

A capitalist stranglehold on “artificial intelligence”: a gallop through piracy, privacy invasion, lock-in, and a fever dream of democratization

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Abstract

In this paper, I discuss the emergence of personal computing, the rise of platform-controlled smartphones and tablets, and the recent surge in artificial intelligence technologies. I explore how these technological advancements have often been shaped by the interests of capital, with recent trends towards increased platform lock-in, control, and exploitation of users (workers). I argue that without a strong push for open-source, democratized AI, these technologies risk being used to further the globalized colonial capitalist project. Through discussion of contemporary issues in corporate LLMs, I explore the corporate piracy of text, visual, and auditory data on the internet and the copyright and other ethical and human implications of this theft of work. I highlight the potential for open-source hardware and software to counter the proprietary and un-hackable future of AI, offering a radical alternative that empowers users and advances human, ecological, and labor rights alongside technology tools. Ultimately, I call for greater attention to the social, political, economic, and environmental implications of computing and AI technologies under capitalism.

Keywords

Artificial intelligence, worker exploitation, capitalism and machinery, cultural studies

Introduction

The orifice of the bourgeoisie has been traditionally apathetic, at best, to novel technologies and machinery in the public sphere. While machinery is a critical tool that enables capital to increase the productivity of labor and produce relative surplus value, which it does by reducing the value of labor power (Marx 1990), the publication and marketing of tools *for* capitalists is often more subtle. Inventions, or perhaps more accurately, subsumptions of invention by the ruling class, do not always have a public face, a marketing image, or even a name. Rather, the introduction of new “machinery” often quietly leads to an increase in the intensity and duration of labor as capitalists seek to maximize the “value” extracted from workers (Marx 1990). In turn, novel machinery and “inventions” displace workers on a grand scale, leading to surplus humans, which capital can subsequently exploit or ignore. This process, which has existed as long as capitalism, demands continual “innovation” and invention, both in creating new products for the market, as well as new modes and affordances for the capitalist class, ensuring their continued hegemony and enduring control of the dominant narrative (Gramsci 1996). Recently, however, the massive outbreak of “artificial intelligence” hype has drawn mixed commentary, criticism,

concern, and celebration across the capitalist and working classes. Throughout recent history, we have seen explosive growth in consumer technology from the 1990s to today. As the microchip and other computer components became cheaper to mass produce, new forms of marketing emerged to entice consumers into reckless spending on newer, faster, better, more efficient, more powerful systems, devices, consoles, tablets, and so on. These technologies have been simultaneously produced, controlled, and utilized to the extreme benefit of a handful of multinational corporations. While some democratization, open-sourcing, and accessibility have been considered, by and large, corporations fully control, capture, and compute our daily working experiences from manual labor orchestrated through computers to fully automated finance algorithms.

Following Marx, the development of machinery is shaped by the social relations of production. In this regard, no development can be considered a neutral, technical process but rather driven by the *interests of capital*. In a conservative sense, the transition to “machine production” destroys older forms of handcraft and domestic industry, disrupting traditional social structures and ways of life. Parallels here to the outcry of artists and writers, whose work has already been stolen by “AI” corporations (Goetze 2024), are undeniable. With this increased “productivity” (theft) from machinery, capitalists cheapen commodities and extract ever more surplus value. This reproduces and reinforces the cycle of capital at a grander level, abstracting professions and capacities from humans toward capitalist control. In this way, the development of machinery is a double-edged sword; it “raises productivity”, but also intensifies exploitation and social disruption (Marx 1990). When applied to one of the largest, extractive, and wasteful (Perkins et al. 2014; Widmer et al. 2005) industries in the world, computing technology, there are interesting insights in both reform pressure and radical industry transformation, which deserve attention.

In this paper, I briefly discuss the emergence, accidental partial democratization and distribution of personal computing, the rise of platform-controlled smartphones, tablets, and other systems, and the next wave of computing “innovation” (marketed as) “Artificial Intelligence” of text to image and large language models. Twenty-five years after Napster’s launch, I explore the acquisition of training data, the creation of LLM models, and the privatization of knowledge under capitalist copyright hegemony, which has again transmuted to an anti-worker frame, additionally exploiting, extracting, and “pirating” in the name of AI futurism. Underpinning this exploration of three different but intertwined histories is a critical examination of the fundamental values of the computing platforms upon which modern work depends. I argue that increasingly strong anti-democratic and anti-socialized forces may see an unfortunate proprietary and unhackable future for artificial intelligence and its descendants, thereby reproducing the globalized colonial capitalist project for the continued exploitation of the 99% on the basis of corporate-backed piracy. Alternatively, I see a “radical” future for computing in the open-source computing space.

An alternate reality

In an alternate reality, IBM may have retained all rights to the PC (Veit 1994). This turn, suggesting no Compaq and resulting PC Clones, would have fulfilled IBM’s vision of owning the mainframe, the terminal, and the software stack. Their proprietary monopoly system, while expensive, would have been the only choice for computing productivity, and while hobbyists and tinkerers may have had a brief time in the limelight, and UNIX may have clung in edge cases, the standardization of the “PC” because of cloning, reproduction and thousands of hours of coding would never have emerged, and IBM’s strategy would have prevailed. Our workplaces would still be brandished with IBM logos, and our software, hardware, network infrastructure, and so much more would carry a single trademark. Armies of programmers, creatives, service people, and those interested in technology would, eventually, be sucked into the big blue. Perhaps, one day, the shrinking of technology would have enabled a world where IBM was also responsible for the smartphone, tablet, smart TV, and other multimedia consumption devices. In this world where IBM holds all the keys to the kingdom, there would be no Instagram for endless hours of reels. Instead, your international global mediator of media content would be produced with IBM digital cameras, edited in IBM nonlinear editing software, and distributed over the IBM hyperweb to your IBM

palmtop. Our digital benevolent dictators would take only a small fraction of every transaction, knowing they had complete control over a global colonized empire. In this world, a monopoly platform owner dictates who may think of, create, and release software. They decide who will access, make use of, and in what way they will be allowed to use the hardware. Indeed, this hypothetical IBM, or Microsoft, Apple, Google, Amazon, and so on, would hold complete and monopoly control over “computing” – not personal, but corporate and distinctively *for capital*.

