REPORT ON THE PRODUCTION OF DIGITAL COMMONS AND ON THE CONDITIONS OF THE ORGANISATION AND ACTION OF THE DIGITAL COMMONS POLICY COUNCIL.

DCPC22

NEWS AND MEDIA RESEARCH CENTRE

REPORT ON THE PRODUCTION OF DIGITAL COMMONS AND ON THE CONDITIONS OF THE ORGANISATION AND ACTION OF THE DIGITAL COMMONS POLICY COUNCIL (2021–2022)

DIGITAL COMMONS POLICY COUNCIL

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The DCPC is an international think tank, founded in 2021. The DCPC aims to increase the recognition of the benefits of digital commons such as free and open source software and Wikipedia, and of the volunteer labour which produces these common goods. It does so by producing evidence-based public reports and other resources. More information at https://www.dcpc.info / TW @Peer_Production.

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Published by the Digital Commons Policy Council, Canberra, Australia and the News & Media Research Centre, Canberra, Australia.

ISBN (print) 978-1-74088-540-9
ISBN (electronic) 978-1-74088-541-6

DOI 10.25916/7wbc-4909

Cite as: Digital Commons Policy Council (2022) *Report on the production of digital commons and on the conditions of the organisation and action of the Digital Commons Policy Council*. Canberra: DCPC/News & Media Research Centre, University of Canberra.

Book design: DCPC / Ava Wang

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I.
INCREASING RECOGNITION FOR DIGITAL COMMONS AND THE VOLUNTEER LABOUR THAT PRODUCES THEM

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Digital commons are resources produced and maintained by communities and projects made of diverse actors. They are governed by rules which guarantee their collective and shared nature. Examples include Linux (computer software), Firefox (web browser), Wikipedia (online encyclopedia), and OpenStreetMap (geographic database).

In contrast to political exclusion and privatised digital technologies with restricted or no access, the collaborative co-creation of digital commons illustrates how people from all over the world can work together to create useful resources which anyone can use.

The shape of these resources is directed by the requirements of the producing community: the objectives and outcomes of a project primarily reflect the demands of their initial contributors, who are also its prime beneficiaries. On one hand this means resources are not always, in the first instance, 'user-friendly', so they may be reserved for a technically-proficient minority.

INDUSTRY ADOPTION AND PREDATION

On the other hand, this integrity of product and process results in exceptional robustness, and digital commons have been widely adopted by industry and society.

Google led the creation of more 'user-friendly' products based on Linux with its Android mobile operating system, launched in 2008. Since then all software and data firms have adopted the 'open source' collaborative development model and are now employing open source developers. Microsoft signalled its embrace of this new industrial model when it bought the GitHub collection of open source code repositories for $7.5 billion in 2018.

Similarly Wikipedia provides free content to digital platforms. It has also become an invaluable educational resource and a key fact-checking tool.

Looking ahead, decentralised and peer-to-peer (P2P) architectures such as blockchain and DAO (decentralised autonomous organisations) inspire new experiments in cooperative ownership, organisation and exchange.

Integrity radiates outwards since new participation is only possible by adopting a project's collaborative values and open licenses. Yet the integrity of some digital commons is being threatened by predatory corporations seeking to turn value and resources created for all into closed, private goods.

DIGITAL COMMONS ARE OPEN AND EXCLUSIVE

A resource is deemed 'non-rival' if, for any level of production, the cost of providing it to an additional user is zero. Clearly, if corporations can easily appropriate and enclose common resources, the importance of producing non-rival goods is not being given its due. Should non-rival goods be given more recognition? Should the contributions of volunteer programmers and editors be valued by society, not just their peers and — in the case of software engineers — their employers?

Historically, the free software movement considered software as *resources* upon which users have certain rights, not as products of a labour that deserves monetary retribution. Further, some may argue that introducing financial rewards within free and open source software projects risks distorting the emergent and self-directed means of determining the relative value of project goals.

The rejection of financial rewards inside digital commons projects such as free and open source software and Wikipedia reproduces class and gender inequalities. It fails to account for the fact that engaging in unpaid labour is only accessible to a minority with the necessary disposable income, cultural capital, or family support.

Volunteer labour does co-exist with an allied economy of paid developers and contributors paid for by customers, users, and organisations. However the *ad hoc* and indirect nature of these financial rewards hinders the evolution of the commons into an autonomous mode of production.

If digital commons are to transform society and not simply provide digital capitalism with a pool of free labour, they cannot depend only on volunteer work and informal arrangements, but must invent institutions and metrics to compensate peer labour and measure value.

NEW METRICS TO MEASURE VALUE

In the foreseeable future, voluntary unpaid labour will probably remain a necessary component of numerous digital commons projects. But digital commons thinkers and practitioners need to devise viable mechanisms to make the commons economy more robust and more autonomous, in order

to challenge the structural imbalance between what digital capitalism obtains from the commons, and what it gives back.

How could volunteer coproduction be better recognised in future economic policies? What could be done to incentivise the ongoing development and maintenance of our digital commons? Is the monetisation of online labour through new digital currencies and tokenisation a help or hindrance to the production of digital commons? And finally, are peer-to-peer or decentralised organising models living up to their emancipatory aims?

Addressing these questions and meeting the threat of predatory appropriation requires timely and proactive regulatory innovation. The policy world needs to catch up: it must appreciate the specificities of community self-regulation in order to support grassroots projects that produce and maintain critical digital infrastructure.

For example, the coproduction by volunteers and paid workers of key digital infrastructure should be factored in when debating progressive economic policies, such as the establishment of a Universal Basic Income, or the reduction of formal working hours.

