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THE 3D ADDITIVIST COOKBOOK



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THE DOMESTICATION OF PLASTIC

“3D PRINTING
REPRESENTS
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The recent extension into consumer markets of 3D printing frees plastic production from the confines of industrial manufacture. Despite the fact that plastic was and continues to be produced by relatively small scale plants, often with about one hundred employees, these spaces were necessarily industrial. Plastic objects were used within but could not be produced from domestic and craft spheres. This led to what Mike Michael called plastic's 'abject relationality.' He writes, '...plastic is perhaps the example par excellence of what, from the perspective of the domestic and of craft, is an abject relationality – the impoverished possibilities of re-inventing and re-forming plastic. In sum, plastic is a material with a 'composition' (where 'composition', read through a Whiteheadian lens, implies a nexus of technologies, systems, skills, environments and so on) and precludes manipulation outside of an industrial setting' (2014, 32). Plastic objects, Michael argues, imply an entire production chain, from oil and natural gas extraction to chemical plants to extrusion and molding processing to container ships and distribution centers, finally arriving on shelves in stores.

3D printing, by short-circuiting this composition and in the creation of new compositions that are implicated with hacker and art cultures, extends and amplifies plastic's contradictions.¹ At once a material of utopia and anxiety, of abundance and waste, of democratic access and ecological horror, plastic can be understood as the material distillation of advanced capitalism. It gives rise to the pleasures and desires of an increasingly large section of the population, resulting in the most fabulous and imaginative sex toys, prosthetics, a wide array of guns, artist projects, replicas of lost cultural monuments and statues, and all of the banal and endlessly reproducible objects that increasingly populate our everyday lives and can be found discarded and broken in every location on earth. 3D printing represents the duality of individual desire and infinite reproducibility. It is oil made digital, made personal.

What is particularly fascinating about this moment in time for 3D printing is the fact that the quality, at least for most consumer 3D printers, isn't very good. It breaks and cracks, the programs are full of glitches and holes and the objects end up with too much and not enough plastic. Detail is lost. The hand of the machine is visible in the work, along with seams used to bind pieces together. Similar to the poor quality image, 3D printing 'mocks the promises of digital technology...Only digital technology could produce such a dilapidated image in the first place' (Steyerl 2009, 1). And like poor images, 3D printing 'feeds into both capitalist media assembly lines and

alternative audiovisual economies' (Steyerl 2009, 8). The technologies become vectors for liberation from industrial processes just as we are ever more locked into and increasingly accept the intimacies of oil, solidified through plastic.

Duane Linklater's recent work for the *salt 11* exhibition at the Utah Museum of Fine Arts (UMFA) uses the imperfect, glitchy, nascent technologies of domestic 3D printing to exploit the ways in which the objects produced erase details, blur edges, and create rather unappealing beige blobs. The project involved 3D printing objects, that didn't have an attributed author, from the Utah Museum of Fine Arts' American Indian collection. The composition of the works was done through digital files, transmitted over 2,000 miles and printed using consumer quality printers. What results are degraded, washed out, and blurry renderings of objects that were once practical, ornamental, ritualistic, spiritual, or artistic. The artworks comment provocatively on the violence of the de-contextualization of colonial acquisition of Indigenous objects. The blurred and washed out sculptures that resulted, replete with 'mistakes' such as bumps and divets and the purposeful preservation of the seams that show how the works were pieced together, is a comment on the blatant disregard for the specificity of Indigenous art and Indigenous objects. In fact, during the course of the research, it was discovered that one of the objects that had had no noted authorship, did in fact have the artist's name etched into it (Tassie 2015, 9). Due to this observation, the artist's name was finally entered into the official records of the museum. The blatant erasure or denial of authorship (a value that is held by Western museums generally) mirrors the lack of care in acquiring the objects, the lack of specificity or thoughtfulness when noting tribal names, contexts that the object circulated in, and, most importantly, gaining permission through reciprocal processes of approval to collect the object in the first place. Linklater's artworks appear like the zombie-doubles of the original artifacts, without a soul or a life, commenting on the ways in which the UMFA holdings are composed of these diminished relics. The artworks then provide a cutting critique and lively engagement with contemporary art and the continued resurgence of Indigenous cultures across North America. As Rosa Menkman writes in relation to glitch art, 'Through these voids, artists and spectators

1 I realize that 3D printing can be done with a range of materials, from bioplastics to clay to various types of resins. What I am primarily concerned with here, though, is the implication of oil in the manufacture and creation of hacker and artistic cultures through the material of plastic.

can understand the politics behind the code and voice a critique of digital media' (2010, 4). Linklater's works can be understood within this framework of the glitch, introducing an aberrant space that allows for critical reflection and commentary on the colonial structures of museums. Further, the possibility of replication of the 3D rendering coupled with the consumer quality status of the objects themselves undermines the museum's quest for an 'authentic' Indigenouslyness that is rather the fabrication of a colonial imaginary.

In addition to the possibilities for engagement and critique by artists, the repurposing and hacking of the systems of 3D printing provide ways for plastics to be domestically recycled – a moment that seems to herald in a future when we, as a culture, will acknowledge the incredible value of this material of compressed time. 3D printing offers the possibility of recomposition of the intimacies of oil. But these processes of violent extraction do not go away and in the endless proliferation and replication of objects in our everyday lives, the space of critique is often not so far away from complicity. It is negotiating the immanence of oil to provide glitches, cracks, and imperfect renderings that new imaginaries of plastic unfold.

Works Cited

Menkman, Rosa. '[Glitch Studies Manifesto](#)' 2010.

Michael, Mike. 'Process and plasticity: Printing, prototyping and the prospects of plastic' in *Accumulation: The Material Politics of Plastic*, edited by Jennifer Gabrys, Gay Hawkins and Mike Michael, 30-46. London: Routledge, 2014.

Steyerl, Hito. '[In Defense of the Poor Image](#)' *e-flux* 10 (November 2009)

Whitney Tassie. '[Salt 11: Duane Linklater](#)' Utah Museum of Fine Arts, 2015.