tripleC 18(2): 613-621, 2020
http://www.triple-c.at

Should We Look for a Hero to Save Us from the Coronavirus? The Commons as an Alternative Trajectory for Social Change

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Abstract: The coronavirus outbreak has come in the aftermath of other concerning and disastrous events, from the rainforest fires in the Amazon to the wildfires of Australia. So far, the political response worldwide has been limited to identifying the villain and the hero who will first invent the life-saving vaccine. However, in a time of crisis, it is becoming obvious that the problem is not external but rather embedded and systemic. We argue that a political economy based on compound economic growth is unsustainable. While the pandemic is no proof of the unsustainability of economic growth as such, the speed and scope of this disease are driven by the interconnectivities of accelerated globalization. Through three ongoing cases, which we have been studying following a participatory action research approach, we discuss an alternative trajectory of a post-capitalist future based on the convergence of localized manufacturing with the digitally shared knowledge commons.

Keywords: commons, degrowth, peer production, sharing economy, post-capitalism

Acknowledgement: We are grateful to L'Atelier Paysan, Nicolas Garnier and Alekos Pantazis for the digging tool photos; to Wind Empowerment members 500rpm, RurERG and Tripalium for the wind turbine photos; and to Vasilis Niaros for the face shield photos. V.K. and A.P. acknowledge funding from the European Research Council under the European Union's Horizon 2020 research and innovation programme (grant agreement No 802512). K.T. acknowledges funding from the Hellenic Foundation for Research and Innovation (HFRI) under the HFRI PhD Fellowship grant (Fellowship Number: 632).

1. Introduction

The coronavirus outbreak has come in the aftermath of other concerning and disastrous events within the past nine months alone. From the ravaging rainforest fires in the Amazon to the wildfires of Australia (Watts 2019; Cordell and Morton 2020), every month the world has been hitting a new milestone in the trajectory of the climate crisis. Connections may still not be proven between this outbreak – or others yet to come – and the environmental degradation and disruption of ecological systems, but scientific claims indicate they are surely not unrelated (Vidal 2020). After all, the global epidemic scenario has been on the list of possible climate-related threats long enough that no

Date of Acceptance: 11 August 2020
Date of Publication: 17 August 2020

one can pretend to be taken aback (2020). Even considering that it came sooner than expected (National Intelligence Council 2017), the level of awareness and preparation worldwide was low.

The deadly virus scenario is amongst the terrifying disasters that make a popular action film, right next to alien invasions and natural disasters. And yet there seems to be no devastating threat, from floods and tornadoes to extra-terrestrial invaders, that cannot be solved by a Hollywood superhero. Pop culture does not operate in a vacuum: the stories we tell ourselves reflect who we are and how we think the world works (Klein and Warner 2016; van Zoonen 2007). Likewise, in the face of the coronavirus pandemic, the political response worldwide is limited to identifying the villain (Finnegan 2020) and the hero who will first invent the life-saving vaccine. But not all imminent disaster scenarios have to be the same. A blockbuster script often comprises an 'external' threat, be it a mutated virus, aliens or (un)natural disasters, a stereotypical villain and an equally stereotypical hero. However, we argue that currently the threat is not at all external, but rather embedded and systemic. Hence, any possible solution to the problem must also be embedded and systemic.

2. The Pandemic of Growth

A number of authors have taken issue with the unsustainability of compound economic growth (for a review see Kallis et al. 2018), criticising the "green growth" thesis according to which policy and technological fixes alone are sufficient to avert future socio-ecological disasters, not least climate change (Hickel and Kallis 2020; Magee and Devezas 2017). This 'degrowth' literature points to the increasing social and ecological costs of growth that in high-income countries have rendered growth 'uneconomic', and argues for rethinking human economies along the principles of care and commoning.

Epidemics happened in the past (Hays 2005) and will happen in the future (Kolbert 2020). The pandemic is no proof of the unsustainability of growth as such. Yet the speed and scope of this disease are driven by interconnectivities of accelerated globalization (World Health Organization 2015) – the spread of the virus followed the routes of aeroplanes. The growing ease with which viruses jump from animals to humans is conditioned by expansion of corporate agri-systems, encroachment of humans on habitats, and the commodification of wildlife – all integral to current growth economies. In turn, the austerity cuts that weakened public health systems and preventative control mechanisms were pursued in the name of growing the economy after the 2008 crisis. The reluctance of governments to act early in order to avoid economic costs, and the urge to reopen the economy as fast as possible, even at the cost of lives lost for the sake of the economy, are all in line with the "growth paradigm" (Schmelzer 2016) that prioritises the growth of GDP over human and ecological well-being.