The Digital Commons Policy Council was created to build connections between the worlds of policy-making and of community-based digital innovation. Our aims are to increase the recognition of the volunteer labour that produces common digital resources and to examine the opportunities and limitations of digital commons as templates for futures of work.

After an internal debate in August 2021, the decision was made to not formally incorporate, so that for the time being the Digital Commons Policy Council is not a formal association with statutes, but — much like its predecessor the *Journal of Peer Production* — a network of people who share common values and objectives.

Part I of this report documents our activities and outlines some future plans. Part II includes a selection of relevant documents published before the Digital Commons Policy Council's creation in June 2021, as well as since that date.

For the DCPC: Kit Braybrooke, Sébastien Broca, Angela Daly, Mathieu O'Neil, Cecilia Rikap, Denise Thwaites, Stefano Zacchiroli

November 2022

Thanks to Amanda Lawrence for comments to an earlier version of this report.

FOSS/
FREE AND OPEN SOURCE SOFTWARE

SUCCESS/APPEAL

The global industrial system depends on digital infrastructure for the transmission, storage and analysis of digital data. Digital infrastructure relies heavily on free and open source software (FOSS). FOSS is computer software produced in self-governed projects, which is meant to be freely shared and improved. A famous FOSS axiom is that 'with enough eyeballs, all bugs are shallow': all coding errors will be fixed quickly if enough people are involved.

The General Public Licence (GPL) or 'copyleft' is the most famous free software IP license. It guarantees the freedom to copy, use, modify and distribute software. With licenses such as the GPL, contributors know that their work cannot be absorbed into proprietary software and hence closed off. This has inspired Creative Commons licenses used for cultural works such as Wikipedia.

ROLE OF VOLUNTEERS

IT firms have adopted the open source collaborative development model, and many are paying programmers to contribute to projects. However FOSS projects still rely on volunteer labour, which provides non-monetary benefits (enjoyment, community recognition, employment opportunities). On the most active GitHub open source software repositories, the average number of commits produced by firm employees and non-firm employees per day between 2015 and 2019 were almost identical. Firm employee contributions dipped during the weekend, whereas volunteer contributions remained constant.

THREATS

Many firms benefit from digital infrastructure without contributing in return ('free riding'). Professional IT media, Big Tech firms and 501(c)(6) foundations such as the Linux Foundation define IT firms and volunteer projects as forming a unified 'community'. Yet cloud-based systems such as Software as a Service (SaaS) introduced by firms such as Amazon transform FOSS, a common resource meant to be shared freely, into a proprietary resource to be sold: the opposite of 'community'.

For more information about how Big Tech firms such as Google neutralised the GPL, see pp. 28-32. For an explanation of how SaaS neutralises free licences, see Note 1 on page 36 of this report.

AIMS

- Measure the coproduction of FOSS by firm employees and volunteers
- Publicise the impact and collaborative development of FOSS
- Make the contribution of volunteers to FOSS production better known
- Document free riding and predatory appropriation
- Document alternatives to the perception that innovation only comes from for-profit start-ups
- Stimulate debates in the FOSS community about the recognition of volunteer labour and predatory appropriation

FUNDING

‘Mapping the coproduction of digital infrastructure by peer projects and firms’, Critical Digital Infrastructure Fund, Sloan Foundation and Ford Foundation. 2019–2020.

‘DCPC: Operational and pilot research support for the Digital Commons Policy Council’, Ford Foundation. 2022–2024.

ACTIVITY: COPRODUCTION ANALYSIS

Outputs

Public report, 2021: *The Coproduction of Open Source Software by Volunteers and Big Tech Firms*. DCPC/News & Media Research Centre, University of Canberra. 72 pages. A4. DOI: 10.25916/r8vg-hd09

Scientific article, 2022: Co-producing industrial public goods on GitHub: Selective firm cooperation, volunteer-employee labour and participation inequality. *New Media and Society*. DOI: 10.1177/14614448221090474

Press article, 2022: Le pillage de la communauté des logiciels libres, *Le monde diplomatique* [translated from French into English, Farsi, German, Kurdi, Norwegian and Spanish]

Ongoing work

Mapping networks of university researcher contributions to GitHub R repositories.

ACTIVITY: COMMUNITY ENGAGEMENT

Outputs

Public report, 2021: *2016 De*bian Survey: Work and Volunteers. DCPC/News & Media Research Centre, University of Canberra. 46 pages. A4. DOI: 10.25916/zgcc-am08

Ongoing work

Second Debian survey administered in 2023.

WP/ WIKIPEDIA

SUCCESS/APPEAL

Free software licenses have inspired the creation of Creative Commons licenses which enable the sharing of cultural or intellectual works, such as Wikipedia. The different language versions of this online encyclopedia comprise 45 million articles. All over the world, countless people embraced qualities foreign to traditional proprietary encyclopedias, such as unlimited access to knowledge and the transparency of the editing process afforded by the wiki platform.

Peer review by the crowd is less likely to result in correctness when it comes to ideas than computer code. Either code runs, or it does not, and the difference is plain to see. In contrast, just because a fix to an error on Wikipedia can be made, does not mean that it will be made. Wikipedia is not perfect. Yet numerous studies have found that its medical content is of an equivalent standard to that of professional publications.

ROLE OF VOLUNTEERS

Work is performed by volunteers in diverse roles including editors, administrators, developers, and community organisers. The Wikimedia Foundation, which supports Wikipedia and other projects' infrastructure, is staffed by paid employees.

