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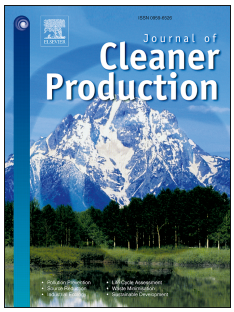

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Karin Bradley

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Bike Kitchens – Spaces for convivial tools

Karin Bradley, Department of Urban Planning and Environment,

KTH Royal Institute of Technology, 100 44 Stockholm, SWEDEN,

karin.bradley@abe.kth.se

Tel: +46 8 790 8591

Abstract

There is currently a marked interest in do-it-yourself culture and sharing of skills, tools and spaces, manifesting in maker spaces, tool libraries and open workshops for remaking furniture, electronics, bicycles or clothing. This paper explores the phenomenon of 'Bike Kitchens', do-it-yourself bicycle repair studios run on a non-profit basis. The Bike Kitchen in Malmö, Sweden, is used as a case study involving interviews with key persons and users of that Bicycle Kitchen and on-site observations. The exploration of the Bike Kitchen is situated in a wider theoretical discussion around technology in relation to degrowth. Two theoretical perspectives are used, firstly, Illich's (1973) notion of tools for conviviality, meaning tools that enable citizens to reconquer practical knowledge for autonomy and creativity rather than being confined to commercial relations, and secondly, forms of non-capitalist relations. It is argued that the Bike Kitchen is an example of democratisation of technology in practice – a social innovation to make low-cost technology, tools and know-how easily available to anyone. The concept of the Bike Kitchen is a way to develop and cultivate conviviality, i.e. a social and spatial infrastructure – a *space for convivial tools*.

Keywords: democratisation of technology; degrowth; Bike Kitchen; conviviality; low-tech; Do It Yourself

1. Introduction

In many European and North American cities, there is a renewed interest in do-it-yourself (DIY) culture and expansion of the collaborative economy that facilitates sharing of skills, tools and spaces. This is taking place in a contemporary context of economic insecurity, a widespread awareness of environmental challenges and/or fatigue with a consumerist culture (Botsman & Rogers, 2011). This contemporary DIY and sharing culture is manifested for instance in the form of maker spaces, tool libraries and open workshops for remaking furniture, electronics, bicycles, clothing, etc.

This paper explores the phenomenon of Bike Kitchens, which are DIY bicycle repair studios where citizens can borrow tools and space for repairing or building their own bikes. The idea of Bike Kitchens is that participants work on their own bike but also help each other, building a culture of collective learning (Johnson, 2014). Bike Kitchens also serve as recycling centres for unwanted bikes, enabling citizens to access spare parts or build entirely from old parts and they are generally run on a non-profit basis, using some form of volunteering system (ibid). Bike Kitchens, or community bike workshops, started to appear in Europe in the 1980s as well as in California more broadly in early 2000s (Luna, 2012). The phenomenon has since then spread to other cities and continents. In this paper the first Swedish Bike Kitchen, which opened in Malmö in 2011, is used as a case study.

This exploration of the Bike Kitchen is situated within a wider theoretical discussion around technology and degrowth and seeks to respond to the question of what forms of technology are relevant in a degrowth context. Schneider et al. (2010: 512-513) argue

that "[r]esearch and technological innovations in a degrowth trajectory would involve innovations for consuming less through lifestyles, political measures and technologies which embody appropriate and chosen limits, rather than continuous innovation to spur consumption". This paper provides an example of what this assertion could mean in practice.

There is an abundance of scholarly work on bicycle culture (e.g. Horton, 2006), urban planning and bicycling (e.g. Fleming, 2013) and bicycle activism (e.g. Carlsson, 2002). There are also shorter popular articles about bike kitchens (e.g. Luna, 2012; Johnson, 2014; Bliss, 2015 and hitherto unpublished research by Simon Batterbury[1]). However, no previous academic research has analysed bike kitchens in a contemporary theoretical context of degrowth.