We do not, however, live in this universe. Instead, the PC and the Mac were cloned software, and hardware in the personal computer remains, by and large, personally customizable — in spite of the predilections of some ecosystem makers. Developers, programmers, creatives, and eccentrics have access to tools and programs that enable development for software, websites, servers, and services with diverse possibilities, and for practically no cost, enabling creative licensing and free open-source software (c.f. Fortunato and Galassi 2021; Müller, Schindler, and Slany 2019; O’Neil et al. 2021), though, not without potential for social engineering security holes and lack of meaningful compensation and livelihood for important work done by free software developers (Jones 2024). While there are aspects of our personal computing that depend on proprietary, locked-in standards, manufacturers, and so on, there are either open software or hardware standards relatively sufficient for open computing (or efforts to create them c.f. Dörflinger et al. 2021; LaurieWired 2024). We cannot, here, ignore the cost of the e-waste crisis and the unequal global deployment of computing technology, including access to, use of, and creation of computing systems across the Global South. While in the anglosphere, smartphones outnumber people, massive demographics still lack access to even basic computing, internet, and communication technology because of gate-keeping capitalists and growing exploitative smartphone rental systems (Malinga 2022).

Global lock-in

Our reality meets with this alternate story when it comes to our smartphones and tablets. While there are exceptions to the rule, and nuances depending on the platform, two major multi-billion dollar marketing companies are responsible for the creation of the operating systems, specifications, default apps, and publishing of other individuals’ and companies’ apps on our smartphones (Cano Bejar, Ray, and Huang 2023; Diel, Buck, and Eymann 2018; Tolani, Owoseni, and Twinomurinzi 2020). While Google’s Android offers slightly more flexibility and openness for customization, side-loading applications, hardware hacking, and de-Googlification, these practices remain in the fringe and come with their own challenges from corporations (for example, banking apps disallowing custom firmware for “security reasons”) (Palmer 2022). Some may argue that Android’s use of the Linux kernel continues the tradition of open-source freedoms in your pocket; however, the ongoing proprietary nature of technology in smaller form factors was a departure from the open marketplaces, open hardware, and open possibilities of the PC, a sacrifice most were willing to make for convenience, and one that most are largely unaware of and unworried by in contemporary times.

Our smartphones, smart TVs, tablets, and other media consumption devices have become the site of significant platform lock-in. Apple and Google, ignoring edge cases, have such significant control over both the hardware and software of our most intimate technology that the emergence of new devices that even complement this ecosystem not produced by one of the big three (Apple, Google, or Samsung) are forgotten, and more quickly than others become e-waste (Gabrys 2011). The publication of apps is tightly controlled, though still incapable of stopping spam, gambling, and other exploitative apps, and platform users remain at the mercy of a small handful of global marketplaces which are differentially deployed in regions of the globe with different copyright laws, systems of government and censorship requirements. Here, the disadvantages are, perhaps, less clear to a angloshperic demographic. Devices sold in China, for example, are not able to access proxy, VPN, or any kind of network obfuscation service through Apple’s App Store and Google’s Play Store (Ruan et al. 2016; Ververis et al. 2019). In many countries, media producers disallow access to content due to licensing agreements or lack thereof. This has implications for YouTube videos, which may, for example, make use of copyrighted audio on an

educational video, thus denying this knowledge to the region.

Platform control has become such a pressing issue for big tech that they spend millions lobbying governments to attempt to avoid regulation. Recently, both the European Commission and the United States Government have brought different cases against Apple over monopoly and platform control (Chee 2024b, 2024a; Song 2024). While some concessions have been made for residents of those economic regions, the platform controllers remain firmly in control. This advanced state platform control and its subsequent “lock in” keeps people buying, consuming, and using a platform provider’s services for decades. Despite hobbyist projects, commercial research projects, and hacking communities, there has not been serious mainstream interest in open-sourcing these mobile platforms. This has serious and unequal effects across the globe, with developers and content creators outside the anglosphere being unable to afford development licenses or access to sufficient equipment to produce software and media. While libre tools continue to get better on the PC and, while imperfect, offer a better landscape than in the mobile space where platform control keeps major developments marginal with proprietary the flavor of the lifetime, anything with an ongoing fee to use, in particular, earns up to 30% commission for Apple, Google, Samsung, Meta or Amazon and is thus incentivized.

Platform control, or marketplace control, is certainly not a new phenomenon. As a foundational tenet of capitalism, modern app marketplaces, social media providers, and “big tech” broadly are merely following suit, verging on company stores, manufacturing currencies, perpetually reinvesting in “engagement,” and vying for control of information, advertising, messaging, and ultimate monopoly. It follows here, that the design, implementation, use, and control of technology under capitalism by capitalists leads to the marginalization of (thought) workers from the products of their labor, with workers appendaged to the technology of modern smartphones (Marx 1990). “Saint Peter, don’t you call me, ‘cuz I can’t go. I owe my soul to the” (Travis 1946) iPhone.