CHALLENGES

Besides its well-known gender gap, age, education, Internet skills, employment status, income, and race/ethnic identity affect who participates in Wikimedia projects as content producers and as readers. Wiki Education, part of the Wikimedia Foundation, is working to address imbalances through its programs.

Negative perceptions of Wikipedia's reliability are widespread in the school teaching community. These perceptions are outdated. 'Anybody can edit' a Wikipedia article, but the community ensures that these edits are based on reliable sources, are neutral, and do not represent original research. All modifications to a Wikipedia article are archived on this article's 'History' page. Similarly disputes between editors about the article's content are visible in the article's 'Talk' page. This transparency and auditability make it impossible for baseless conspiracies to remain published for long — with the possible exception of obscure topics where very few editors are involved.

AIMS

- Augment the understanding and use of Wikipedia in educational settings
- Publicise the functioning of Wikipedia
- Recognise the contribution of volunteers
- Quantify the benefit Big Tech firms derive from re-using content produced by the community
- Stimulate debates in the WP community about the recognition of volunteer labour and predatory appropriation

FUNDING

'Co-developing a new approach to media literacy in the attention economy', Australian Capital Territory Education Directorate-UC Affiliated Schools Research Program. Additional funding: University of Canberra Industry Collaborative Seed Grant, US Embassy (Canberra). 2021–2022.

ACTIVITY: FACT-CHECKING METHODS IN SCHOOLS

Outputs

Children's textbook, 2022: *Six Fact-Checking Lessons for Kids*. DCPC*I* News & Media Research Centre, University of Canberra. 126 pages. A5. DOI: 10.25916/3tmw-j769

Ongoing work

The fact-checking program using lateral reading and Wikipedia which was trialled in 2022 in four Australian Capital Territory primary and secondary schools will be expanded to include other Australian states.

ACTIVITY: EDUCATION POLICY

Outputs

Symposium, 17 September 2022: Wikipedia and Education in the Time of the 'Crisis of Information', University of Canberra. Participants included researchers and members of Wikimedia Australia.

Ongoing work

The *Strategies for the Recognition and Use of Wikipedia in Australian Educational Settings* public report will be released in 2023.

ACTIVITY: COMMUNITY ENGAGEMENT

Ongoing work

Participation in survey of Wikipedia-FR editors and users coordinated by marsouin.org, 'Enquête sur les utilisateurs et les contributeurs à Wikipédia', 2022–2023.

CAN VOLUNTEER LABOUR BE TOKENISED?

SUCCESS/APPEAL

The development of decentralised computing has accelerated to support visions of a next-generation Web based on P2P technologies, such as blockchain, holochain and hashgraph. In addition to their notoriety as the underpinning P2P network architecture for cryptocurrencies such as bitcoin, distributed ledger technologies (DLTs) have also become a tool for economic experimentation, including the prototyping of new ways of accounting and remunerating online community labour.

Initiatives such as the Fediverse (decentralised web publishing), Furtherfield's DAOWO (i.e. Decentralised Autonomous Organisation With Others) program, and Guerrilla Media Collective's DisCO (i.e. Distributed Cooperative Organisation) are examples of how decentralised technologies may facilitate alternative economies that build on principles of the digital commons.

ROLE OF VOLUNTEERS

Much like for free and open source software projects and Wikipedia, the on-going prototyping of DLT-based commons has relied on unpaid labour that is only accessible to a minority with the necessary disposable income, cultural capital, or family support.

CHALLENGES

Since their inception, blockchain and distributed ledger technologies (DLTs) have been subject to controversy and hype, attracting polarised opinions. For some, the digital economies of a decentralised P2P web are a natural continuation of the FOSS movement that resists centralised tech giant ownership of fundamental digital infrastructures. For others, the tokenisation of the web through the mechanisms of DLTs represent a major threat to the digital commons: yet another tool for the global banking sector.

In this charged context of social media promotion and scandal, it is urgent to gather reliable information about the possible applications of DLTs to support digital commons.

AIMS

- Address the ‘crisis of measure’ (how can voluntary contributions be measured since they vary widely in size and duration)
- Clarify current debates surrounding the potential role of DLTs in facilitating digital commons
- Evaluate approaches to tokenising online labour otherwise offered on a volunteer basis
- Compare and contrast community values associated with FOSS and DLT-enabled cooperatives

ACTIVITY: TOKENISING THE COMMONS

We aim to address whether blockchain’s capacity for tokenisation is a viable means to account for volunteer online labour.

Methodologies will include qualitative methods, such as in-depth interviews, comparative case studies, content analysis of online archives/fora, as well as technical reviews of existing and planned solutions.

RFP: 2024 POLICY LAB

In 2024 DCPC will run a Policy Incubator / Living Lab with like-minded organisations. We intend to build upon past and current Living Lab examples by developing a hybrid model between grassroots experimentation and institutional approaches to policy development.

AIMS

- Connecting to allied entities (collectives, individuals)
- Exchanging knowledge and information about the recognition of the digital commons and volunteer labour
- Developing common objectives
- Documenting policy successes/failures

POSSIBLE QUESTIONS

- Can measuring volunteer labour (e.g., via tokens) be articulated to progressive economic policies such as the establishment of a Universal Basic Income, the reduction of formal working hours, or making more public services free?
- Can digital commons be leveraged for broader sustainability beyond online labour, to take into account energy and physical infrastructural costs?

FUNDING

‘DCPC: Operational and pilot research support for the Digital Commons Policy Council’, Ford Foundation. 2022–2024.

