The Free Universal Construction Kit: On Appropriation and Parasites

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Abstract

With the increasing economic accessibility of 3D printers, the lessons learned and the logics cultivated on digital Web 2.0 now seems applicable to the world of material things. Released in early 2012 by the artist groups F.A.T. and Sy-lab, the *Free Universal Construction Kit* is a set of 3D drawings that enable everyone with access to a 3D printer to make connectors, "the missing links", between intellectual property restricted toys like *LEGO*, *Tinkertoys*, and *FischerTechnik*. However, with the description "reverse engineering as a civic activity" it seems obvious that the greater agenda of the project is not just to enable cross-over playing but rather to problematize and ultimately open up closed formats through critical appropriation. But how does that, for instance, conform with the fact that the connectors are parasitically attached to these toys, whose logic it is simultaneously defying?

Keywords

3D printing, political economy, art, appropriation, file sharing

Introduction

An acronym for Free Art and Technology, the F.A.T. Lab is a group of artists, tinkerers, researchers and hackers whose sarcastic but functional projects comment on digital practices and phenomena by dealing with appropriations of 'the digital' in the broadest possible sense. A collaboration with Sy-lab, *Free Universal Construction Kit* (figure 1) is a project promising "complete interoperability between 10 popular construction toys". 80 two-way adaptors enable connections between ten different proprietary toy systems – e.g. *LEGO*, *Tinkertoys*, and *FischerTechnik*. The connectors are downloaded as 3D files and printed on a 3D printer.

Figure 1: The complete Free Universal Construction Kit printed in beige plastic. Picture by F.A.T. Lab and Sy-Lab.

This paper discusses the *Free Universal Construction Kit* as a particular way of critiquing contemporary (digital) culture and its political economy based on intellectual property rights (IP). Through appropriating highly canonized toy objects, the connectors express a resistance to the capitalist culture they are embedded in, all the while affirming the importance of the original toys themselves.

An industrial revolution?

One of the joys of construction toy systems is the multitude of combinations and constructions possibilities they offer. However, they rarely provide connectors to other proprietary systems. These barriers to "cross-brand interoperability" are removed with the *Free Universal Construction Kit* where manipulation of digital bits results in physical atoms that form "a 'meta-mashup system' ideally provisioned for the creation of transgressive architecture and chimeric readymades." (F.A.T., 2012)

Chris Anderson (2012) asserts that home 3D-printing and maker-culture is part of a new industrial revolution that will change complicated and sometimes quite laborious, capital-based manufacturing into a process of DIY entrepreneurial creativity. Affordable 3D printers and online databases like *Thingiverse* (thingiverse.com) are becoming as important to the "object industries" as online sharing systems (legal as well as illegal) have been to the music industry. Although referring to Karl Marx' call for control over the means of production as a way of overcoming capitalism, Anderson (2012, p. 26) still understands this development as an addendum to "the long tail" (Anderson 2006). Like any other object, home-printed 3D objects will be part of the capitalist circuits of economic exchange. Conversely, others believe that 3D printing will profoundly "disrupt established patterns of mass-production, mass-consumption and global distribution networks" (Söderberg & Daoud, 2012, p. 66). A database like *Product Bay*, an *atoms*-oriented parallel to *The Pirate Bay* where *bits* are shared, specifically follows this logic.

The *Free Universal Construction Kit* project uses a similar revolutionary rhetoric to criticize the various proprietary rights in the "old world" of closed business models based on IP. On the project's website, making, distributing, and playing with toys across various brands is described as a kind of fundamental rights – even something essentially human – stifled by economic interests (F.A.T., 2012).

Parasitic sharing?

The connector files can be downloaded (1) from *Thingiverse*, (2) from F.A.T. lab's website and (3) on *Pirate Bay*. In combination, these distribution channels describe how the internet works as an environment for distributing and sharing – the myriad of technologies that allow for bits and bytes to multiply and change hands. However, they also constitute quite different discursive environments with differing takes on what it means to share:

1. Based in the web2.0 paradigm, *Thingiverse* is a typical DIY website similar to those in e.g. programming (sourceforge.com) and knitting (ravelry.com). These sites gain their importance because users share experiences with particular files and projects.

2. The FAT website is the web1.0 distribution channel: A file is made available for download on a private server, other people download it.

3. Heavily debated, blocked in many countries, and highly political, *Pirate Bay* is the primary symbol of subversive or illegal file sharing. *Free Universal Construction Kit* thus also reflects an anti-capitalist and anti-proprietary attitude where resistance is primarily a matter of "freeing" material from the hands of capitalist corporations. Hence perhaps the acronym *F.U.C.K.*

Notable, though, is the simultaneity of the parasitic and the "anti-": *Pirate Bay* has come into existence and, it could be argued, has been kept alive (as well as sought killed) only because of

capitalist, proprietary social systems (cf. Stallman 2010, p. 18). In many ways, the *Free Universal Connector Kit* highlights the complexities of these issues. The connectors are only fun, and only toys, because something else makes them toys. Otherwise, they would merely be strangely shaped objects. They can only display resistance because there is something to appropriate, and they can only be functional objects of play because they parasitically feed off of the proprietary and trademarked toy systems.

(il)legal art?

In the world of toys, it appears, a playful attitude is only allowed on levels that do not include IP. Facing the fact that this project borders on infringements, it invokes a multiple defense strategy in the accompanying description (F.A.T., 2012), appealing (1) on a normative level ("please think of the children"); (2) on a semi-threatening level (referring to the so-called 'Streisand effect': prohibitions often increase desirability); and (3) on a legal level (by referring to *fair use*).

However, fair use only applies to copyright, not patent, trademark or design (O'Rourke 2000, Bradshaw et al. 2010). Since F.A.T. and Sy-lab must know this, their defense fundamentally rests on the assumption that patent holders (hopefully?) will perceive the connector kit as an artistic expression, not as a set of functional objects even if they are also functional.

Concluding remarks

Whether a manifest-like statement or fully functional objects, it could be argued that these connectors show the many consequences of the fact that digital files can be endlessly manipulated and copied. This can be hard to fathom when moving a file from a computer and onto *Dropbox*, or when uploading a picture to *Facebook*. But when holding a strange amalgamation of *LEGO* and *FischerTechnik* – an object which is simultaneously both and none of those – the concept of remix and digital materiality literally becomes tangible. Thus, expressing a particular kind of resistance and appropriation, the connectors enable us to understand what it means 'to manipulate the digital' – conceptually, materially, politically, and economically. In addition, and this may be the most important point concerning the ways that the project appropriates the existing toy systems, it becomes obvious that processes of appropriation will always need the 'original' forms. Without the individual toy systems, the connectors will be very un-fun toys – even when they are great appropriations, and even when they clearly serve as a kind of physical resistance towards the mechanisms of proprietary formats.

In conclusion, we would suggest that this physical appropriation is a critical conceptual artwork, engaging in a socio-economic and political discussion of digital culture in general and online sharing in particular. The explicit reference to fair use gives away the artistic nature of the project. It is primarily an art project using marxist inspired analysis and appropriation techniques of modifying and creating anew, thus showing that things could be different. Still, the *Free Universal Construction Kit* only gains significance, because it is *also* a project with a practical purpose: this is *both* art *and* design, both aesthetic objects made for contemplative pondering and practical objects made in order to be useful.

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