“Artificial intelligence”

The massive interest in “Artificial Intelligence” brings new concerns about lock-in, control, and access to technologies, media, and a digital voice. Ethical concerns about LLMs abound, with daily high-profile court cases and battles between OpenAI CEO and various jilted torchbearers (most recently Scarlet Johansson). The capacity of big tech and their cronies to vacuum the internet for “free real estate” to feed text to images and LLMs without repose has demonstrated that a new era of proprietary and highly controlled platforms and corporate-sponsored piracy is upon us. Open AI, Google, Midjourney, Adobe, Anthropic, and many more offer a private, closed, and proprietary “artificially intelligent” infrastructure¹. Moreover, even “local” models, those which are run on your own device, are often proprietary and leverage the existing platform lock-in from Apple and Google, ensuring that developers, creatives, and users keep using technologies in the ecosystem and leverage existing control to prevent competition. Microsoft, Apple, and Google, the major closed-source players in operating system development, integrate their own or OpenAI’s technologies tightly into their ecosystems, avoiding open alternatives (Apple Inc. 2024; Microsoft Corporation 2024). Even more complex than open hardware in phones and tablets, LLMs require significant computing power to run quickly and usually require more pirated data than an average user could store in order to generate meaningful responses. Naturally, as commodity hardware decreases in price, there could be a commensurate increase in the number of people able to run open-source and customizable home LLM systems. However, this is not a natural and easy future to realize. Indeed, more affordable systems such as the Raspberry Pi already have communities of hackers and tinkerers developing bizarre conglomerations of lower power tensor processors to match or nearly match proprietary platforms (Level 2 Jeff 2024). A stronger narrative, though, is needed to counter the commercialization, privatization, and control of these systems before there is a broader appeal.

AI platforms have been the talk of the bourgeois. The explosive interest in streamlining thinking to

¹ Notably, however, several of these companies also offer downloadable, offline, and open-source LLM models, benefiting financially and in product development from the open-source community by providing feedback, development hours, and additional use cases.

work through short prompts has caught the attention of the feeble-minded and meager writing capacity of executives, middle managers, and millionaires alike. From tech corporations through to university governance, the Generative AI fad has all but replaced the thinking capacity of over-eager “knowledge managers” in a race to the bottom. Workers in all configurations are under serious threat in the creative and *thinking* industries; the use of “AI” to shortcut these important roles does not come close to replacing or replicating the labor of human workers, but it comes close enough for the capitalist not to employ us to do the work. The environmental and human cost of running all your emails, corporate communications, and purchasing decisions through the LLM black box bears little significance to the CEO watching “line go up.” Moreover, we see a rising tide of commercial AI use by state and nefarious actors to obfuscate, generate, and justify unethical behaviors, lobby lawmakers, and manipulate social media – in spite of the supposed safety of fair use agreements in these commercials, private and black box systems (OpenAI 2024). Here, we have dual problems: Broadly, an inability to replicate the capabilities of large corporate LLMs in the home and a lack of capacity to replicate the corporate-backed piracy and deception involved in creating the dataset in the first place (c.f. Ayling and Chapman 2022; Christoforaki and Beyan 2022). In addition, we see threats to livelihoods, the environment, and the continued acceleration of capital for the capitalist. Complicating this space is the growing faux hype, marketing, and eye-watering failures of underbaked LLMs in an AI race to the bottom, which fractures the general appeal and usability to the broader population, spawning mixed reactions at best.

The technologies bound up in what marketing has labeled “artificial intelligence” are already being deployed as marketing machines (Arsenijevic and Jovic 2019; Verma et al. 2021), corporate governance advisers (Hilb 2020; Jabeur et al. 2021), and medical consultants (Alowais et al. 2023; Dave and Patel 2023; Iqbal et al. 2023). Amidst a litany of other purposes, the rising tide of commercial LLMs for myriad purposes cannot be ignored as a space of capitalist machine growth. Not only are these technologies supporting and enabling practitioners and workers, but they are also simultaneously deprofessionalizing others and are highly locked down, corporately controlled, and expensive – economically and environmentally. Indeed, sustainable, “green” and low-impact AI deployment has been the subject of debate in academic circles (Dhar 2020; Ligozat et al. 2022; Nishant, Kennedy, and Corbett 2020; Verdecchia, Sallou, and Cruz 2023), where contention arises around the use of any technology as ecologically sustainable. Models that are runnable “at home” on commodity hardware often draw hundreds of watts of electricity for short periods to generate basic responses. At a large corporate scale, however, the full impact of the electrical and ecological scope and scale of deployment is still uncertain but highly problematic (Loeffler, 2024; Luccioni, Jernite, and Strubell, 2024; Vincent, 2024). However, the “model” itself in LLM technologies is not the only area of interest in controlling narrative building around information dispensed by “AI” Indeed, corporate “piracy” plays a significant role in the production of datasets, the production of AI tools, and the politics of control of information.

Corporate piracy, or jobs that “shouldn’t have been there in the first place.”

Copyright law globally is often deployed differentially between corporations, cooperatives, notable figures, and private citizens. This is particularly the case for those who have been deemed “pirates” or responsible for the alleged theft of copyright materials from the capitalist bastion. Time and again, notable figures in what the media dubs “piracy rings” have been caught and punished to the fullest extent of the law. The treatment of small corporations who conduct themselves similarly has, at least in the case of Napster, KaZaA, and their ilk, been treated similarly to private citizens (Suzanne 2006). However, in the context of the global surge of “artificial intelligence,” or specifically transformer-based LLMs, a fundamental requirement is training data. This data requires copious texts to “train” the model to generate more coherent responses, though the hallucinations of contemporary LLMs remain a fundamental feature of generative AI and are, to the computer, fundamentally indistinguishable from coherent responses with ongoing efforts to refine responses (Farquhar et al. 2024; Hicks, Humphries, and Slater 2024; Zhang et al. 2024). Ongoing debates about the nature and suitability of copyright