WE WANT TO HEAR FROM YOU!

FIND US :-)

II.
DOCUMENTS RELATING TO THE FOUNDATION OF THE DIGITAL COMMONS POLICY COUNCIL

NOW, THE COMMONS (EXTRACTS)

The *Journal of Peer Production* was born at the 2009 Oekonux Conference in Manchester, an event that brought together researchers and activists. Oekonux was the original actor in the dynamic German commons movement, whose characteristic is the attempt to unite 'offline and online, tangible and intangible, old and new, green and social commons with the explicit aim of transforming society' (Euler, 2016: 95). Accordingly the *Journal of Peer Production* was intended to be a strategic tool for discussing 'new perspectives on the implication of peer production for social change'.

In the face of the continuing destruction of the Earth by industry, and of the exploitation and domination of humanity by oligarchs, we need to ask a familiar question: what should be done (what can we do)? Echoing Oekonux, Nick Dyer-Witheford put it best: 'If the cell form of capitalism is the commodity, the cellular [seed] form of a society beyond capital is the common. A commodity is a good produced for sale, a common is a good produced, or conserved, to be shared' (Dyer-Witheford 2007: 82).

For the most part, the *Journal of Peer Production* has eschewed visions of future social arrangements and focused on concrete and practical concerns, such as the effectiveness, justice and sustainability of ethical-modular assemblages and organisations. Future issues on peer urbanism (JoPP#11, October 2017) and the institutionalisation of shared machine shops (JoPP#12, April 2018) represent exciting developments of this perspective. Such investigations need to be pursued, but also articulated with a new direction.

Indeed, we believe it is now time for the *Journal of Peer Production* to expand its reach, beyond an exclusive focus on the institutions of the commons. We have the means to clearly articulate persuasive ideas. As a journal and as a community of engaged scholars and activists we are in a unique position to research and develop the ecology, regulations and culture which can grow the commons. If we are serious about social change, we should strive to make the commons a core part of the collective understanding of what it means to be human. […]

CHAMPIONING THE COMMONS

In order to instil new cultural standards, we need to popularise champions of the commons. Elinor Ostrom's (1933–2012) focus on social and institutional forms which enable the sharing of common resources and rights, showing how necessary

it was to protect forests and rivers, are clearly more relevant now than ever. Traditional communities, in existence for many centuries, may conform to the Ostrom model, but restrict access to the resource based on family belonging, with entry gained through marriage: an inclusive, global dimension should always be incorporated. In ideological terms Ostrom contradicts how the first modernity (16th–18th Century) conceives the world, a view which still dominates our education system. By mixing law, technology and economy, 'science' became normalised as the act of dissipating non-renewable natural resources. We still live in a world where private property is better protected than common property: a concerted cultural shift, primarily disseminated through schools and popular culture, must be made to change this value system. Ostrom's contribution should inform (and ultimately direct) the governance of our global environmental commons. Identifying and researching the commons around us, such as built ones (schools and libraries), natural ones (air and sunlight) as well as communal islands in family, friendship and cooperative circles demonstrates that the commons are alive and well.

Works cited:

Dyer-Witheford, N. (2007) Commonism. *Turbulence*, 1: 81-87.

Euler, J. (2015) Commons-creating Society. On the Radical German Commons Discourse, *Review of Radical Political Economics*, 48(1), pp. 93–110.

Originally published as:

Mathieu O'Neil, Johan Söderberg, Maurizio Teli and Stefano Zacchiroli, Now, the Commons, *Journal of Peer Production* #10 WORK, May 2017. http://peerproduction.net/issues/issue-10-peer-production-and-work/now-the-commons/

WHAT'S NEXT? PEER PRODUCTION STUDIES? (EXTRACT)

We asked at the outset: "Should there be a field of peer production studies?" The answer is: why not, but also: who cares? Ultimately when it comes to one's personal interest in peer production, considering it analytically, as an object of study, is perhaps less important than getting involved as a participant. We have accordingly decided to use the knowledge and imaginaries we encountered whilst studying peer production to list the benefits commons-based and commons-oriented peer production could contribute to humanity and the biosphere. To this end, the next and final chapter of the *Handbook of Peer Production* outlines guiding strategic principles and concrete policy proposals for progressive social change. Though we hope others will find these useful, this is not our main concern: the primary audience for this final chapter, as implied by its title ("Be Your Own Peer!"), is ourselves. It is meant as a resource that we can, with as much success as events will afford us, put into practice.

Originally published as:

Mathieu O'Neil, Sophie Toupin and Christian Pentzold, What's next? Peer production studies? In: M. O'Neil, C. Pentzold & S. Toupin (Eds.), *The Handbook of Peer Production* (p. 394). Malden, MA: Wiley-Blackwell, February 2021.