Two theoretical perspectives are used here to analyse the Bike Kitchen. The first is Illich's (1973) notion of *tools for conviviality*, meaning tools that enable citizens to reconquer practical knowledge for autonomy and creativity, rather than being confined to commercial relations. The second is the role of *non-capitalist relations*, drawing on Gibson-Graham (1996, 2006) and, more specifically, the non-profit collaborative economy (Kostakis & Bauwens, 2014). By applying these perspectives, the Bike Kitchen is analysed not only in terms of the technology it deals with, but also in terms of how it is socio-economically organised, i.e. non-capitalist sharing of material resources and skills. The Bike Kitchen is viewed here as an example of the social economy, which Johanisova et al. (2013) describe as pivotal in the trajectory towards degrowth.

[1] See https://bikeworkshopsresearch.wordpress.com/, accessed 1 June 2016.

The paper illustrates how a convivial *tool*, as the bicycle, benefits from a convivial *space*, i.e. a Bike Kitchen. Through the social and material space of the Bike Kitchen, the tool can be collaboratively repaired, tinkered with, and 'hacked'. It is argued that the Bike Kitchen is an example of what democratization of technology could mean in a degrowth context – a way to make tools and low-cost technology easily available to anyone, facilitating for citizens to maintain, repair, self-build and appropriate bicycles, in a collaborative way, where the payment is sweat equity, rather than money.

2. Theoretical framework

2.1 Tools for conviviality

In spite of increased public awareness of environmental challenges, politics on sustainable development, corporate sustainability programmes etc., levels of material consumption and resource use continue to increase in the rich part of the world (UNEP, 2010). The degrowth movement is therefore not primarily concerned with how to "green" consumption, but more with finding ways to live well with *less* material consumption (Schneider et al., 2010). As Demaria et al. (2013) point out, there is a shared critique among degrowth researchers of ecological modernisation and the belief that new technologies and technological efficiency are the *primary* solutions to the ecological crisis. Nevertheless technological change and control over technology play an important role in contexts of degrowth, including low-tech and globally interconnected high-tech solutions.

This paper focuses on low-tech tools, more specifically the bicycle, and how access to and control over this tool can be democratised. Interest in the environmental aspects and democratisation of low-tech has its historical roots in Gandhian philosophy and in the 1970s movement for "appropriate technology" (Schumacher, 1973; Darrow & Sazenian, 1986). The latter movement grew out of the 1970s energy crises and was inspired by the writings of Schumacher (1973) and Illich (1973) in attempts "to create 'appropriate technologies' meaning tools and machines that could be made from locally available resources, that were scaled to steward rather than exploit their ecological surroundings, and that could be shared in a collaborative culture" (Rifkin, 2014: 121). In this movement, there was an interest in rediscovering, and in developing and upgrading, traditional technologies that had been abandoned in the rush towards modernisation (Rifkin, 2014: 122).

In the contemporary era of industrial production with planned obsolescence and technologies that tie consumers into buying new or constantly upgrading their products, the writings of Ivan Illich from the 1970s appear highly relevant (llich, 1973; 1974). Illich (1973) argued the importance of "tools for conviviality", describing these as tools that "foster conviviality to the extent to which they can be easily used, by anybody, as often or as seldom as desired, for the accomplishment of a purpose chosen by the user" (ibid: 22). Illich's use of the term conviviality differs from the more popular understanding of it as friendliness, sociability or geniality.[2] Illich (1973) defines conviviality as the opposite of industrial productivity, i.e. as autonomous and creative relations among persons, and between persons and their environment, without people

[2] See synonyms of conviviality in Oxford Dictionaries: http://www.oxforddictionaries.com/definition/english-thesaurus/conviviality, accessed 1 June 2016.

being reliant on a body of specialists controlling the tools or technologies necessary for a good life. A central issue for Illich (1973) is to strive towards autonomy, understood as the power to control the use of resources in order to satisfy human needs. In this sense, conviviality deals with control over resources and means of production, and hence bears certain resemblances to the Marxian notion of alienation. However, Deriu (2015: 80) points out a key difference:

> "…the alienation that Illich describes does not depend on the ownership of the means of production. It is not an issue of property or redistribution, but of the inherent logic embedded in the instrument. Certain tools are inherently destructive, maintains Illich, no matter who owns and uses them. According to Illich, some tools are designed to produce new demands and new forms of slavery, so as to make an industrial society with an intensive market economy indispensable."

