Chapter 14

The open workshop WerkBox3 in Munich offers countless possibilities for DIY and DIT. (Image: Stephanie Schmitz)

Open Workshops: Collectively Creating and Using Infrastructure

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Open workshops have been Tom's main area of interest for years: first when he was one of the initiators of the open serigraphy workshop SDW-Neukölln, then as a founding member of the German Federation of Open Workshops (Verbund Offener Werkstätten) and since 2010 as a scientific collaborator of the anstiftung foundation, which advises, researches and networks do-it-yourself (DIY) initiatives and spaces. This text represents his personal views.

1. Doing things together instead of consuming alone: open workshops create commons-based free spaces for productive do-it-yourself and do-it-together cultures

The main goal of the open workshop mentality is to create and maintain easily accessible spaces containing a productive

infrastructure. These spaces can have many names: "DIY houses," "thing factories," "DIY workshops," "open labs," "co-making spaces" or "wood shops" and can represent different concepts, philosophies, proposals and types of equipment. However, they are all united by the idea of sharing know-how, tools and machines, technology, and materials in a space for common action.

These spaces are independent of external commercial interests and are open to anybody who wants to work manually, technically or artistically with a DIY philosophy. They are independent open spaces for independent work and initiatives —for young and old, amateurs and (semi-)professionals, artists and handicrafts producers, artisans and nerds, individuals and groups. Instead of replicating asymmetrical teacher-student structures, open workshops foster a free exchange of knowledge and a mutual teaching-learning process on equal footing. You could say that the ideal workshop project brings together the productive capabilities of a factory with the educational offer of a university and the comfort and social integration of a café or community center.

(Re)cultivating DIY open spaces as a common good
In the ultra-commercialized life of modern society, the idea of working with one's hands and using different materials, technologies, tools and types of equipment to do so has all but disappeared. In schools and public education institutions, the use of workshops is generally linked to specific course contents and, additionally, to the individual user's status as either school student, college student or apprentice. In other words, it is limited to a specific temporal context and is not an end in itself. The workshops of educational institutions respond to their intrinsic systemic goals, not to those of their users. For their part, most commercial workshops exist to produce or repair commodities, and are therefore organized according to market-based notions

of efficiency, are in private hands, and are not openly accessible, either. Then there are certain collaborative workshops offered as a leisure activity that tend to focus on specific products, i.e. on a temporary use in predefined and guided courses, and are rarely made openly accessible beyond this.

In our densely populated urban areas, space is a rare commodity. At the same time DIY is dependent on space, especially when it is seen in broader terms as social and self-empowerment on the basis of technical, mechanical, artistic and artisanal methods, techniques and processes – not just as tinkering (alone) in one's garage.

Open workshops take DIY out of basements and garages and create self-organized spaces for working together with others. DIY is a conscious act and open workshops create the open space for it. Here, the users can renegotiate what individuals can, should and are allowed to do as consumers. Those involved create ad hoc structures for the appropriation of education without external control, to test out new abilities, to realize the individual projects of its users and give rise to peer-organized commons. One of the main results is the creation of open spaces for exchange, mutual inspiration and support. Instead of commercial models, these spaces seek to test out social and economic "operating systems" that have the potential to replace monetary exchange in the long term with a system of contributions and communal responsibility. The goal of achieving the economic feasibility of an individual project through solidarity is thus more important than making a profit: added value for many, instead of profit for the few.

Doing things together and changing the world

Can "open workshops" be called a movement? Yes and no. "Open workshop" is not a uniform concept, but rather an umbrella term with many different subcategories, and a phenomenon that manifests in extremely diverse ways: from

informally organized groups to non-profit organizations and even commercial businesses. The one thing that can be said is that these new forms of sharing, exchanging, using and DIY can have system-changing potential, and open workshops are a part of this wave. Authors such as Jeremy Rifkin believe that the new game rules of so-called collaborative or share economies will replace the mechanisms of old-school capitalism in the middle to long-term. The authors of a recently published study on the potentials of the sharing economy in Berlin argue that the collaborative economy does not only change our lifestyles, but also the way we think, act and live together, our values.[1] Use instead of property and access instead of status: These ideas of collaborative action are continuously spreading to new areas of our globalized and connected society.