BE YOUR OWN PEER! PRINCIPLES AND POLICIES FOR THE COMMONS (EXTRACT)

Issue	Problem	Solution	Policy
• Dominant ideology of individualism and competition	• Lack of appreciation for cooperation and the commons	• Increase societal recognition of contributions to the commons	• Promote value of common goods and celebrate champions in school curricula • Recognize and teach indigenous sovereignty (land, data, etc.) • Map common goods
• Industrial production and consumption • Automation	• Environmental costs • Exploitation • Job loss	• Develop circular economy • Work less or less intensely • Re-localize food production • Localize energy production	• Authorize local energy grids • Include agricultural skills in school curricula • Tax incentives for food and tool co-ops • Develop microgrids
• Dominant and alternative ideologies: necessity of technological innovation	• Environmental costs • Loss of autonomy	• Promote re-use of objects • Promote DIY skills • “Degrowth” and “slow data” • Discredit consumption of new goods	• Tax incentives for the consumption of recycled goods • Include practical repurposing skills in school curricula
• Voluntary production of common goods not recognized as socially or financially worthwhile	• Crisis of measure: which contributions to the commons are meaningful?	• Increase economic recognition of contributions to the commons • Connect common goods sector to trade unions, civil society, political parties	• Contributory activities enable contributors to acquire social rights or points • Tax incentives for non-profits and cooperatives • Universal Basic Income or free public services
• Open source licensing	• Enables free riding by commercial actors	• Distinguish communal and commercial uses of commons and charge accordingly	• Copyfarleft licensing
• Practical knowledge on how to set up local cooperatives not readily available	• Reliance on personal networks, social selection	• Increase access to practical, legal, and technical know-how	• Establishment of web sites gathering practical, legal, and technical advice

Originally published as:

Mathieu O'Neil, Sophie Toupin, & Christian Pentzold, Be Your Own Peer! Principles and policies for the commons. In: M. O'Neil, C. Pentzold & S. Toupin (Eds.), *The Handbook of Peer Production* (p. 402). Malden, MA: Wiley-Blackwell, February 2021.

THE OPEN-SOURCE WORLD IS MORE AND MORE CLOSED

'Another digital world' emerged in the 1990s, alongside the information technology industry. Geographically disparate volunteer developers formed communities to collaborate on software projects that competed with so-called proprietary or commercial alternatives; some of the best-known examples are the Linux operating system, the Apache HTTP server and the VLC multimedia player.

These developers gave up their exclusive rights to their creations not just because their work provided its own rewards (satisfaction, learning, reputation, job offers), but also for moral reasons. A so-called 'copyleft' licence (such as the General Public Licence, GPL) grants users the rights to use, copy, modify and distribute computer code, on condition that these freedoms are preserved in all derivative versions of the software.

Where does the free software movement stand today? It has been co-opted, integrated and taken over by the Silicon Valley giants, Google, Apple, Facebook, Amazon and Microsoft (the 'GAFAM' or Big Five), to the point that 'open-source' software — a term the industry adopted to talk about free software without mentioning freedom[1] — is now at the heart of the digital economy.

According to a 2018 survey of 1,200 IT professionals, more than nine out of ten applications contain code from the open-source world[2]. The integration began in the early 2000s at IBM and was completed in 2018 with Microsoft's $7.5bn takeover of the collaborative development platform GitHub. Companies pay some developers, profit from the free work of volunteers — and critical intellectuals, who saw open source as a tool for liberation, are left hanging in the breeze[3].

TWO KEY PLAYERS

In this process of appropriation, two entities have played a key role in bridging the gap between the commercial world and the FOSS project world[4]. First, GitHub, the platform that hosts software development, created in 2005 and now a central node with some 40 million users and 190 million code repositories. Its very centrality discouraged FOSS activists from leaving the platform after Microsoft acquired it. GitHub's success stems from its collaborative model and the

fact that volunteer contributions, listed on individual developer profiles, in effect constitute their CVs.

The other key player is the Linux Foundation, launched in 2000 as a non-commercial home for the Linux free operating system, developed by Finnish-American developer Linus Torvalds. Its purpose is to facilitate the use of Linux by producing technical specifications, code and professional certifications. From a legal standpoint, it is a non-profit consortium that defends the interests of its member companies, which include most of the Big Five. Its expansion has been astonishing: in 2013 the Linux Foundation was running ten projects, generating $23m in revenue and had 39 employees; five years later it had 156 projects, $81m in revenue and 178 employees[5].

In its PR, the Linux Foundation emphasises the importance of documentation and security to 'professionalise' development and reassure non-tech companies that use open-source software. It's careful to present a unifying image: at its big-budget conferences, keynote speakers from Intel and GitHub speak up for the poor Chinese 'devs' (developers) prevented by their authorities from contributing to 'the commons'.

Above all, the Linux Foundation stresses the idea that companies and collaborative projects form a single 'community'. Employees of commercial companies systematically use this same word in presentations at professional conferences, to underline the convergence of interests between volunteers and employees collaborating on projects[6].

Companies that publish code on GitHub also stress the 'community governance' of their projects, as anyone can submit a change for approval by the original author — allowing commercial companies to retain final say, while giving the illusion of horizontality... The same vision of 'a united community' also recurs in articles in the trade press about co-production between commercial companies and volunteer projects.

SURVEILLANCE CAPITALISM AT WORK?

Such a convergence is no coincidence. This Orwellian inversion of the positive meaning of terms such as 'community', 'collaboration' and 'openness' is characteristic of surveillance capitalism[7]. In reality, the interests of communities of volunteers and predatory corporations only coincide to the extent that the former are increasingly subject to digital predation by the latter. For example, the Big Five capture research co-produced with academia: between 2014 and 2019, 78.3% of Microsoft's 17,405 employee publications were co-authored with academic

researchers; in the same period, the company secured 76,109 patents, of which only 0.2% were shared[8].

Another technique is for companies to extend R&D opportunities to young developers; then, when these creators present their innovations, the company cuts them loose and creates its own version. Google ATAP and X Labs, the R&D divisions of Google's parent company Alphabet, have made this their speciality, but Facebook does it too[9].