Illich cites the bicycle, the sewing machine and the telephone as examples of convivial tools, as they empower individuals and increase the freedom to transport themselves, produce (sew) and communicate in a fairly autonomous way, being less reliant on costly transportation on high speed railways or motorways, clothing from distant industries or communication via controlled media. The television can be used as an example of a non-convivial tool, as it primarily entails passive consumption of standardised services. However, Illich (1973) did not argue for the abolition of industrial production, or non-convivial tools, but rather pointed out the importance of a balance between convivial tools and industrial production.

Illich (1973) also pointed out that commodification of needs actually *creates* scarcity. When people are able to grow food, make clothes or build houses by themselves, or collaboratively outside the market, there is little scarcity. However, when satisfying these basic needs is transformed into an issue of trading commodities on a capitalist market, scarcity is created. Illich (1973: 66) argued that:

> "Cars create distance. Speedy vehicles of all kinds render space scarce. They drive wedges of highways into populated areas, and then extort tolls on the bridge over the remoteness between people that was manufactured for their sake. This monopoly over land turns space into car fodder. It destroys the environment for feet and bicycles."

In another paragraph, he argued that "[c]ars are machines that call for highways, and highways pretend to be public utilities, while in fact they are discriminatory devices" (1973: 32). Hence according to Illich, the problem with mass motorisation is not the fossil fuel dependency, the resource use and the pollution (as eco-critics emphasise), or the exploitative capitalist car industry (as Marxist critics would argue), but rather an inherent characteristic of the car technology itself, which creates scarcity and limits autonomy.

Convivial tools are tools that enable people to satisfy needs with less reliance on the monetised sphere. A convivial approach to technology implies product design that allows users to learn about the technology, to tinker and modify the artefact. This can apply to low-tech tools such as the bicycle, which is fairly easy to understand, repair and modify. However, it can also apply to certain more complex digital technologies. It

should be noted that Illich's work was in fact an important source of inspiration for the early generation of hardware hackers and PC developers (Levy, 1994/1984). Lee Felsenstein, one of the early developers of the PC, had read Illich and wanted the PC to be a convivial tool (ibid.). He was a member of the legendary Homebrew Computer Club, which argued that every PC would need a computer club around it for tinkering and developing the technology.[3] Felsenstein hence viewed the PC not as a standardised product for passive mass consumption, but as a tool to be tinkered with and collectively developed, in order to free people from government and corporate control (Isaacson, 2014: 266). However, the development and use of the PC, have become largely commercialized and evolved in quite another direction compared to what Felsenstein envisioned. Nevertheless, the idea of building social spaces in the form of non-commercial institutions for building and tinkering with tools – be it computers, bikes or 3d-printers – resonates with Illich's philosophy that there needs to be social institutions that cultivate the continued conviviality of tools and generation of use value for people, protecting the tools from being commodified (see Illich 1978: 52).

2.2 Cultivating noncapitalist relations

A central concern in the degrowth movement is freeing the imagination from, and cultivating practices beyond, commercial and capitalist relations (Fournier, 2008; Schneider et al., 2010). As Johanisova et al. (2013) argue, this can mean for instance stimulating economic relations in the form of social enterprises, cooperatives or various forms of non-profit organisation orientated towards serving communities or a broader public interest. There is a long scholarly tradition amongst critical anthropologists,

[3] https://en.wikipedia.org/wiki/Lee_Felsenstein, accessed 5 January 2016.

feminists, ecologists and post-development theorists of highlighting the role of different forms of non-capitalist economies (e.g. Gibson-Graham, 1996, 2006; Henderson, 1999; Mauss, 2000[1925]; Polanyi, 2001[1944]). Gibson-Graham (2006: 70) uses the metaphor of the iceberg, arguing that wage labour in a capitalist firm is in fact only a small part of the larger "economy", i.e. it is the visible tip of the iceberg, borne up by a much larger body of different forms of non-capitalist economic relations – public non-commodity production, gifting, care-taking, local sharing and exchange schemes, bartering, self-provisioning, etc.