The word "degrowth" signifies a path of becoming "slower by design, not disaster" (Victor 2008). With the emphasis placed on localization and low-tech, convivial tools are often viewed to suggest a sort of regression, and a rejection of the fruits of modernity. However, degrowth authors insist that they want to invite thinking beyond dualisms such as local versus global, high-tech versus low-tech, modern versus backward; and in this way open paths beyond what seems a "one-way future consisting only of growth" (Le Guin, quoted in Kallis and March 2015, 361).

The notion of the commons has been central in the degrowth literature (Kallis et al. 2020). The commons here are understood as forms of collective action, of coming together, that are not based on a logic of perpetual expansion, but of mutual and collective self-limitation. Commons systems carry the wisdom of self-organisation from past (pre-enclosure) times into the future, and demonstrate how social technologies

can be fruitfully combined with appropriate physical technologies, providing for real human needs. There is a lot to be learned in this respect both from “traditional” resource commons (Ostrom 1990) and from the emerging commons of geographically distributed communities connected through the Internet (Bauwens, Kostakis and Pazaitis 2019); to these we now turn.

3. Empowering the Local Economy through the Commons

The global response to the recent pandemic seems to match the banality of a war movie. Political leaders call for unity and faith (Smith 2020), while powerful nations alongside pharmaceutical giants compete to be the heroes in the vaccine saga (Sanger et al. 2020).

Meanwhile, dispersed, self-organised groups from around the globe share knowledge and experience to create collective solutions. They are building an expanding universe of commons (Bollier and Helfrich 2019). Driven by diverse motivations, people with no geographical proximity, and no predefined structures and roles, design and share creative solutions that can be produced, adapted, used and shared back, potentially by anyone, or with the help of an expert (Kostakis et al. 2018). The potential of the digital commons of knowledge, software and design, combined with localized manufacturing technologies (from 3D printing and CNC machines to low-tech tools and crafts) can be crucial in covering human needs, and even more so in crisis situations (Kummitha 2020). We briefly discuss three cases, which we have been studying following a participatory action research approach, to illustrate the contours and the possibilities of the emerging paradigm.

To begin with the agricultural sector: small-scale, organic farmers rarely find appropriate machinery to support their work (Giotitsas 2019). And even if they do, this requires important concessions in terms of autonomy (2019). So, a cooperative of farmers and engineers in France has designed and manufactured its own agricultural machines. The cooperative shares its designs with the world – as a digital commons. Two other networks of small-scale farmers, one from the US and another from Greece, in the latter of which the authors of this paper participate, have been doing the same. These three communities have connected and created synergies by improving the same digital commons of designs, knowledge and software. A fourth community from Bhutan has been benefiting from the existing digital commons in its effort to locally manufacture agricultural technologies customised to their needs.