Why have copyleft licences such as the GPL failed to protect the open-source world from Big Tech predation? Partly because Google took them over and torpedoed them. Google built its domination by using the Linux kernel as the basis of the Android operating system for smartphones. But the public licence obliged Google to publish the source code of its modifications to this free software, so Google developed its own operating system, Fuchsia, which is not subject to a copyleft licence.

The GPL has also suffered from the development of cloud computing: the storage and processing of data on remote servers rather than on users' devices. Most copyleft licences, including the GPL, only guarantee access to, modification of, and redistribution of the source code of software if it is distributed to users — in other words, transferred and installed on their devices. But they do not apply when the software runs on Big Tech's servers because the software is not downloaded, but used remotely.

The FOSS world tried to create effective copyleft licences against 'cloudification' (with, for example, the Affero General Public Licence), but Google fought it tooth and nail. Had it been adopted by many players, this licence would have forced Google and others to share the source code of software running on their servers, even for users accessing the software remotely. As a result, Google has simply banned its use in its products [10].

DIVISIONS WITHIN THE INDUSTRY

Not all tech companies share this attitude to open-source software. Analysing presentations by tech employees at three major open-source conferences reveals a clear division between large groups such as the Big Five and smaller companies. In contrast to Big Tech's economic model and community claims, the smaller players have a critical vision more focused on the sustainability of projects. Their employees stress the importance of licences and respect for FOSS principles, while Big Five employees just keep saying these issues are no longer of interest to most contributors.

Sharing and transparency are two founding values of free and open-source software. Big Tech devotes so much time and resources to nourishing the illusion that it belongs to the voluntary collaborative universe because it knows its position is morally untenable. To fight them, it's vital to reiterate that the founding principles of open-source software are being systematically and cynically flouted by these companies. But who needs to hear this criticism? The public? Developers?

People care little about the principles of FOSS software, but are sensitive to issues of privacy and surveillance. Given the scandals that have tainted the reputation of the Big Five, ordinary users could gradually adopt decentralised platforms and services from the open-source world, such as the 'archipelisation' proposed by the Framasoft association to create partnerships between different kinds of structures, the Matrix open standard for secure and decentralised real-time communication, and Nextcloud, a file-hosting and collaboration solution with an open architecture[11]. However, realism demands we recognise that these solutions, despite occasional successes, cannot compete with the almost infinite range of the Big Five's services, particularly when it comes to cultural content.

The battle has never been evenly matched, and the employment status of some open-source developers in large companies as well as the dominant discourse that defines innovation solely in terms of private investment and start-ups are crippling the resistance. FOSS communities have traditionally formed as collective entities in response to attempts to appropriate programs.

NEED FOR WIDE DISCUSSIONS

The situation calls for a broad debate within these communities. When Oracle acquired Sun Microsystems in 2010, the deal threatened some of the open-source projects Sun supported, and community members decided to build an alternative open-source version of the MySQL database management system, which they renamed MariaDB. Removing from appropriation the entire digital infrastructure of the Internet, built on open-source software (such as Linux, Kubernetes, and more generally the entire software stack on which commercial clouds are built), and from there search engines, social media and other service platforms for businesses and ordinary users, is inconceivable without public support.

In contradiction to both firm and community culture, what's now needed is the connection of FOSS and the state. In a context of increasing automation and unemployment, there are urgent questions about the recognition of voluntary contributions

and the relationship between the cooperative, state and private sectors.

For example, the Appalled Economists (an anti-neoliberal association) and the late French philosopher Bernard Stiegler have proposed variants of 'social drawing rights', which would allow those who contribute to the commons to accumulate access rights to social services. But can the FOSS software community form itself into a political entity that reflects not just on software, but on society as a whole? Can it challenge productivist orthodoxies and the infinite development of computing power? Everything in the past suggests not. But if it is to succeed, it must.

[1] Evgeni Morozov, 'The meme hustler', *Baffler*, Cambridge, Massachusetts, April 2013.

[2] Keenan Szulik, 'Open source is everywhere', blog.tidelift.com, 12 April 2018.

[3] See Sébastien Broca, 'Fighting the online giants', *Le Monde diplomatique*, English edition, September 2014.

[4] See Benjamin Birkinbine, *Incorporating the Digital Commons: Corporate Involvement in Free and Open Source Software*. University of Westminster Press, 2020, and Arwid Lund and Mariano Zukerfeld, *Corporate Capitalism's Use of Openness: Profit for Free?*, Palgrave Macmillan, New York, 2020.

[5] Bradford Biddle, 'Linux Foundation is eating the world', *Journal of Open Law, Technology & Society*, vol 11, no 1, 2019.

[6] Mathieu O'Neil, Xiaolan Cai, Laure Muselli, Fred Pailler, Stefano Zacchiroli. *The Coproduction of Open Source Software by Volunteers and Big Tech Firms*, News and Media Research Centre / Digital Commons Policy Council, Canberra, 2021.

[7] See Soshana Zuboff, 'Once we searched Google. Now it searches us', *Le Monde diplomatique*, English edition, January 2019.

[8] See Cecilia Rikap and Bengt-Ake Lundvall, 'Big Tech, Knowledge Predation and the Implications for Development', *Innovation and Development*, London, 2020.

[9] *Wall Street Journal*, New York, 9 August 2017; *Fortune*, New York, 15 June 2016.

[10] 'AGPL policy', Google open source, https://opensource.google

[11] See https://framasoft.org; https://matrix.org; https://nextcloud.com

Originally published as:

Mathieu O'Neil, Laure Muselli, Fred Pailler and Stefano Zacchiroli, The open-source world is more and more closed, *Le Monde diplomatique*, English edition, January 2022.