One example of non-capitalist economic relations is what Benkler (2006) has described as "commons-based peer production", which is similar to what Kostakis and Bauwens (2014) call the "for-benefit collaborative economy". Differing from both capitalist and socialist forms of production, Benkler describes this as a "third mode of production", characterised by being: a) based on contributions (rather than the notion of equivalent exchange), b) focused on meeting needs or the desire to work or create together (rather than making profit), c) conducted as peers (rather than in hierarchical structures), and d) based on an ethic of sharing and building commons (rather than private property) (Benkler, 2006; Bradley; 2014; Kostakis and Bauwens, 2014). Others, have described such practices as "commoning", i.e. producing, living off and through commons (Linebaugh, 2008; Bollier & Helfrich, 2015). Bollier and Helfrich (2015) point out that commons, be it fisheries, open-source software or physical common spaces, can only survive if practices of commoning are nourished, i.e. creating things together, the collaborative caretaking, the cooperation and joint action, taking place in and through the commons. Such practices of commoning can, as will be illustrated, be observed at Bike Kitchens.

3. The case of the Bike Kitchen

The case study of the Bike Kitchen in Malmö, Sweden, is used here as an example to address the question of what forms of technologies are relevant to a degrowth context. The term *Bike Kitchen* could be understood as a play with the notion of the soup kitchen, meeting basic needs available to all in a collaborative and non-profit way, based on donated food (or bike parts) (Rivera, undated).

3.1 Material and method

The Bike Kitchen in Malmö has been chosen as a case study, given that it was the first to open in Scandinavia, it is has become well-used and has served as a source of inspiration for several other kitchens to start up. Being situated in Sweden, the context is the affluent world, but Malmö has a working class history and in fact faced years of economic hardship after the ship-building industry closed down in the 1970s. There is a vivid alternative culture scene and Malmö has a long tradition of red-green political rule, supporting grass-root initiatives (Dannestam, 2009). Therefore it is perhaps not a coincidence that the first Bike Kitchen in Sweden, which also received economic support from the municipal authority, opened up in Malmö.

The empirical material on which the present analysis is based was obtained in interviews and on-site observations during two visits to the Malmö Bicycle Kitchen, the first in April 2014 and the second in June 2014. Semi-structured interviews were conducted with the initiator of the larger maker space house in which the Bicycle

Kitchen forms part (Maia), one of the initiators of the Bicycle Kitchen (Hans), one of the regular staff (Agneta) and one of the volunteers (Esteban), and short conversations were held with users on-site. The names in brackets are assumed names in order to keep interviewees anonymous. The interviews were recorded, while the short conversations with users on-site were not recorded. The interviews were conducted in Swedish and quotes that are used have been translated from Swedish to English by the author. The focus of the interviews was on the motivation behind, and the organisation of, the Bicycle Kitchen – exploring questions such as: Why it was started, what purposes it serves, how it is organised and who the users are. Hence, the ambition was not to evaluate the actual environmental or social effects, but rather to explore the ideas behind the Bicycle Kitchen. The research method was inspired by Gibson-Graham's (2014) approach of exploring and finding new ways to conceptualise diverse non-capitalist relations, however without entering the field with a fixed theoretical lense. The conviviality and degrowth lenses, were in fact something that came out of the empirical analysis paired with readings, rather than something being employed prior to the empirical analysis.

In order to contextualise the case of the Bicycle Kitchen in Malmö (section 3.3) and explore recurring ideas and organisational principles in other bicycle kitchens, reports, articles and websites of other Bike Kitchens or community bike workshops were studied. The initiator of the Gothenburg Bicycle Kitchen was also visited and interviewed. The background to and general ideas of Bike Kitchens are described in the section below (3.2).