law to address the “problem” of LLMs’ use of texts accessible via the internet have meant that even high-profile cases, such as the *New York Times vs OpenAI*, have had little serious impact on how LLMs are trained thus far (Grynbaum & Mac 2023; Mantegna 2024; Quang 2021). Or, perhaps, a corporate-copyright hegemony reconfiguring “piracy panic narratives” (Arditi 2015) about acceptable use, knowledge ownership, and a visage of appropriation (see also other such historic reconfigurations, c.f. Kribs 2020). Recently, Apple announced “Apple Intelligence,” a brand comprising LLMs from Apple’s research and their partnership with OpenAI (as well as others forthcoming). During a panel discussion at their developer conference, Apple discussed that they, too, had crawled the internet, copying text data to train their LLMs, only retroactively allowing content creators, writers, and webmasters to prevent this crawling (Vorhees 2024). In spite of supposed ways to prevent this indexation and copying of supposedly copyrighted texts, several AI corporations, including Perplexity, OpenAI, Anthropic, and others, have been caught bypassing supposed “rules” that prevent their access to “scrape” websites for training data repeatedly (Hays 2024; Marchman 2024; Mehrotra and Marchman 2024). Corporations continue to play a major role in AI research, development, and deployment, and thus, their governance of AI is crucial for the public interest. However, the prevailing attitude in these firms appears far from respectful, requiring organizing and whistleblowing from employees to trigger action (Cihon, Schuett, & Baum 2021).

The callous attitude of AI corporations mirrors the “tech bro” mindset of rapid iteration at any cost and, as discussed above, comes at extreme cost to the environment, work, and creative industries in various forms (c.f. Carrigan 2023; Griffith 2022). The stolen work of visual artists, the stolen texts of writers, and the stolen compositions of musicians are amongst the foundational tools of the contemporary “AI” race – a race against copyright law to produce datasets that control the creative process, locking down access so that corporations creating these AI systems have exclusive control over creativity, knowledge and even the capture of epistemology (Lazega and Montes-Lihn 2021); this is at least the case for the corporate AI companies whose attitude continues to be *we will do what we want* with little fear of recourse. On a panel discussion about AI allegedly “empowering humanity,” one of OpenAI’s representatives, Mira Murati, was quoted noting, “some creative jobs maybe will go away, but maybe they shouldn’t have been there in the first place” (Dartmouth Engineering 2024). This attitude of a race to the bottom, purloining copyright materials, sidelining human creatives, and replacing the labor of humans which, continually, offers more inherent thinking value than a machine guessing what might come next is antithetical to the empowerment buzzword and another indication of the necessity for clearer thinking about the nature and future of work + AI, empowerment + AI, environment + AI, or technology + AI. While the law had traditionally been on the side of large corporations, the repeated copying, bypassing of restrictions, and workarounds implemented by corporate AI providers shows a disregard for the legal process, even where copyright law is being actively transformed in the face of such behavior (Hays 2024; Vincent 2022).

Open access to data, attribution, and understandable, transparent, and accountable access to knowledge, information, systems, and processes enable AI to become a political priority (Cihon et al. 2021; Lazega & Montes-Lihn 2021). “Openness” in “AI” requires examination beyond the availability of source code, models, weights, and training data. Indeed, as Liesenfeld and Dingemans (2024) have identified, there is a growing trend of “open-washing,” where companies claim open-source-ness while withholding critical information about training data, fine-tuning, and other key aspects of their AI. They argue that new laws in the European Union will create incentives for more transparent labeling of open-source software, particularly in the AI space, and that this may, through an evidence-based approach, provide better transparency in research and lead to the creation and use of AI tools, rather than focusing solely on licensing (Liesenfeld and Dingemans 2024). Here, to counter corporate kleptomania and growing control of information by corporations on the basis of large-scale information piracy, openness is crucial.

Open source

Open-source software is the sphere of both private enterprise and private citizens. This partially

democratic sphere where tools, programs, 20-line scripts, and entire productivity packages are produced is done on the back of volunteer time and, to some extent, corporate dime (Andersen-Gott, Ghinea, and Bygstad 2012). In a sort of “do-ocracy” where feature requests are not pivotal to a corporate bottom line, open-source communities thrive on the upskilling of individuals with an interest in committing software, features, and ideas and catching bugs as *doers* who have a vested stake in their contributions – they need it to make use of their software. While, as explored briefly above, there are concerns about social engineering and other vulnerabilities in open-source software, many of the concerns of private closed-source software are negated, as anyone with sufficient skill can examine the source code, make changes, and commit these back. This process of “forking,” creating “pull requests,” and building features, documentation, and communities continually generate new inventions, administrative workload, and demand for time-poor volunteers (Eghbal 2020). This work, while partially backed by corporate interests, is typically committed to the public good. By its nature, it is highly configurable, customizable, knowable, and sometimes obtuse.

Where open source meets artificial intelligence, a hope for an open, customizable, and configurable future emerges. The challenges of power efficiency, access to appropriate hardware, and global disparities in technology access are not, and will not be, overcome through the use of open-source hardware and software alone; however, across multiple fields and use cases for LLMs, there is a proliferation of different “AI” tools, models, and software which are *more* accessible and open across the globe (DeepSeek-AI et al. 2024; Wu et al. 2024). These tools leverage open-source software and open-source datasets and are able to be made to work for us, by us, rather than for the capitalist for the augmentation of production and capital accumulation (c.f. Samuel 2024). While this space remains in rapid development, there is already a hopeful configuration of people around AI technologies that can be used for the betterment of humanity, the sharing and diversification of these tools, and new ways of using “smarter” technology to solve human problems. From learning to the organization of files on your computer, AI technologies are “revolutionizing” computer usage. While empty labels, vague gestures, and arrogant professions from the capitalist class about the possibility and future of AI abound, the actual work of developing, understanding, and creating tools that work for *us* continues, if only in minority spaces. The real work remains in the global diversification of these tools and knowledge and the accessibility and assurance of control over systems that could easily be used to exploit, extract, and destroy creatives, thinkers, and workers the world over.