ANNOUNCING THE CREATION OF THE DIGITAL COMMONS POLICY COUNCIL

Once regarded as marginal curiosities, commons-based peer production projects such as free and open source software and Wikipedia now define industrial innovation and hold the key to societal cohesion.

'Digital infrastructure' (also known as free and open source software) constitutes the 'roads and bridges' of the digital economy. After IBM's initial adoption in 2002 and Google's launch of Android in 2008, Microsoft's acquisition of GitHub for $7.5 billion in 2018 epitomised the shift from an 'informational capitalism' organised around the protection of IP to a nimbler 'digital capitalism' which integrates the digital commons into its ecosystem.

As for Wikipedia, long derided as 'untrustworthy,' it now represents the only realistic response to societal maladies such as misinformation and the distrust of scientific knowledge: made-up conspiracies based on 'doing your own research' are systematically weeded out on Wikipedia (provided the article has a reasonable number of contributors). Everyone can see how the epistemic sausage is made; everyone is treated the same. This explains why right-wing conspiracy theorists now claim Wikipedia has a 'left-wing' bias: because their lies are not tolerated.

We are not suggesting that free and open source software and Wikipedia are perfect — issues such as sexism, inequality and (on Wikipedia) regulatory inertia are well documented — but all the same, their benefits are near-immeasurable.

In short, peer production is now triumphant. It propels technological innovation, it defeats misinformation! But it also faces a severe lack of recognition. Wikipedia and free and open source software's radically collaborative mode of production and significant contributions to society and industry are not well understood in the broader community.

Further, the integration of free and open source software into dominant for-profit ecosystems constitutes a potentially deadly peril, as the advent of cloud computing and Software as a Service (SaaS) negate the reciprocal capacities of popular copyleft licenses.[1]

RECOGNITION FOR VOLUNTEER WORK AND THE COMMONS SECTOR

We believe an academic journal does not represent the most effective means to promote the societal

recognition of the digital commons, or to oppose the threats they face. It is time to develop new tools. The work of the P2P Foundation, Commons Transition, Communia and Commons Network shows the way, but more organisations and initiatives that can facilitate connections between peer production and traditional institutions are necessary. In the context of widespread automation leading to increasing rates of unemployment in many sectors, there is a need to develop the means to gain more space and recognition for volunteer work and the commons sector from states and firms. Too often, unpaid digital labour producing digital commons is captured by 'free riding' entities who benefit without contributing to their sustainability in return.

To this end, in 2021 members of the *Journal of Peer Production* community began working on a new 'think tank': the Digital Commons Policy Council. The Digital Commons Policy Council (DCPC) documents initiatives seeking to expand the digital commons and to use the digital commons to transition to a more ecologically sustainable and fair society. It also seeks to increase the recognition of the social benefits of the digital commons and of the volunteer labour which produces these common resources. It does so by producing evidence-based public reports and how-to guides, and by making submissions to government. The DCPC's website is dcpc.info. We present below existing and planned DCPC reports.

For the DCPC: Kit Braybrooke, Angela Daly, Mathieu O'Neil, Stefano Zacchiroli

TITLE The coproduction of open source software by volunteers and big tech firms

AUTHORS O'Neil, Cai, Muselli, Pailler, Zacchiroli

RELEASED 9 JUN. 2021

This report maps how firms are collaborating with communities of unpaid volunteers to produce open source code, used in the 'digital infrastructure' which powers the contemporary networked economy. The IT news media, big tech firms and commercial foundations define firms and projects as a unified 'community.' Yet big tech firms such as Amazon are using cloud computing and Software as a Service to transform open source software, which is intended to be shared and modified, into closed assets. The report outlines strategic responses to big tech appropriation and reviews current debates about the recognition of volunteer work, money in FOSS, software licenses and universal basic incomes. The report also features invited comments exploring alternative perspectives by French open source specialists from the fields of academia, industry and activism, such as Framasoft.

TITLE 2016 Debian Project survey: Work and volunteers

AUTHORS O'Neil, Zacchiroli, de Blanc

RELEASED 16 DEC. 2021

Debian is a free software distribution (a distribution is a software suite comprising an operating system and applications). Established following a community model in 1993, Debian aims to be a 'universal' system both in the sense of operating on as many architectures as possible and of featuring as many application packages as possible. Its robustness and strict adherence to the principles of free software have made it legendary. Debian is used by organisations, governments, and individuals all over the world, including much of the critical digital infrastructure that runs daily life. This survey, held in 2016, inaugurated our inquiry into the relationship between volunteer work in free and open source software and broader dimensions of work and employment. There was great interest for this survey within the Debian community, and 1,479 people responded.

TITLE Report on the production of digital commons and on the conditions of the organisation and action of the Digital Commons Policy Council

AUTHORS DCPC

RELEASED forthcoming 2022

[1] In a 'traditional' mode, a software program is downloaded and executed by customers on their own hardware. In a SaaS mode, the program is never transferred onto the customers' machines, but is executed remotely on the provider's hardware, and used online (e.g. within a Web browser). With SaaS, service prevails over use: a subscription to a service is bought, rather than a user licensing agreement being accepted for software copied onto the user's computer. This creates a SaaS 'loophole' in the FOSS principle as implemented by most FOSS licenses, as the service provider is no longer obliged to offer access to the code: as SaaS software is not 'distributed,' it fails to trigger the reciprocal character of licenses such as the GPL (to be sure, a significant amount of FOSS is not distributed under a copyleft license, but under more permissive licenses such as MIT or BSD which are chosen by firms precisely because they do not contain the reciprocal characteristics of the GPL).