3.2 The concept of the Bike Kitchen

Bike Kitchens started to appear in Europe in the 1980s and 1990s; an early recorded place is Vienna in the 1980s (Luna, 2012). Some of the early spaces, for instance in Berlin, were connected to the squatter movement and located in squatted buildings.[4] In the early 2000s bike kitchens or bike coops, can be found in cities as Berlin, Barcelona, Brussels, Milan, Rome and Toulouse, as well as in California – in Los Angeles, San Francisco and Sacramento.[5] Since then, bike kitchens have multiplied and can be found across the world – in Buenos Aires, Toronto, Minsk, Brussels, Dortmund, etc.[6] The initiators of the Bicycle Kitchen in Malmö were inspired by the Los Angeles Bicycle Kitchen.

The spaces may be called different names: bike co-ops/collectives, community bike workshops, bike churches or other locally invented names. However the common features are that it is a DIY repair workshop, a place to which anyone can come to fix their bike or build a bike from spare parts, with the possibility of asking for help and learning from others. All the necessary tools are available, as are knowledgeable volunteers – but the idea is that users help each other, thus building a collective learning process and a culture of sharing of space, tools and knowledge (Johnson, 2014). The Bike Kitchen also often serves as a recycling centre for unwanted bikes or bike parts.

[4] See the DIY bike repair shop "Fahrradswerkstatt" located in the squatted building "Regenbogenfabrik" in Berlin, http://www.regenbogenfabrik.de/fahrradwerkstatt.html, accessed 1 June 2016.

[5] See the research on community bike workshops by Simon Batterbury, https://bikeworkshopsresearch.wordpress.com/2015/03/07/hello-world/, accessed 7 June 2017.

[6] http://www.bikecollectives.org/wiki/index.php?title=Community_Bicycle_Organizations, accessed 11 November 2015 and the Google Map Earth's Community Bicycle Organizations, accessed 8 January 2016.

Housing companies, the police, citizens and/or local businesses donate old bikes or spare parts which people can then rebuild into functioning bikes.

A principal idea of the concept of the Bike Kitchen is that it is run on a non-profit basis. This can take different organizational forms, however, generally volunteer run (Luna, 2012; Johnson, 2014). Some Bike Kitchens have spacious facilities with fixed everyday opening hours, paid staff and regular educational workshops, whilst others manage on very low costs and are housed in cheap basements, or mobile units with more irregular hours. Some receive funding from public authorities, private foundations or community funding, others have small membership fees, or systems for voluntary user donations (Johnson, 2014). However, the intention is to have the space welcoming and available to all, particularly people with little money; often Bike Kitchens are situated in, or made specifically accessible to underserved communities and marginalized societal groups (Johnson, 2014; Bliss, 2015). In a compilation of tips on how to set up a bike kitchen (Johnson, 2014), it is pointed to the importance of seeing to that the kitchen's volunteers and staff reflect the diversity of groups that you would like the kitchen to serve. Another recommendation is to set up theme days or events that cater for specific needs; for example many bike kitchens have women's repair workshops or queer nights in order to counteract the dominant gender norms in knowledge of mechanics (ibid). Many bike kitchens are also active in politics and activism, such as Critical Mass Rides, around improving conditions for bicycling (Carlsson, 2002).

The Bike Kitchen is an open concept, not protected by licenses as for instance Fab labs, so it that can be copied and modified by anyone. Experiences from managing Bike Kitchens and tips for people who want to set up a new one are exchanged via forums

such as the Bike Collectives Network, the Bicycle Organization Project, regional networking projects (Cykelköket, 2013), conferences and Wikis.[7]

3.3 The Malmö Bicycle Kitchen

The Malmö Bicycle Kitchen is part of a larger maker space house called STPLN located in the Western Harbour area, which is currently being redeveloped from industrial use to housing, a university campus and a skate park. The STPLN house is a refurbished shipbuilding yard containing several different semi-independent workspaces. Apart from the Bicycle Kitchen, there is space for digital fabrication, a drop-in free co-working office space, a stage, textile workshops with sewing and knitting machines, and an educational centre for creative remaking and "upcycling".[8] The Bicycle Kitchen opened up in STPLN in 2011 and has spacious facilities with well-ordered tools, recycled bike parts – forks, handlebars, chains, pedals, wheels, etc. – and entire old bikes that anyone can take, as well as inner tyres available at cost price, since these are difficult to reuse (see Fig. 1).