Some open workshop groups see themselves more readily than others as a movement or as part of a movement. It is clear, however, that especially younger generations of do-it-together practitioners are increasingly less willing to accept predetermined spaces and commercialized concepts. In addition, they not only demand the right to co-determination regardless of social or cultural background, but put this idea into practice in very concrete terms. They seek to foster self-sufficiency and innovation by creating spaces that are both playgrounds and laboratories of ideas – both a social experiment and proof that it is always possible to achieve more together than alone. In this sense, for the creators and users of open workshops, collective DIY and the open sharing of production expertise and means is more than just a leisure activity. It is an important building block in the foundation of a new (global) society based on the common good, on the principles of participation and solidarity, and on respect for our limited planetary resources. One of the core ideas is doubtlessly the common use of the material and immaterial means of production, and possibly even the democratization of production in the sense of self-empowerment.

Fab labs: From elite universities to grassroots practices

In addition to infrastructure for traditional forms of DIY, a very specific form of open workshop has become increasingly common in recent years: the fab lab (fabrication laboratory). The first fab lab was founded in 2001 as the result of a lecture series of the physicist Neil Gershenfeld of the Center for Bits and Atoms of the Massachusetts Institute of Technology. Under the slogan "How to make (almost) anything," his goal was to find out which machines and tools are necessary to manufacture all those things that can and cannot be bought, and thus design a set of equipment that is not made for mass production but for personal (digital) production, i.e. the production of things according to one's own ideas and needs. The basic equipment of the fab lab includes machines that normally belong in an industrial context, such as laser cutters, CNC machines (e.g. milling machines) and 3-D printers, which all work with digital templates. This concept created at an elite university has since grown into a global movement and is applied by a wide range of grassroots initiatives. The sharing of skills for working with computers and design and control software, as well as the operation of the machines themselves are all part of the basic educational concept of the labs. The Fab Charter[2] states the goal of giving individuals access to modern production means and processes in order to produce personalized single pieces or prototypes as a community resource. Currently, the platform of the international fab lab movement fablabs.io lists 1,325 facilities worldwide. At the 2018 version of the yearly international Fab Lab Conference the decision was made to set down common goals for the European region, increase networking, and strengthen collaboration beyond national borders and ideological differences.[3] One of the goals identified was to increase the chances of obtaining EU funding for non-academic grassroots initiatives.

2. Open workshops provide infrastructure for DIY from low to high tech, in the city and the country, and with easy access for all ages, educational backgrounds and social groups

The workshops listed on the platform of the Federation of Open Workshops (Verbund Offener Werkstätten e. V.) are a representative sample of all the different manifestations of the open workshop idea. Engineers and mechanical enthusiasts of every age, software developers, environmental technicians, artists, artisans, nerds, geeks and DIYers of all varieties see in open workshops a place of action that they then open up to a wide range of users, organizing and offering workshops and courses and advising and assisting others with their projects. Most workshops are individual initiatives, but some are a part of cultural, citizens' or youth centers or high schools or businesses. Some have been active for decades, others are just starting out. Some identify themselves with specific communities or concepts, such as the aforementioned fab labs, or have a thematic or technical focus with specific equipment, e.g. woodworking, bicycle repairs, metalworking, silkscreen printing, ceramics or the building of specific objects (such as cargo bikes). Some are multifunctional spaces that bring together different areas and types of equipment. These places enable diverse types of work with a wide range of materials and objects, including the development and building of complex machines and devices. It is interesting to note that, for most people, their participation in workshop projects does not (yet) replace traditional paid work. It is seen as a complement to or an expansion of their lives in ways not offered by their daily lives, jobs or formal education institutions. Thus, those spaces for action and experience that are independent of the market and the city and made possible through shared values in the community support the practical realization of more sustainable lifestyles: through making instead of buying, repairing instead of throwing away, open-

source instead of patents. Here we see potential cornerstones for new forms of economy.

Locally organized and (generally speaking) open

An open workshop is always an actual physical place. Its initiators are therefore locally active, managing schedules for open, restricted and supervised use, as well as the different courses, workshops and projects involved. Some projects follow the principle of "restricted openness," meaning that they are targeted at specific interest groups. Hackerspaces are an example of this, where those involved create infrastructure mainly for others like them, organizing exchange and meeting places for all types of IT fans dedicated to free software or Internet politics, or finding creative and unexpected approaches to hardware. We all know the stereotype of the nerd who is only able to or only wants to communicate with those "in the know." However, there has already been criticism, even from inside these groups themselves, of the fact that hackerspaces are only open to "compatible" people.

The participants: social competencies are crucial

Those involved in the different areas and currents where open workshops play a role share the vision that productive infrastructure should be made available as a common good and that access should not be determined by educational background, the size of a person's wallet or any cultural, religious or social factors.