Originally published as:

Kit Braybrooke, Angela Daly, Mathieu O'Neil, Stefano Zacchiroli, The triumph of peer production? Announcing the creation of the Digital Commons Policy Council, *Journal of Peer Production* #15 TRANSITION, March 2022. http://peerproduction.net/issues/issue-15-transition/jopp-in-transition/announcing-the-digital-commons-policy-council/

DIGITAL LITERACY: USING WIKIPEDIA AS A FACT-CHECKING TOOL

CAN WIKIPEDIA BE USED AS A LEGITIMATE SOURCE?

In November 2021 we published an article in *The Conversation* which obviously touched a nerve since it was shared by around 7,000 readers. The article, 'Students are told not to use Wikipedia for research. But it's a trustworthy source', derived from our observation that first-year university students are being held back by an outdated view of Wikipedia, which they were taught in school.
Given the usefulness of Wikipedia as both a source of information and as a media literacy teaching tool, this article was intended to change the narrative around Wikipedia. It represented the first step in a pilot project investigating the use of Wikipedia as a fact-checking resource in schools.

RESEARCH PILOT IN SCHOOLS 2022

This pilot project started in Semester 1, 2022 with Year 4, 5, and 7 students in four classrooms at three ACT schools. Our educational resources, co-developed with school teachers, first outline traditional and crowdsourced means of generating and accessing encyclopaedic knowledge. Through engaging and interactive scenarios, we then aim to instil fact-checking 'reflexes' in students — i.e. when should you check the veracity of a claim? Thanks to structured feedback sessions with teachers and a survey held before and after the project began, we seek to find out how students reacted to these scenarios, and whether their fact-checking skills improved.

So, what should teachers know about Wikipedia?

Wikipedia started in 2001. It has matured over the past 21 years to become a trusted resource on the internet, and is the only not-for-profit platform of the most visited websites.

HOW DOES WIKIPEDIA MAINTAIN CONTENT THAT MEETS ACCEPTABLE STANDARDS FOR USE IN EDUCATION, WITH AN INCREASING NUMBER OF THIRD-PARTY INFORMATION SERVICES, GIVEN IT CAN BE EDITED BY ANYONE?

Wikipedia has community-enforced policies on neutrality, reliability and notability. This means all information 'must be presented accurately and without bias', sources must come

from a third party, and a Wikipedia article can only be created if there has been 'third-party coverage of the topic in reliable sources'.

For popular articles, Wikipedia's online community of volunteers, administrators and bots ensure edits are based on reliable citations. Popular articles are reviewed thousands of times and it's virtually impossible, for instance, for conspiracies to remain published on Wikipedia. Some media experts argue that because of this painstaking process, a highly edited article on Wikipedia might be the most reliable source of information ever created (Bruckman, 2022). By comparison, traditional academic articles — the most common source of scientific evidence — are typically only peer-reviewed by up to three people and then never edited again.

Less frequently edited articles on Wikipedia might be less reliable than popular ones. But it's easy to find out how an article has been created and modified on Wikipedia. All modifications to an article are archived in its 'history' page. Disputes between editors about the article's content are documented in its 'talk' page.

WIKIPEDIA AS A TOOL FOR FACT-CHECKING

Research suggests Australian children are not getting sufficient instruction in spotting fake news. Only one in five young Australians in 2020 reported having a lesson during the past year that helped them decide whether news stories could be trusted (Notley et al., 2020). At a time when it's increasingly difficult to separate truth from falsehood, Wikipedia is an accessible tool for fact-checking and fighting misinformation. Time is precious, so engaging with spurious online content, and potentially falling down misinformation rabbit holes, wastes a most valuable commodity — our attention.

Here are three ways teachers can train students to be effective fact-checkers using Wikipedia.

- Encourage students to use lateral reading when they encounter unfamiliar information. Go to the relevant Wikipedia page to check its truthfulness. If the unknown information isn't verifiable, they can discard it and move on.
- Help students to identify signs of Wikipedia articles being unreliable (such as warning banners or the lack of references). Students can also be taught to find and analyse the 'history' and 'talk' pages of an article, which provide clues about the article's reliability.
- Teach fact-checkers to make a beeline to the authoritative references at the bottom of each Wikipedia article.

In the future, we hope first-year university students enter our classrooms already understanding the value of Wikipedia. This would mean a widespread cultural shift has taken place in Australian primary and secondary schools. In a time of climate change, pandemics and war, everyone needs to be able to separate fact from fiction. Wikipedia can be part of the remedy.

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Notley, T., Dezuanni, M., Zhong, H. & Chambers, S. (2020). *News and young Australians in 2020*. apo.org.au/node/306717

WIKI IN EDUCATION RESOURCES

Reading Wikipedia in the classroom — Teacher Guides: Using Wikipedia to foster media and information literacy skills:

- https://commons.wikimedia.org/wiki/File:Reading_Wikipedia_in_the_Classroom_-_Teacher%27s_Guide_Module_1_(English). pdf
- https://commons.wikimedia.org/wiki/File:Reading_Wikipedia_in_the_Classroom_-_Teacher%27s_Guide_Module_2_(English).pdf
- https://commons.wikimedia.org/wiki/File:Reading_Wikipedia_in_the_Classroom_-_Teacher%27s_Guide_Module_3_(English).pdf

Originally published as:

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DCPC22

RADMIN

DCPC22

DIY THINK TANK

DCPC22

PAY ATTENTION TO WHAT YOU PAY ATTENTION TO