[INSERT Figure 1. Recycled bike parts that can be freely used. Photo by the author.]

In the summer months, the Bicycle Kitchen uses the outdoor space just in front of STPLN and a modified shipping container to house its material (see Fig. 2). The Bicycle Kitchen has regular opening hours on certain weekdays as well as weekends

[7] See http://www.shareable.net/blog/how-to-start-a-bike-kitchen, accessed 8 January 2016, The Bike Collectives website http://www.bikecollectives.org/ and their Wiki http://www.bikecollectives.org/wiki/index.php?title=Main_Page, both accessed 11 November 2015.

[8] See STPLN, www.stpln.se, accessed 3 February 2016

and is open free of charge to anyone. The idea is to be welcoming and keep the rules simple and easily readable on walls at the site, stating: this is a *DIY* repair/build workspace, give others help and you are free to borrow tools and use spare parts (see Fig. 3). On certain days, the Bicycle Kitchen arranges specific courses for a small fee, for instance "The girls' repair course". There is also a "Bicycle library" that lends out cargo bikes and electric bikes.[9]

[INSERT Figure 2. The outdoor summer space of the Malmö Bicycle Kitchen. Photo by the author.]

[INSERT Figure 3. The rules posted at the Bicycle Kitchen, stating: 1. *"Hello, hello. Nice that you are here. Do you want to repair, change … build?"*, 2. *"Here are the tools you need. And here and here and here are used spare parts."* 3. *"You are welcome to ask if you need help. And help the one tinkering next to you."* Photo by the author.]

Hans, one of the initiators, explains that they receive plenty of donated bikes and that housing associations call them regularly and ask if they can come and collect unwanted bikes that take up unnecessary space. These are however in different states, e.g. some just need new tyres, while others need to be entirely rebuilt, work which will take weeks. He describes how material viewed by many as trash is turned into functioning bikes: "During the three years that we have been here, more than 1000 unwanted bikes have been repaired and are now being used, bikes that otherwise would have been sent to the incinerator."

[9] See Cykelbiblioteket, www.cykelbiblioteket.se, accessed 4 January 2016

The philosophy of Malmö Bicycle Kitchen is spelled out in a booklet as entailing environmental, social and economic aspects – to promote cycling, reuse old bikes, develop a culture of collaborative hands-on learning, promote gender equality in repair workshops and empower people to see that they can actually fix things themselves and become less dependent on buying products or services (Cykelköket, 2013). Maia, the manager of STPLN, explains the idea of the whole house:

> "The house is intended to act as infrastructure for people to develop production, a project or an idea, small or big. […] We want the house to be this infrastructure, the workspace you wish that you had in your garage or the textile printing space that you cannot fit into your living room". […] An open house."

There clearly was a need for such an open house and space for making and repairing in Malmö. Maia, Agneta and Hans, all describe how the Bike Kitchen is the most well-visited part of STPLN: just a few minutes after the space opens, it is generally filled with people working on their bikes. Hans describes the reactions from the users:

> "We have noticed that people find it is really fun to repair old things. It is like a new value is created when you have mended something yourself, rather than buying a repair service or buying it new. I would say this is a generation that is tired of the old buying, using and throwing away. And also they are not so used to doing things with their hands, haven't got them dirty, and when they get this experience it feels great. That you really need to press and punch, these are things you don't do in front of a computer […]. Then people come back, just to fix a

small thing, because it was fun, particularly if they managed to build a functioning bicycle from unclaimed broken bikes. So lots of people come back."