A person's participation is not dependent on their level as an expert or beginner, or on their age, background or gender. The decisive factors are rather social competencies and the ability to work well in (heterogeneous) groups. Of course, in general the type of workshop determines its user to an extent, and so repair projects tend to bring together the generation of over 50s, whereas fab labs are usually a place for the young, well-

educated and tech-savvy. You won't necessarily find a unified political worldview shared by all, but then again that's nobody's goal. The glue that brings all these diverse initiatives together is common action and the search for openness.

Most of these projects don't take place within a structure of commercial services or paid work. Because of this, it is not always possible to make a clean split between organizers on the one side and users on the other. Most participants have multiple roles. (As in many community projects, around 80 percent of the common work is actually carried around by 20 percent of the people.) Open workshops are used as meeting places and places of action by a wide range of groups. Precisely because it is not a clearly defined concept, but rather a hands-on approach to implementing practical knowledge and manual skills in a new socio-spatial and material way, many of the aspects of open workshops can also be found in other currents, such as transition towns or urban gardening.

3. A lack of mutual awareness, commoning as a unifying element and common open spaces as a chance for the future

At present, degrowth debates and open workshop scenarios have hardly been brought together into a common vision of sustainable development pathways. More joint action could thus be effective in making core ideas and shared values visible. Commonalities will not manifest on their own. Local projects must know and be aware of each other in order to create a synergy effect. The magic word "networking" could, especially in the case of open workshops, lead to a more intensive and diverse use and therefore to a strengthening of a solidarity-based culture of contributions. This, in turn, promotes mutual inspiration and local support.

The inclusion of a wide range of movements in the project *Degrowth in Movement(s)* and their placement in the degrowth

context allows community resources to shine in a new light. It would be ideal for these different, isolated movements to bring together their common values and convictions. To do this we need common goals. The open workshops movement has the goal of promoting the existence of common infrastructure in concrete places.

Commoning as a unifying element

The experiences of those involved in the creation, operation and maintenance of open workshops are a valuable contribution to the development of stable structures for a peer and commons-based society. Collectivization, self-organization, and the focus on regional and local economic cycles — which are also a part of other currents and initiatives in the degrowth context – can all be found here, not as blueprints, but rather as practical examples of grassroots, open-source infrastructures. What is decisive for those involved is access, not the underlying relations of property: commoning as a lifestyle could be seen as a unifying example in the concrete places where participants of degrowth and open workshops are active.

Creating common, open spaces and infrastructure with the highest possible degree of plurality

Generally speaking, a local group of a movement will always try to create open, physical spaces to carry out community activities. This leads to the question: What would cities, towns and communities look like if multifunctional community spaces were a natural part of the landscape? And we are not talking about private property kindly made available to a specific group, but self-managed, self-organized collective property managed by a community of "users" that is as diverse as possible. In order to get close to achieving the maximum degree of plurality possible, without endangering cohesion,[4] it is necessary to have an open discussion regarding the commonalities, differences, sources of

conflict and existing and possible alliances between the different movements. In the second place, groups should dare more often to experiment with the creation of common, community-based infrastructure in real places. This should be done by groups that still don't realize that they can work together synergistically because of their (supposedly?) different approaches. In other words, the idea would be to create common open space irrespective of shared concepts in order to approach this ideal of maximum plurality and openness and to create realistic ad hoc structures for different groups to come into contact.

4. Open workshops as living labs? Instead of focusing on differences, we can turn to ideology-free spaces as a source of commons

Workshops follow an inherent logic and order that is more important than the individual interests of those that use them. A workshop is not an arbitrary space, but a specific arrangement of equipment and spatial functions. You have to *engage* with the workshop and throw out any ballast so as to develop individual sources of potential together with others in the space. Opinions, judgments and convictions are secondary when it comes to making the most out of such a productive setting. In this sense, workshops can be seen as spaces that provide "freedom from ideology."

The wide range of approaches brought together under the degrowth umbrella has given rise to struggles for the moral high ground that are not necessarily helpful when it comes to discovering deeper commonalities and shared concerns. Which is the right path? The fact that fab labs are gleefully used by some to produce plastic "toys" with 3-D printers, or blinking, beeping gadgets out of minicomputers, is for others a source of criticism: Who needs that? Whom does it help? Isn't this the opposite of degrowth? Isn't this another way for capitalism to subsume yet another movement because those involved just naively "play

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along," instead of fulfilling their potential to create new rules for the big game?