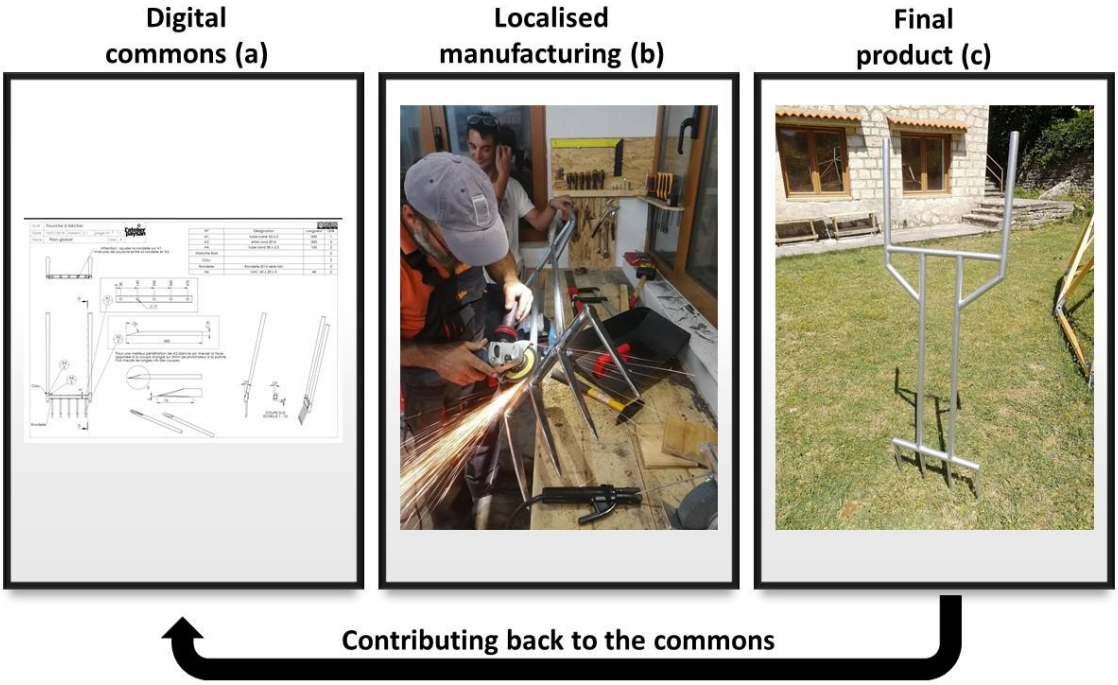

Figure 1: (a) The designs of the digging tool as provided by L'Atelier Paysan (France) under a Creative Commons license (Source: L'Atelier Paysan); (b) and (c) Tzoumakers (Greece) adapted the designs and locally manufactured their own digging tools. They are working with L'Atelier Paysan on how their adaptations and improvements can be integrated into the existing digital commons (Image courtesy of Nicolas Garnier and Alekos Pantazis).

Another imprint of this paradigm is found in rural electrification. An increasing number of people manufacture small wind turbines using locally available tools, skills and materials, and drawing from digital commons. The practice of "Locally Manufactured Small Wind Turbines" (LMSWTs) (Latoufis, Pazios and Hatziargyriou 2015) has been catalysed by Piggott's *A Wind Turbine Recipe Book* (2008), a manual documenting a simple yet robust design for manufacturing small wind turbines that can be adapted to different contexts. The open design has been embraced by multiple actors around the globe, who have adopted and modified it according to different needs, challenges and resources as these arise in diverse settings.

LMSWTs have been applied in rural electrification projects in developing countries (Latoufis, Pazios and Hatziargyriou 2015), as well as within educational projects elsewhere, due to their affordability and their orientation towards using local resources for manufacturing and maintenance, thus supporting the local economy and empowering local skills and autonomy. This type of technology empowers rural communities to improve their livelihoods without leaving their lands or altering them in ways that irreparably disrupt the local ecosystems (Kostakis et al. 2018).

Most of these initiatives act on the principles of open collaboration and knowledge sharing, feeding back newly created knowledge to the knowledge commons, interconnected at different scales: from regional networks that share technical and organisational expertise in France, Tanzania and Argentina to global networks that connect through digital and physical means. In 2011, several groups working with LMSWTs formed the Wind Empowerment (WE) association, to network most of the initiatives worldwide. WE, in which an author of this paper participates, today comprises more than 50 member organisations across South and North America, Africa, Europe and

Asia. Besides hosting digital channels of communication and knowledge sharing and organising a biennial international conference, WE has been empowering its members to perform joint projects and interdisciplinary research around LMSWTs.