On the question of whether the Bicycle Kitchen is encountering hostility from bike dealers or commercial bike repair shops, Hans responded that this has not been the case. On the contrary, these actors have been positive about the Bicycle Kitchen – one bicycle dealer donated a whole set of new saddles. Hans argues that the commercial bike actors believe that the Bike Kitchen contributes to a growing bicycle culture and to more people potentially becoming and remaining cyclists.

Before the Bicycle Kitchen acquired its premises in STPLN, the initiators organised mobile repair workshops in different parts of the city. Then, via the non-government organisation STPLN (which receives permanent funding from the municipal authority), a three-year grant from a foundation[10] was secured, as well as some basic economic support from the municipal authority. This enabled the Bicycle Kitchen to cover the costs of a permanent space within STPLN and some staff salary. For three years the Bicycle Kitchen had funding to pay two part-time employees, but much of the work is done with the help of volunteers. Agneta, which is in her 50s points out that when she started as part-time staff at the Bicycle Kitchen she did not know much about bikes or how to repair them, but she has learnt, which signals to female visitors that the bike mechanics and using the Bike Kitchen is not only something for male bike nerds. The Bicycle Kitchen has also worked consciously to engage volunteers with diverse backgrounds. Esteban, a volunteer at the Bicycle Kitchen, is a newcomer to Sweden and

[10] Three year project funding from Allmänna Arvsfonden, a foundation gathering inheritances from people without close relatives.

for him volunteering at the Bicycle Kitchen is a way of getting into the society, getting to know people in Malmö and learning the language. He describes:

> "I wanted to learn how to fix bikes, when I lived in Mexico I was biking a lot, but had to go to a shop and pay for repairs, so I wanted to learn to fix bikes, then I heard about Cykelköket [the Bicycle Kitchen], and I went there and asked if they needed help, so I started. […] I go there every Monday, Tuesday and sometimes Sunday. […]. We talk, sometimes there is coffee and buns, you drink coffee, talk and work. There is no time pressure. We are all calm."

Esteban is also a regular visitor to the other parts of STPLN, the co-working space and the textile workshop, and describes STPLN as his second home. He explains that since he does not have a residence permit, he is not allowed to work and have an income:

> "…but I wanted to do things and work, but I couldn't get money for it. It was a bit boring first, but then [when I found the Bicycle Kitchen] it was super fun, it was a new way of working – to give resources and to get from others. […] Everyone has something they can give but they don't always know how and when."

Hans and his co-initiator are bicycle enthusiasts and had not realized how many different functions the Bike Kitchen actually would come to serve. He describes how the space proved to have social effects beyond what they had envisioned:

> "What has happened, unexpectedly, is that this place has turned out to be a great social meeting place for citizens of Malmö. On an ordinary evening you will hear

around five different languages here. People come here because their friend is repairing a bike, so they come along, drink some coffee and just hang out here because it is a really nice place."

Hans and Agneta also reported that the users are of all ages, genders, with varying ethnic and socio-economic backgrounds, coming from different parts of the city, with varying forms of knowledge and skills. In fact, they come together through a common interest in doing practical repair work. There is a slight dominance of male visitors, something they try to counteract with arranging the "Girls' repair course" and engaging female volunteers. Middle-aged high-income earners might be underrepresented, but based on on-site observations, there are indeed people of various ages and backgrounds that come to the space.

Despite the Bike Kitchen being immensely popular and well-visited, as well as receiving the City of Malmö's Environmental Prize in 2015, the municipal funding ended in the summer of 2015, as did the three-year foundation funding. This meant that the Bicycle Kitchen had to find new ways of meeting costs. A membership organisation to which regular users pay a small annual fee (approximately 10 Euros) was started, the hours open to the public were restricted, courses were organised and the bicycle library was started.

The Malmö Bicycle Kitchen has hence been successful in several respects. However, it has also faced difficulties, primarily with its funding. It has received considerable media coverage (e.g. