

Geert Lovink's [Principles of Perma-Hybridity](#) is packed-full with concepts I want to explore to a deeper level despite already resonating with my understanding and experience. However, I felt alternatives to platforms were missing. Self-managed federated social media deserve a mention as a practical and functioning example of reaction to the algorithmic management of technically-mediated human interaction. And Free Software has a key role in people's re-appropriation of technology, so it would be a grave error not acknowledging its importance for perma-computing.

In terms of the demographic I'm part of the group of the aging hackers that moved from 'black box'-vs-FLOSS, as Lovink said, towards self-managed federated instance instead of closed platforms. Although I've reservations about the "black box" term. The struggle was between an *unassailable monolithic tool* that is legally and technically impervious to study/modification/interoperability, opposed to a tool that is understandable and modifiable by the user. FLOSS has always been just instrumental to the possibility to understand and modify, or just reuse and share, and fostered collaboration not mediated by money; it was a means to a relatable end (seems a lot of the same end of perma-computing). The Free Software movement was born from an ethical necessity: to allow freedom to users of computers, to allow programmers to freely share their work, to allow solidarity among programmers and users.[\[1\]](#)

The movement first developed in the academic environment, most users were programmers themselves, and sharing of knowledge and hardware tool specifications was perfectly in line with the practice of science, with free circulation of algorithms, formulas, essays, processes, instruments design. Notice: here and in the following "free" means "not bound by legal and deliberate technical restrictions". Indeed, what was preventing programmers from sharing their own works? A techno-legal issue: the lack of free production tools (namely, an operating system with its drivers, to freely use a computer, and the tools to write programs: compilers, libraries, other programs to learn from and to improve without reinventing the wheel).

It was its libertarian birthplace that made the FLOSS promoters to completely neglect the economic sustainability, and the social (governance) aspects intertwined with it. This ideologically-driven blindness has possibly contributed to the moral bankruptcy mentioned in the perma-hybridity essay. Actually, this blindness was further pushed (and exploited) by the stress on the technicalities intentionally put by "open source" enterprise

appropriation, effectively turning FLOSS into a labour exploitation tool. Taking out the ethical considerations from the usage of a technology is – ironically – a strongly-political act, and everybody can see the consequences now. Only in the last year a possible mitigation of enterprise capture of value in FLOSS is arriving from EU regulation (Product Liability Directive, Interoperable Europe Act, Cyber Resilience Act, AI Act), explicitly affirming several user rights (and respective proprietary-software licensor duties) while acknowledging the special status of FLOSS.[\[2\]](#)

Despite the “moral bankruptcy” of open source, I think FLOSS (actually, Free Software only, being ethically motivated, not open source) still is a key tool for re-claiming the tech by the people. Software is at the same time a means of production, is a form of knowledge and craft, and a technology that caters to reuse (think of bug-fixes and new features, with the same hardware). In the form of Free Software it is *the only tool* to repurpose, refurbish, anti-obsolete, anti-vendor-lock-in, and hacking (disassemble and rearrange for unintended purposes) other technical tools (programmable devices). Here I need to consider the technicalities: with software, the legal possibility to obtain, modify, and redistribute the source code is the necessary premise to be able to “possess” a tool (or a programmable machine), instead of being temporarily granted the possibility to use it, under some arbitrary and mutable conditions. And when the tool you don’t possess, nor control, nor understand becomes necessary for professional or social life, who is the user, who is the one being used?

It’s not even about (just) you. The life arc of any software is dependent on other software: failing to have FLOSS components in the whole tool chain means that you will lack the means of production, and the means to actually *use* any software (or hardware) of your choice and liking, and are stuck with the daily decisions of the “owner/master” of the software (operating system, compiler, libraries, drivers, parsers, protocols). Some software is not available for your operating system of choice (yes, there would be many choices, wonder why not many come to your mind?). Some hardware does not provide drivers for your operating system, therefore you must choose one of the two (if you can). The choices of people around you matter: if your co-workers or friends use proprietary software it is highly probable that you will not be able to exchange some documents seamlessly with them (raise a hand if never happened to you that a Word document or a PowerPoint set of slides changed appearance – in an ugly way – when viewed on a different system). Proprietary software can leverage all wiggle space in open

standards (or the lack of open standards enforcement) to prevent other software (open source or proprietary) from seamlessly using the documents.[\[3\]](#)

Wasting people time and efforts to chase the ever-changing behavior of proprietary file formats is a societal cost we could spare, freeing it for other — useful — endeavors. And all of this is implicitly imposed on people, effectively depriving them of freedom, knowledge, and power. What is rarely realized is, it's not just about personal choices: FLOSS is a social matter.

My 15+ years of participating in a Linux user group has proven to me the social, educational, solidarity-driven, non-hierarchical activities of mutual help fostered by FLOSS. These same mutual-help activities performed on proprietary (non-free) software would be extremely limited, and constitute free labour, free advertisement, and free tech support for Microsoft and the like, at best, while reinforcing the lack of choices described before. Becoming a power user in GNU/Linux environments and FLOSS tools is conducive to a career of system administrator, programmer, or tech entrepreneur, with minimal entrance barriers, all knowledge, licenses, and tools included.[\[4\]](#) It's a self-empowerment liberating act.