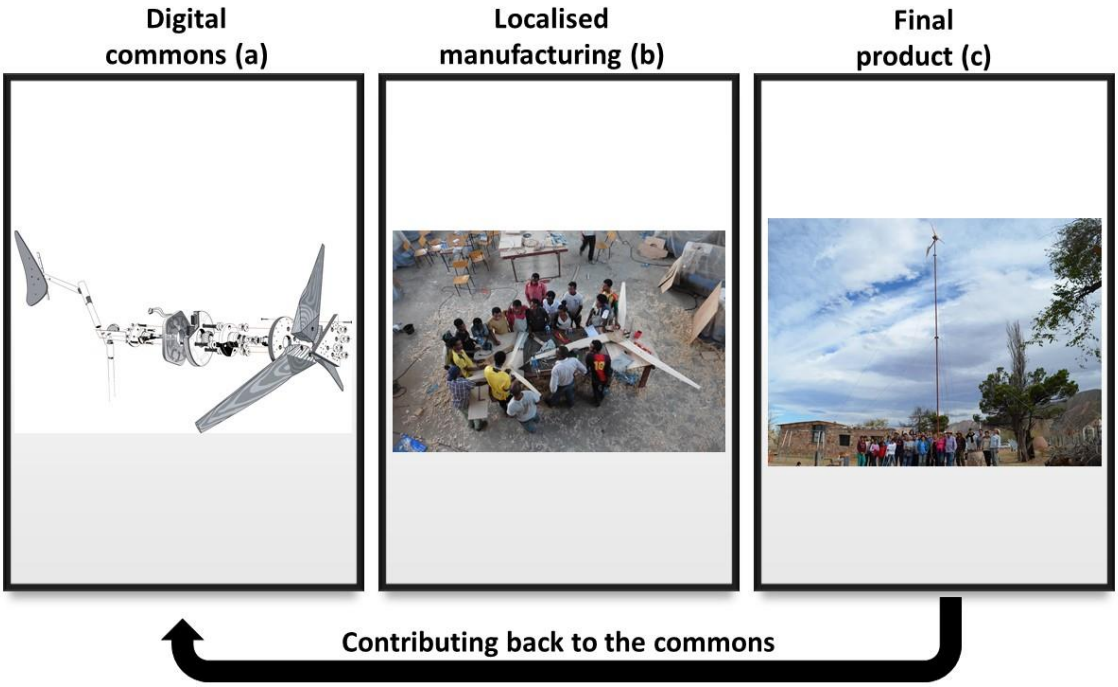

Figure 2: (a) Exploded CAD illustrating the components of the smallest small wind turbine described in Piggott (2008) (Image courtesy of Roland Beile and Tripalium); (b) Manufacturing small wind turbines with university students during a workshop in the Semara region of Ethiopia in 2015 (Source: rurerg.net); (c) Students of the rural school of Isonza, Argentina, local community members and members of the Argentinian organization 500rpm posed in front of the locally manufactured small wind turbine installed to electrify the school in 2015 (Source: 500rpm).

Lastly, in response to the coronavirus outbreak, similar groups began to organise to document knowledge and diagnostic methods and technological tools, or low-cost manufacturing of equipment (Coetzee 2020), to address the pandemic. For example, in Italy a hospital in Chiari was facing a shortage of respirator valves. The manufacturer was unable to respond to the increased needs but was reluctant to share the designs. So, a designer from Milan worked with another manufacturing company in Brescia to reverse-engineer the valve and produce it with a low-cost 3D printer, thus allowing its manufacturing potentially anywhere (Toussaint 2020). In Greece, two of the authors have been participating in similar initiatives that build on the existing digital commons and locally manufacture coronavirus protective equipment (from 3D-printed face shields to hand-sewn masks).