This vision of open-source hardware and software + AI could pose a significant challenge to the proliferation of corporate and closed-source AI systems. Not only are open-source systems more customizable, often more human-friendly, and more likely than corporate developers to be driven by the genuine needs of users, these systems also offer significant “value” in a capitalist marketplace. While manufacturers such as Microsoft and Apple roll out privacy-invasive features to track and analyze everything you do on your PC, tablet, and phone, open-source developers continue to create useful tools out of LLMs and other emergent neural network technologies. In a future where corporate-driven, consumerist, and pro-capital AI drives every part of our digital lives, the capacity for recourse with technologies that enable human liberation is, to me, much more enticing – and endlessly possible, if we seriously reconsider how and why we use, embrace and adopt technologies. While legal and other human movements towards tackling some of the serious problems of closed systems, environmental damage, and knowledge appropriation are beginning to take shape (McCabe 2024), we have still arrived at this locked-in situation in the first place, and I, for one, would prefer a future not directed by ego-inflated tech-bro CEOs and their sycophantic armies.

Conclusion

If we accept AI as a new wave of computing, following the gradual acceptance of personal computing, the emergence of e-waste commodity products such as MP3 players, iPods, and early digital cameras and other technologies now absorbed into the impossible to repair or maintain smartphone

industry, then the economic, productivity, ecological, and human toll needs desperate assessment. While one aspect of this is enabling access to the technology for those without high budgets for bleeding edge development and learning, the other concern is keeping users aware of developments, privacy and productivity implications, and retaining a pulse of those interested in the perpetuation of open, accessible, hackable and modifiable “AI” for human means, rather than capital means. As with any technology tool, the emancipatory potential of artificial intelligence to support human labor and even the liberation of information, learning, knowledge sharing, task easing, and so on, is limitless. The “open” in Open AI ought to refer to a genuine commitment to open-source, creative commons, and artistically acceptable licensing that created a new world of information transformation and reconfiguration. Alas, short-sighted and covetous corporate overlords seek to control, lock-in, and direct the flows of knowledge, information, and learning through AI (like it or not), and while there may be disapproving glances and collective sighs over LLMs suggesting glue pizza without serious attention to this space, the potential for democratic access to, let alone creation of, “AI” which advances human, ecological and labor rights will be forgone.

Put simply, if we do not continue to have at least a version of a people-powered, open-source, and accessible “artificial intelligence” technology suites, these tools will be used to exploit us, reconfigure the nature of work for the worse, and endlessly proprietize and black box new technologies, “content” and ways of working aside from occasional corporate-backed “research papers.” If we assume that the occasional arxiv paper by Google and Apple indicates the extent to which these tech giants are willing to open-source these technologies, then open-source LLMs and other “AI” technology offer a radical alternative – complete control by and for the user. If we look at the rise and fall of Napster, and the proliferation of sharing services which erupted from its shallow grave, we can see how – even on the “pirate” fringe – technologies that humans *feel* make a meaningful impact in their lives are never truly “shut down”, closed source, or proprietary. If the continued success of BitTorrent, the platforms, trackers, clients, and tools are anything to go by, the software that enables “piracy” will continue to transmute, transform, and realize open potential in the mainstream. Hopefully, with the efforts of dedicated researchers, hobbyists, and consumers, the artificial intelligence “revolution” can be harnessed for the liberation of the working class from endless pointless paperwork, forms, and communication harnessed as busywork by the capitalist class. Instead of offering only deeply problematic pro-capital positionality, perhaps the contradictions of corporate LLMs versus open-source projects will bear out a mediated middle ground between the interests of capital and labor or maybe even build new ways of learning, thinking, and programming for the future of human liberation.

