What Lies in the Path of the Revolution

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Abstract

There is an unequal power distribution between those who may own technological artefacts and those who may not. The causes and symptoms of this situation are heterogeneous, appearing in the implementation details of programs as well as the organisational schemes of the workers that rely on those programs. We are involved in various projects that attempt to shift this power distribution, relating to universal accessibility, appropriable software, platform cooperatives, etc. In this paper, we attempt to align those projects in a research and activism program by describing a set of revolutionary goals in terms of future usage and underpinnings of technological artefacts.

1. Introduction

We can't storm today's Bastille because we can't find it, and because we lack the tools to dismantle it even if we could. Today's citizenry is oppressed by far more subtle machinery, institutions and ideologies than those represented by France's 14th-century fortress, and we will have to journey back through not just technological, but economic, social and philosophical history to find how to undermine today's fortresses. Thankfully our revolution will be a peaceful one — as a character in Hilary Mantel's 1992 revolutionary novel "A Place of Greater Safety" (Mantel, 1992) remarks, "Abstractions don't kill people".

One of the principal effects and aims of the 1789 French Revolution was the dismantling of France's feudal system, under which some citizens (nobles, officers of the church, etc.) enjoyed special rights, protections and income, whilst others (serfs, peasants) faced special taxes and in some cases were prohibited from holding personal property at all. We argue that a form of "digital serfdom" is rapidly growing up around us, where various important classes of artefacts, increasingly essential for everyday life, including participation in political and economic life, cannot be effectively owned by ordinary individuals. The power to own these artefacts is increasingly reserved only to corporations, which as a result of legal frameworks arising from the end of the 19th century, especially in the Anglo-Saxon nations, are considered legally as persons.

However the barriers to ownership are not merely legal, but cognitive, economic, technological and even metaphysical. Many of the technological barriers to ownership, especially as regards software, can be seen as embedded in certain questions of "reuse" — one of the central affordances of ownership is the ability to transplant a thing from its original location to a different one, following the desires or person of the owner. For most kinds of software this is possible in only a crude way — an "application" can be installed on one machine rather than another — and with the rising prevalence of rental or cloud-based models for the deployment of software, it is decreasingly possible at all.

In this paper, we use ownership to refer to a set of related use patterns where owners can pursue alternatives, repurpose and adapt their property, or maintain their property as the surrounding world changes.

In this paper we will survey the kinds of things that we might want to own and how we could set about transforming our environment so that they could be owned.

In terms of aligning with a historical trajectory, we should note that even if we envision a socialistic far future, establishing the means for personal property and thus ending feudalism is a basic requirement to even operate capitalism. Marx did not even propose to operate communism without a basis for personal

property[1].

2. Ownable Expression

It should be possible to own the means to create and modify software, which we currently call programs. At a small scale software is built up out of collections of authorial expressions, taking the form of declaration and instantiation of entities, state mutations, etc. For these expressions to be ownable, all authors should have the ability to freely contribute their expressions to the work of others, and freely "buy into" and "buy out of" the expressions of others. We have formulated this requirement as the *Open Authorial Principle*: Any expression by one author can have its effect replaced by an *additional* expression by a further author. (Basman et al., 2018)

Impediments: Turing model of computation, programming languages, function invocation and application, types, and all the rest. Divergence and convergence (Basman et al., 2016). Externalization / potentialization (Clark and Basman, 2017).

3. Ownable Function

It should be possible to own software artefacts that provide useful functions. In this section, we talk about reuse and repurposing — the "color picker" example where a "plugin" architecture was intended to allow parts to be interchanged, named "context reuse" in the taxonomy of Biddle and Tempero (1998), but fails to allow at the same time for "component reuse". Environments written in different languages or on different platforms or with different interface technologies cannot get access to what is essentially "the same function". The fact that the user has to be troubled by these irrelevant considerations of platform betray that we are in a pre-industrial environment plagued by irregularities like screws which are not of a size to match screw threads, or trains which cannot run on each other's tracks. Implies that programming languages need to be abolished, or at the very least dissolved into an "integration domain" (Kell, 2009).

We have examples of workable economies of function, e.g., in how one is able to go into a craft store and buy ownable tools and materials, which is qualitatively different from buying an application, which is a closed-world pipeline to manufacture a particular sort of product.

The GPII vision of interfaces that adapt to your needs. Nouwens and Klokmose have studied how non-ownable tools tie into economic precarity (Nouwens and Klokmose, 2018).

4. Ownable Data

It should be possible to own one's informational products, traces, and [I am missing a word to describe data that mirrors or augments real-world phenomena, such as an organization's member list, though maybe "traces" covers that]. Google in theory provides the facility to export your data from its services using "Google Takeout", a product of the "Google Data Liberation Front". But most purveyors of application function don't, and even if one has this data, i) it is not clear in many cases how it can be used given the tendency to service monopolies such as YouTube, and ii) the damage may already have been done to its capacity for use by having been incorporated under the service provider's licencing conditions.

Other elements of this ecology: "Data Package" system of the Frictionless Data group, and in theory, the actions of the Open Data Institute. But it is no good having data in ones hands if it is not effectively usable — which means we also need shared ownership of the means of transmitting, interpreting and versioning data, and also of acting on it.

5. Ownable Infrastructure

It should be possible to own the physical machines and networks on which the software of individuals

[1] "We by no means intend to abolish this personal appropriation of the products of labour, an appropriation that is made for the maintenance and reproduction of human life, and that leaves no surplus wherewith to command the labour of others." (Marx and Engels, 1848)

and communities runs. We don't necessarily mean that people should be able to run their own data centres, but this should at least be in theory possible if the ones commercially on offer operate unsuitable policies, e.g. with respect to data privacy, licencing, etc. One should at least have the basic "mobility" implied by the theoretical interchangeability of the various IaaS providers. Talk about technologies such as Kubernetes and Docker. Talk about federated peer-to-peer communities such as Mastodon?

6. Ownable Economies

Talk about cooperative platforms, and how they will enable community-owned platforms, where decisions about monetization, licencing, etc. can be made amongst peers.

7. Conclusion

The point of drawing up a utopian vision is to have a positive heuristic for where to direct our technical, social, and political efforts.

> You see, of course, if you're not a dunce,
> How it went to pieces all at once, —
> All at once, and nothing first, —
> Just as bubbles do when they burst.
>
> –Oliver Wendell Holmes, "The Deacon's Masterpiece"

The goals we have drawn up are revolutionary because we argue they cannot be reached piecewise, by iteration.

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