Open-source everything

Seen through a different lens, this supposedly naive "messing around," this new desire to deconstruct, understand and appropriate technology, is a sign that the preconditions for self-empowerment are changing. Today, affordable electronic parts, open-source software and hardware, readily available, comprehensive knowledge on any topic imaginable, as well as networking and exchange possibilities allow many to implement complex projects that would have been unthinkable a few years ago. Every day we use a significant number of products and services without understanding in the least how they work. To change something, you have to understand it first. The open-source paradigm (hardware, design) seeks to put an end to these black boxes and closed loops, and create openness. Now, it is possible to find freely available blueprints, designs and self-sufficiency concepts for all important areas of life, such as food, water treatment, energy, housing and mobility. High and low tech approaches thus come together time and time again in the search for developing "appropriate technologies."[5]

Together, different political currents could fertilize, "cultivate" and create awareness in the open-workshop culture, because "doing it yourself" doesn't necessarily mean producing in a sustainable or future-oriented way.[6] In other words, certain values and ideas from degrowth concepts could provide guidance to certain "doers," expanding their horizons and helping them find a context for their own action. In addition, open workshops are themselves living labs that can help find an economic system beyond the concept of growth. When people that normally don't have anything to do with each other "come together" in a productive exchange, things always start to get interesting. My suggestion is therefore that we dare to go into the "other

camp" and —instead of arguing about ethical questions or defending our personal truths— simply do something together and solve a (small) concrete problem through our own work. To put it broadly: therapy instead of diagnosis, concrete instead of abstract, doing instead of (only) talking.

5. Using existing infrastructure as a building block for a plural movement

Instead of always having to invest money, time and energy into equipping new spaces, existing infrastructure could be gradually made available for an open and self-organized use. (Free) space and equipment are essential resources for a strong, emancipatory movement. There is actually more than enough room and equipment to go around: there is a surplus, not a shortage. Schools are a good example. A large number of the existing schools in Germany have workshops, but they are only for internal use. There is no way to use them outside of courses and curricular programs without supervision or a set schedule. Thus, these workshops are often unused and empty, especially in the afternoon and evening. What if, in accordance with a broader vision of workshops, schools were to become a new place of (self) education in order to meet the need for self-organization and collaboration?

So why not make existing infrastructure, such as school workshops, available to independently organized workshop groups when they are not used? These rooms with equipment could be rented out with a series of rights and obligations, opening up a new space of opportunities without significant material investments.

It is still unclear how all this could be turned into commons-based infrastructure in the long run. To do so, it might be necessary to tackle the "holy cow" of private property and replace profit with social added value. The resulting, socially worked out set of rules for a solidarity-based approach to abundance—brought

about through small, organized local groups in a responsible social practice grounded in daily life— could perhaps be called a "pluriversalist system." This "vision" of using existing infrastructure differently without a "system reboot" and making this a reality through a convincing practical approach is in itself close to the degrowth vision. I refer to "degrowth approaches" here as a heterogeneous "melting pot" of different groups that makes it possible to implement this practice regardless of ideological differences – like a "real utopia."[7]

In order for the open workshops vision to truly release its society-changing potential, two criteria must be fulfilled:

- DIY – in its forms that highlight the idea of commons and the economic transformation of the system – will become increasingly important for a society that practices resilient and sustainable ways of living, and "doing things oneself" will stop being a niche and become part of the mainstream.
- These new peer and common-based operating systems will be flexibly adapted by each group to the local conditions and they will operate stably. In other words, there will be a comprehensive and reliable material and social responsibility for goods (such as spaces and equipment) that will be assumed by the collective, in a general environment of mutual respect and appreciation between all different enablers and commons practitioners.

In order for this to be successful, it is not only necessary to have alternative places of action but also a new understanding of what can be commons-based infrastructure and what these new forms of use could look like.

Translation: Santiago Killing-Stringer

Endnotes

1   Leisman et al., 2012.
2   Available at fab.cba.mit.edu/about/charter (Accessed 30 January 2019).
3   Memorandum of understanding, available at sites.google.com/view/europa-makes-network/home (Accessed 30 January 2019).
4   Alain Caillé uses the term "pluriversalism". See also greeneuropeanjournal.eu/the-convivialist-manifesto (Accessed 30 January 2019).
5   A definition by the Kollektiv für angepasste Technik (Collective for Appropriate Technology): kante.info/uber-uns/angepasste-technik (Accessed 30 January 2019).
6   Petschow, 2014.
7   Wright, 2010.

Links

Open source Hardware Association: oshwa.org
Repair initiatives in Germany: reparatur-initiativen.de
Verbund Offener Werkstätten, association of open workshops: offene-werkstaetten.org
Fab City – locally productive, globally connected cities: fab.city
Online social network of the international Fab Lab community: fablabs.io/labs/map
List of Hacker Spaces: wiki.hackerspaces.org/List_of_Hacker_Spaces
Map to find Maker Spaces: thisishardware.org/maker_spaces

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