References

- Alowais, Shuroug A., Sahar S. Alghamdi, Nada Alsuehaby, Tariq Alqahtani, Abdulrahman I. Alshaya, Sumaya N. Almohareb, Atheer Aldairem, Mohammed Alrashed, Khalid Bin Saleh, Hisham A. Badreldin, Majed S. Al Yami, Shmeylan Al Harbi, and Abdulkareem M. Albekairy. 2023. “Revolutionizing Healthcare: The Role of Artificial Intelligence in Clinical Practice.” *BMC Medical Education* 23(1):689. doi: 10.1186/s12909-023-04698-z.
- Andersen-Gott, Morten, Gheorghita Ghinea, and Bendik Bygstad. 2012. “Why Do Commercial Companies Contribute to Open Source Software?” *International Journal of Information Management* 32(2):106–17. doi: 10.1016/j.ijinfomgt.2011.10.003.
- Apple Inc. 2024. “Introducing Apple Intelligence for iPhone, iPad, and Mac.” *Apple Newsroom*. Retrieved June 11, 2024 (<https://www.apple.com/newsroom/2024/06/introducing-apple-intelligence-for-iphone-ipad-and-mac/>).
- Arditi, David. 2015. *iTake-over: The Recording Industry in the Digital Era*. Lanham, Maryland; Boulder, New York; London: Rowman & Littlefield.
- Arsenijevic, Uros, and Marija Jovic. 2019. “Artificial Intelligence Marketing: Chatbots.” Pp. 19–193 in the *2019 International Conference on Artificial Intelligence: Applications and Innovations (IC-AIAI)*. Belgrade, Serbia: IEEE.
- Ayling, Jacqui, and Adriane Chapman. 2022. “Putting AI Ethics to Work: Are the Tools Fit for Purpose?” *AI and Ethics* 2(3):405–29. doi: 10.1007/s43681-021-00084-x.
- Cano Bejar, Arturo Heyner, Soumya Ray, and Yu Hsuan Huang. 2023. “Fighting for the Status Quo: Threat to Tech Self-Esteem and Opposition to Competing Smartphones.” *Information & Management* 60(2):103748. doi: 10.1016/j.im.2022.103748.
- Carrigan, Coleen. 2023. *Cracking the Bro Code*. Cambridge, Massachusetts: The MIT Press.
- Chee, Foo Yun. 2024a. “Apple Challenges \$2 Bln EU Antitrust Fine at EU Court.” *Reuters*, May 22.
- Chee, Foo Yun. 2024b. “Apple Retreats in Fight to Defend App Store in Europe.” *Reuters*, March 13.
- Christoforaki, Maria, and Oya Beyan. 2022. “AI Ethics—A Bird’s Eye View.” *Applied Sciences* 12(9):4130. doi: 10.3390/app12094130.
- Cihon, Peter, Jonas Schuett, and Seth D. Baum. 2021. “Corporate Governance of Artificial Intelligence in the Public Interest.” *Information* 12(7):275. doi: 10.3390/info12070275.
- Dave, Manas, and Neil Patel. 2023. “Artificial Intelligence in Healthcare and Education.” *British Dental Journal* 234(10):761–64. doi: 10.1038/s41415-023-5845-2.
- Dartmouth Engineering, dir. 2024. *AI Everywhere: Transforming Our World, Empowering Humanity*.
- DeepSeek-AI, Xiao Bi, Deli Chen, Guanting Chen, Shanhuang Chen, Damai Dai, Chengqi Deng, Honghui Ding, Kai Dong, Qiushi Du, Zhe Fu, Huazuo Gao, Kaige Gao, Wenjun Gao, Ruiqi Ge, Kang Guan, Daya Guo, Jianzhong Guo, Guangbo Hao, Zhewen Hao, Ying He, Wenjie Hu, Panpan Huang, Erhang Li, Guowei Li, Jiashi Li, Yao Li, Y. K. Li, Wenfeng Liang, Fangyun Lin, A. X. Liu, Bo Liu, Wen Liu, Xiaodong Liu, Xin Liu, Yiyuan Liu, Haoyu Lu, Shanghao Lu, Fuli Luo, Shirong Ma, Xiaotao Nie, Tian Pei, Yishi Piao, Junjie Qiu, Hui Qu, Tongzheng Ren, Zehui Ren, Chong Ruan, Zhangli Sha, Zhihong Shao, Junxiao Song, Xuecheng Su, Jingxiang Sun, Yaofeng Sun, Minghui Tang, Bingxuan Wang, Peiyi Wang, Shiyu Wang, Yaohui Wang, Yongji Wang, Tong Wu, Y. Wu, Xin Xie, Zhenda Xie, Ziwei Xie, Yiliang Xiong, Hanwei Xu, R. X. Xu, Yanhong Xu, Dejian Yang, Yuxiang You, Shuiping Yu, Xingkai Yu, B. Zhang, Haowei Zhang, Lecong Zhang, Liyue Zhang, Mingchuan Zhang, Minghua Zhang, Wentao Zhang, Yichao Zhang, Chenggang Zhao, Yao Zhao, Shangyan Zhou, Shunfeng Zhou, Qihao Zhu, and Yuheng Zou. 2024. “DeepSeek LLM: Scaling Open-Source Language Models with Longtermism.”
- Dhar, Payal. 2020. “The Carbon Impact of Artificial Intelligence.” *Nature Machine Intelligence* 2(8):423–25. doi: 10.1038/s42256-020-0219-9.
- Diel, Sören, Christoph Buck, and Torsten Eymann. 2018. “Your Smartphone, My Smartphone - How Smartphone Ownership Determines Social Group Affiliation.” *Hawaii International Conference on System Sciences 2018 (HICSS-51)*.

Dörflinger, Alexander, Mark Albers, Benedikt Kleinbeck, Yejun Guan, Harald Michalik, Raphael Klink, Christopher Blochwitz, Anouar Nechi, and Mladen Berekovic. 2021. "A Comparative Survey of Open-Source Application-Class RISC-V Processor Implementations." Pp. 12–20 in *Proceedings of the 18th ACM International Conference on Computing Frontiers, CF '21*. New York, NY, USA: Association for Computing Machinery.

Eghbal, Nadia. 2020. *Working in Public: The Making and Maintenance of Open Source Software*. First Edition. San Francisco: Stripe Press.

Farquhar, Sebastian, Jannik Kossen, Lorenz Kuhn, and Yarin Gal. 2024. "Detecting Hallucinations in Large Language Models Using Semantic Entropy." *Nature* 630(8017):625–30. doi: 10.1038/s41586-024-07421-0.

Fortunato, Laura, and Mark Galassi. 2021. "The Case for Free and Open Source Software in Research and Scholarship." *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 379(2197):20200079. doi: 10.1098/rsta.2020.0079.

Gabrys, Jennifer. 2011. *Digital Rubbish: A Natural History of Electronics*. Ann Arbor, MI: University of Michigan Press.

Goetze, Trystan S. 2024. "AI Art Is Theft: Labour, Extraction, and Exploitation, Or, On the Dangers of Stochastic Pollocks." doi: 10.48550/ARXIV.2401.06178.