Having failed some cultural and socioeconomic aspects of free software doesn't mean that its key legal and technical successes are to be thrown away, especially at a point in time when it is needed more than ever. The "browser wars"[\[5\]](#) are starting anew, the latest act featuring unrequested AI embedding.

While it may look like FLOSS (actually, Free Software) is no more an issue, this would be alike to give for granted rights that were not considered as *conceivable* when the movement started, and as all rights, can (and will) be lost if active control, and memory of the struggle, are suspended. I'm ok with putting the stress of the permacomputing message elsewhere, but neglecting or belittling free software would be a fatal error, in my opinion, both as a tool, and as communities already formed and active, that are coming to similar conclusions as perma-hybridity but having walked a different path. Indeed, besides surfacing anti-competitive practices from digital incumbents, thus promoting awareness in software (and technology at large) usage, FLOSS has inspired and above all *enabled* a whole wealth of communities, including the ones fighting the "black-box platforms", that are marginally interested in FLOSS in itself, and more as a tool and a spirit. These are communities that harbor people that just need to be exposed to

the right viewpoint (socially, economically, historically, politically informed), to find themselves aligned with a ecological digital justice movement, or in some cases are already trailblazing the applications and ramifications of this movement.

An off-the-top-of-my-head list:

- [OpenStreetMap](#)
- [Wikipedia](#)
- [Open hardware](#)
- [Open Source Ecology](#)
- [Open Source Community Africa](#)

FLOSS has enabled and is powering alternative social network platforms, that in turn enable communities of interest and movements with their own practical goals that are often aligned or potentially aligned to perma-computing.

[Lemmy](#), [Mastodon](#), [PeerTube](#), [Pixelfed](#), are all working decentralized platforms, born as a reaction to the algorithmic content selection and data extractivism, to put in first place the human interaction, (community-local) social contracts, distributed moderation efforts, and also distributed economic efforts. Each of them enables a specific type of communication, e.g. Lemmy is about forums, Mastodon about microblogging, Pixelfed and PeerTube about photos and videos, respectively. Necessarily they use FLOSS, but that is just an important technicality to be preserved. They use a common language to communicate - the ActivityPub protocol (and FLOSS is fundamental in keeping it freely usable), so all together they form a single big communication platform, the Fediverse. Anybody can have its own control center (a server, or "instance") of one of these, and technically all of them can communicate together, with no centralized corporate management. The communities managing these instances act as a collector and selector (implicit or explicit, with admittance checks) of human communications. They run the server, paying for hardware, electricity, connectivity, or hosting. They manage their own users interactions (moderation) and interactions with the rest of the Fediverse (selective de-federation). You can join at multiple different instances, each with its own focus, rules, and visibility of the Fediverse itself. Your personality and your life are multi-faceted: the Fediverse provides the infrastructure to be more safely social online, interacting with different communities, while protecting your privacy.

My point is, perma-computing as a movement needs to reach its people, to let them share knowledge and organize. One of the Mastodon instances I'm in has a motto that goes like "organize on-line, then meet IRL": it's a way to bootstrap and feed human relationships, that are the flesh of a community. Corporate social media and proprietary communication platforms have proven actively toxic for this, as they expose the users to manipulation, data exploitation, and for most minorities also to even more grave and direct dangers. I personally was transformed as a human being when, despite introducing myself as middle-aging white cis hetero male from EU, I was accepted into an LGBTQ+ mastodon instance in the USA: I was allowed to expose myself to a (sub)culture that had to flee twitter (was already gone by the time of Musk's X all-in monstrosity) to build a social digital infrastructure of their own. I read of the harassment and the difficulties, of the self-help and mutual aid, and creative and unconventional solutions to physical and emotional struggles. In Mastodon messages I have learned of [Gemini protocol](#) and Lemmy, in Lemmy I found the SLRPNK community. And much more.

I have both first-hand experience of these tools, and also understand the technicalities behind them and I see their potential towards sustainable digital justice. So I wonder why there is no trace of this in the essay. Likely, for communication^[6] and organization, online office automation^[7] there is already a wealth of solutions alternative to "black-box" platforms, all working, all based on self-hosting, distributed social efforts (all, necessarily, FLOSS). Most if not all of them were ethically motivated, if only as a re-appropriation of the communication and socialization tools.

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Notes

[1] The ethical motivations are explicitly stated in the [The GNU Manifesto](#) (1985).

[2] The Free Software Foundation Europe on Cyber Resiliency Act and Product Liability Directive [fsfe on PLD](#) (2024).

[3] Have a glimpse at the unnecessary struggle to support file format variations in [The Document Foundation bug tracking](#).

[4] [Forge your future with Open Source](#).

[5] [Ms antitrust findings](#).

[6] [Matrix](#).

[7] [Nextcloud](#).