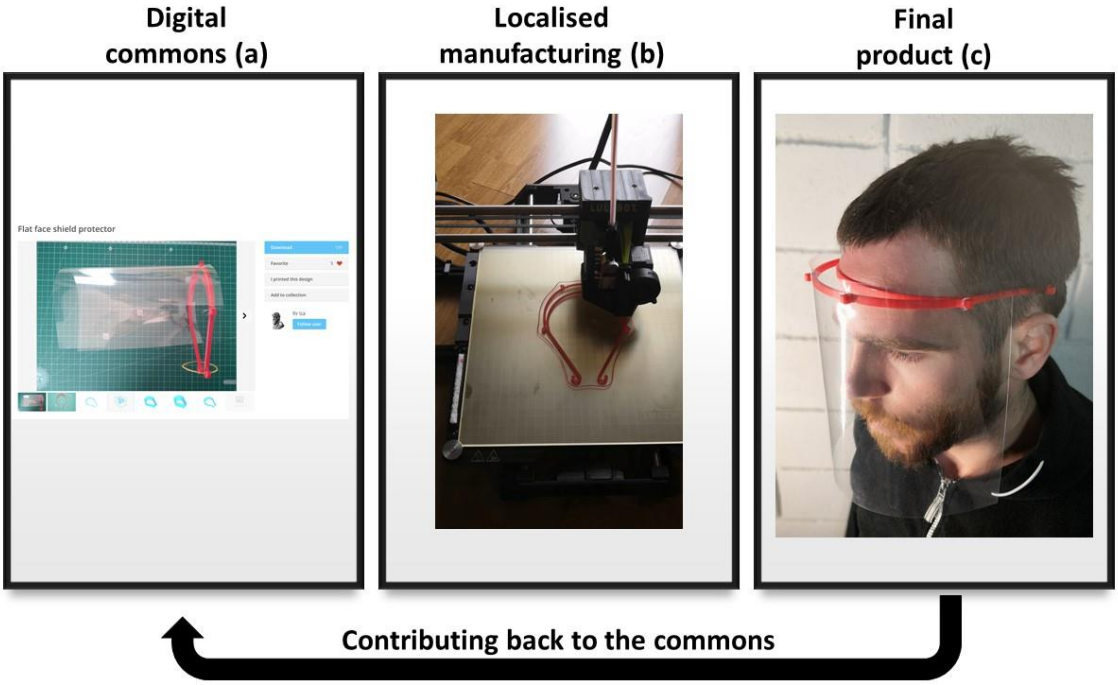

Figure 3: (a) The designs of the flat face shield protector available under a Creative Commons license (Source: https://www.youmagine.com/designs/flat-face-shield-protector); (b) and (c) 3D printing and then wearing the face shield protector in Ioannina, Greece (Image courtesy of Vasilis Niaros).

Thousands of experts, engineers and scientists can mobilise around such open projects and work on common infrastructures and protocols to better respond to crises. They could contribute to a lesser or larger extent with their knowledge and skills where they are most needed. Consider this: the knowledge and designs to produce vital equipment, like respirators or breathing masks, would be openly available everywhere. Local makerspaces could manufacture them with low cost, using shared protocols and practices, based on local materials and capacities, minimising dependence on global supply chains, or, in the case of a pandemic, reducing exposure to health risks. With more autonomy locally, and more sharing globally, more agile and resilient production systems may be created to better respond to global crises.

In contrast to growth-oriented "cosmopolitanism", such commons-based production initiatives may point to a "cosmopolitan localism" (Sachs 1992) or "cosmolocalism". The cases presented here do not fall easily into standard distinctions such as high-tech versus low-tech, global versus local (or globalization versus self-sufficiency). In line with degrowth principles (Kallis et al. 2018), they sketch an existing alternative economic paradigm that combines elements from the past and future in new ways, making advanced technologies with simple uses accessible to everyone. In putting human needs at their centre and over profit, and in facilitating a re-localization of productive activity (Kostakis et al. 2018), these technologies provide solutions with a broadly defined future beyond growth-based development.

Nevertheless, the cases outlined above do not provide a blueprint for commons-based transformation or reconfiguration. Rather, they emphasise the emerging post-capitalist dynamics from a techno-social perspective towards new ways to enact sustainable design and manufacture. Much research needs to take place from an institutional perspective, bearing in mind lessons learnt from the "traditional" commons scholarship (Agrawal and Gibson 1999) and the contradictions of the digital commons

(Fuchs and Horak 2008; Birkinbine 2018; Kostakis, Roos and Bauwens 2016; Roos, Kostakis and Giotitsas 2016).

4. Conclusions

This coronavirus may be the first in a series of massive extinction threats that current generations will be called to face. Most probably the current threat will soon abate, while effective treatment and vaccines will soon be available. However, we should not feel complacent and refrain from considering the embedded problems that made our societies vulnerable in the first place. We should radically reconfigure our lives and collective institutions. And the commons can be a transformative social, economic and political paradigm.

As long as we continue kick-punching climate change and global inequality; as long as we wait for our 'heroes' (e.g. donors) to save us, ignoring how much of their political influence they might use to erode, *inter alia*, public infrastructure and health systems (Schwab 2020); as long as we look for villains and respond to disasters with 'thoughts and prayers' as long as we keep confronting collective issues with individualistic means, we may further the destruction of the wealth upon which our survival and prosperity relies. Because the real wealth is not registered in big pharma bottom lines nor on stock market indices. It is composed by the people, the knowledge, the culture and the environment in which we are all embedded. And these types of global crises come to remind us of this inevitable condition.

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