Gramsci, Antonio. 1996. *Selections from the Prison Notebooks*. London: Lawrence and Wishart.

Griffith, Erin. 2022. "Silicon Valley Slides Back Into 'Bro' Culture." *International New York Times*.

Grynbaum, Michael M., and Ryan Mac. 2023. "The Times Sues OpenAI and Microsoft Over AI Use of Copyrighted Work." *The New York Times*, December 27.

Hays, Kali. 2024. "OpenAI and Anthropic Are Ignoring an Established Rule That Prevents Bots Scraping Online Content." *Business Insider*. Retrieved June 24, 2024 (<https://www.businessinsider.com/openai-anthropic-ai-ignore-rule-scraping-web-content-robotstxt>).

Hicks, Michael Townsen, James Humphries, and Joe Slater. 2024. "ChatGPT Is Bullshit."

Ethics and Information Technology 26(2):38. doi: 10.1007/s10676-024-09775-5.

Hilb, Michael. 2020. "Toward Artificial Governance? The Role of Artificial Intelligence in Shaping the Future of Corporate Governance." *Journal of Management and Governance* 24(4):851–70. doi: 10.1007/s10997-020-09519-9.

Iqbal, Javed, Diana Carolina Cortés Jaimes, Pallavi Makineni, Sachin Subramani, Sarah Hemaida, Thanmai Reddy Thugu, Amna Naveed Butt, Jarin Tasnim Sikto, Pareena Kaur, Muhammad Ali Lak, Monisha Augustine, Roheen Shahzad, and Mustafa Arain. 2023. "Reimagining Healthcare: Unleashing the Power of Artificial Intelligence in Medicine." *Cureus*. doi: 10.7759/cureus.44658.

Jabeur, Sami Ben, Cheima Gharib, Salma Mefteh-Wali, and Wissal Ben Arfi. 2021. "CatBoost Model and Artificial Intelligence Techniques for Corporate Failure Prediction." *Technological Forecasting and Social Change* 166:120658. doi: 10.1016/j.techfore.2021.120658.

Jones, David. 2024. "Fears Rise of Social Engineering Campaign as Open Source Community Spots Another Threat." *Cybersecurity Dive*. Retrieved June 5, 2024 (<https://www.cybersecuritydive.com/news/open-source-social-engineering-fears/713330/>).

Kribs, Kaitlyn. 2020. "Same as It Ever Was: The Canadian and American Music Industries' Responses to Digitization and the Circulation of 'Piracy Panic Narratives.'" *Stream: Interdisciplinary Journal of Communication* 12(1):53–69. doi: 10.21810/strm.v12i1.283.

LaurieWired, dir. 2024. *The Magic of RISC-V Vector Processing*.

Lazega, Emmanuel, and Jaime Montes-Lihn. 2021. "On Macro-Politics of Knowledge for Collective Learning in the Age of AI-Boosted Big Relational Tech." in *What is Essential to Being Human?* Routledge.

Level 2 Jeff, dir. 2024. *I Built a MONSTER AI Pi with 8 Neural Processors!*

Ligozat, Anne-Laure, Julien Lefevre, Aurélie Bugeau, and Jacques Combaz. 2022. "Unraveling the Hidden Environmental Impacts of AI Solutions for Environment Life Cycle Assessment of AI Solutions." *Sustainability* 14(9):5172. doi: 10.3390/su14095172.

Liesenfeld, Andreas, and Mark Dingemans. 2024. “Rethinking Open Source Generative AI: Open Washing and the EU AI Act.” Pp. 1774–87 in *The 2024 ACM Conference on Fairness, Accountability, and Transparency*. Rio de Janeiro Brazil: ACM.

Loeffler, John. 2024. “I Watched Nvidia’s Computex 2024 Keynote and It Made My Blood Run Cold.” *TechRadar*. Retrieved June 6, 2024 (<https://www.techradar.com/computing/i-watched-nvidias-computex-2024-keynote-and-it-made-my-blood-run-cold>).

Luccioni, Alexandra Sasha, Yacine Jernite, and Emma Strubell. 2024. “Power Hungry Processing: Watts Driving the Cost of AI Deployment?”

Malinga, Sibahle. 2022. “More South Africans Opt for Phone Rentals.” *ITWeb*. Retrieved June 5, 2024 (<https://www.itweb.co.za/article/more-south-africans-opt-for-phone-rentals/DZQ58vV8jnmMzXy2>).

Mantegna, Micaela. 2024. “ARTificial: Why Copyright Is Not the Right Policy Tool to Deal with Generative AI.” *The Yale Law Journal* 133:1126–74.

Marx, Karl. 1990. *Capital: A Critique of Political Economy*. edited by B. Fowkes and D. Fernbach. London; New York: Penguin Books in association with New Left Review.

Marchman, Tim. 2024. “Perplexity Plagiarized Our Story About How Perplexity Is a Bullshit Machine.” *Wired*, June 21.

McCabe, David. 2024. “US Clears Way for Antitrust Inquiries of Nvidia, Microsoft and OpenAI.” *The New York Times*, June 6.

Mehrotra, Dhruv, and Tim Marchman. 2024. “Perplexity Is a Bullshit Machine.” *Wired*, June 19.

Microsoft Corporation. 2024. “ChatGPT vs. Microsoft Copilot: What’s the Difference? -” *Microsoft Support*. Retrieved June 11, 2024 (<https://web.archive.org/web/20240105065028/https://support.microsoft.com/en-au/topic/chatgpt-vs-microsoft-copilot-what-s-the-difference-8fdec864-72b1-46e1-afcb-8c12280d712f>).

Müller, Matthias, Christian Schindler, and Wolfgang Slany. 2019. “Engaging Students in Open Source: Establishing FOSS Development at a University.” *Hawaii International Conference on System Sciences 2019 (HICSS-52)*.

