. The communities need help recognizing when the object's original context might intercede upon the its fabricated context, rendering the success of production inert. That is, while we may be able to fabricate objects, we do not yet have a foundation for understanding and predicting triggers the reproduction of those objects may elicit.

To account for this trigger space, the disciplinary conventions of the academy might work to help establish connections between materiality and memory, examining the sometimes difficult emotional reactions brought about by re-establishing narratives of production and distribution over the contextual signification of the object as cultural artifact. The objects reproduced in online communities of exchange fabricate a myth of permanence, preservation, and success rather than the political, cultural, and social contexts the object might represent; locked in the process of re-making and re-invention, these communities skirt contextual issues not because they do not exist, but because they are not visible in the objects being fabricated. Questions about the object, the maker, and the connections both have to cultural contexts of the past, present, and future remain unanswerable. What humanities discourses—the models of rhetoric, philosophical reason, and scientific practice—can provide is a way to see how the fabricated object might represent a form of cultural knowledge—or dissemination—that accounts for—or represents—the expectations, biases, and failures of the communities that fabricate it.

These communities of exchange are forced into questions about how the ethics of reproduction affect the makers of the original object or those who experienced and lost the original object. At the same time, the community’s motivations, or shortcomings—technological, sociological, cultural, textual, pedagogical—are reflected in how the fabricated object is received in the numerous cultural contexts such communities might represent. What the fabrication of objects made by online communities of exchange might show us is that these objects are not artifacts in a tactile, material, or academic sense, but rather are symbolic of a set of emotional, cultural, and economic contexts for fabrication that need to be read, examined, and critiqued.

Looking at how objects make their way from these online communities of exchange into a state of materiality, open for discussion and critique, may allow us to discover how ontological narratives extend from experiences fabricating the object, enabling us to trace our own motivations for—and errors in thinking about—fabricating the object in the first place. It would then seem reasonable to suggest that working with desktop fabrication technologies—and the communities that support them—in order to remake objects for disinterested contemplation is fabricating more than merely objects for scrutiny or playful interaction. While accounting for the emerging paradigms that fabrication might offer for renewing disciplinary conversations in the humanities, we must also resist turning stone into plastic and take note of the generative contexts that led to our curiosity in the first place. There are important distinctions to be raised when these objects belong to an unaccounted for original context or are situated in contexts where playfulness and sharing might not be a welcome mode of cultural inquiry.

Bibliography

Elliott, Devon, Robert MacDougall, and William J. Turkel, “New Old Things: Fabrication,

Physical Computing, and Experiment in Historical Practice.” *Canadian Journal of Communication* 37 (2012): 121-128.

Peters, John Durham. *The Marvelous Clouds: Toward a Philosophy of Elemental Media*.

Chicago: University of Chicago Press, 2015. Kindle edition.

Sherratt, Tim. "Unremembering the Forgotten." Keynote at the annual international

conference of the Alliance of Digital Humanities Organizations (ADHO) in Sydney, Australia, June 29–July 3, 2015, http://discontents.com.au/unremembering-the-forgotten.

1. Devon Elliott, Robert MacDougall, and William J. Turkel. "New Old Things: Fabrication, Physical Computing, and Experiment in Historical Practice," *Canadian Journal of Communication* 37 (2012): 122-3. [↑](#footnote-ref-1)
2. <http://www.instructables.com/>; <https://www.youmagine.com/>; <http://www.123dapp.com>; and <https://www.thingiverse.com/>. [↑](#footnote-ref-2)
3. "New Old Things, ” 122. [↑](#footnote-ref-3)
4. Ibid.,122. [↑](#footnote-ref-4)
5. John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago: University of Chicago Press, 2015), Kindle edition. [↑](#footnote-ref-5)
6. “New Old Things,” 127. [↑](#footnote-ref-6)
7. Tim Sherratt, “Unremembering the Forgotten” (keynote presented at the annual international conference of the Alliance of Digital Humanities Organizations (ADHO) in Sydney, Australia, June 29—July 3, 2015). [↑](#footnote-ref-7)