Nishant, Rohit, Mike Kennedy, and Jacqueline Corbett. 2020. “Artificial Intelligence for Sustainability: Challenges, Opportunities, and a Research Agenda.” *International Journal of Information Management* 53:102104. doi: 10.1016/j.ijinfomgt.2020.102104.

O’Neil, Mathieu, Laure Muselli, Mahin Raissi, and Stefano Zacchiroli. 2021. “Open Source Has Won and Lost the War’: Legitimising Commercial–Communal Hybridisation in a FOSS Project.” *New Media & Society* 23(5):1157–80. doi: 10.1177/1461444820907022.

OpenAI. 2024. “Disrupting Deceptive Uses of AI by Covert Influence Operations.” *OpenAI*. Retrieved June 6, 2024 (<https://openai.com/index/disrupting-deceptive-uses-of-ai-by-covert-influence-operations/>).

Palmer, Jordan. 2022. “I Tried Completely De-Googled Android — Here’s What Happened.” *Tom’s Guide*. Retrieved June 5, 2024 (<https://www.tomsguide.com/features/i-tried-de-googled-android-again-heres-how-that-went>).

Perkins, Devin N., Marie-Noel Brune Drisse, Tapiwa Nxele, and Peter D. Sly. 2014. “E-Waste: A Global Hazard.” *Annals of Global Health* 80(4):286. doi: 10.1016/j.aogh.2014.10.001.

Quang, Jenny. 2021. “Does Training AI Violate Copyright Law?” *The Berkeley Technology Law Journal* 36(1):1406–35. doi: 10.15779/Z38XW47X3K.

Ruan, Lotus, Jeffrey Knockel, Jason Q. Ng, and Masashi Crete. 2016. *One App, Two Systems*. Canada: The Citizen Lab.

Samuel, Jeffrey. [2024] 2024. “Jeffser/Alpaca.”

Song, Victoria. 2024. “US v. Apple: Everything You Need to Know.” *The Verge*. Retrieved June 5, 2024 (<https://www.theverge.com/24107581/doj-v-apple-antitrust-monopoly-news-updates>).

Suzanne, Dylan Eric. 2006. “Lessons from the Digital Crisis in Copyright: Ethical and Political Implications of Radical Automation.” Ph.D., Vanderbilt University, Nashville, Tennessee.

Tolani, Adedamola, Adebowale Owoseni, and Hossana Twinomurizi. 2020. “Designing for Context Versus the Lock-in Effect of ‘Free’ Global Digital Platforms: A Case of SMEs from Nigeria.” Pp. 321–32 in *Designing for Digital Transformation. Co-Creating Services with Citizens and Industry*, edited by S. Hofmann, O. Müller, and M. Rossi. Cham: Springer International Publishing.

Travis, Merle. 1946. *Sixteen Tons*. Los Angeles: Capitol Americana.

Veit, Stan. 1994. "What Ever Happened to ... IBM's PC Leadership?" *Computer Shopper* 14(9):592–94.

Verdecchia, Roberto, June Sallou, and Luís Cruz. 2023. "A Systematic Review of Green AI." *WIREs Data Mining and Knowledge Discovery* 13(4):e1507. doi: 10.1002/widm.1507.

Verma, Sanjeev, Rohit Sharma, Subhamay Deb, and Debojit Maitra. 2021. "Artificial Intelligence in Marketing: Systematic Review and Future Research Direction." *International Journal of Information Management Data Insights* 1(1):100002. doi: 10.1016/j.ijime.2020.100002.

Ververis, Vasilis, Marios Isaakidis, Valentin Weber, and Benjamin Fabian. 2019. "Shedding Light on Mobile App Store Censorship." Pp. 193–98 in *Adjunct Publication of the 27th Conference on User Modeling, Adaptation and Personalization, UMAP'19 Adjunct*. New York, NY, USA: Association for Computing Machinery.

Vincent, James. 2024. "How Much Electricity Does AI Consume?" *The Verge*. Retrieved June 5, 2024 (<https://www.theverge.com/24066646/ai-electricity-energy-watts-generative-consumption>).

Vincent, James. 2022. "The Lawsuit That Could Rewrite the Rules of AI Copyright." *The Verge*. Retrieved June 24, 2024 (<https://www.theverge.com/2022/11/8/23446821/microsoft-openai-github-copilot-class-action-lawsuit-ai-copyright-violation-training-data>).

Vorhees, John. 2024. "How We're Trying to Protect MacStories from AI Bots and Web Crawlers – And How You Can, Too." *MacStories*. Retrieved June 24, 2024 (<https://www.macstories.net/stories/ways-you-can-protect-your-website-from-ai-web-crawlers/>).

Widmer, Rolf, Heidi Oswald-Krapf, Deepali Sinha-Khetriwal, Max Schnellmann, and Heinz Böni. 2005. "Global Perspectives on E-Waste." *Environmental Impact Assessment Review* 25(5):436–58. doi: 10.1016/j.eiar.2005.04.001.

Wu, Chaoyi, Weixiong Lin, Xiaoman Zhang, Ya Zhang, Weidi Xie, and Yanfeng Wang. 2024. "PMC-LLaMA: Toward Building Open-Source Language Models for Medicine." *Journal of the American Medical Informatics Association* ocae045. doi: 10.1093/jamia/ocae045.

Zhang, Di, Xiaoshui Huang, Dongzhan Zhou, Yuqiang Li, and Wanli Ouyang. 2024. "Accessing GPT-4 Level Mathematical Olympiad Solutions via Monte Carlo Tree Self-Refine with LLaMa-3 8B."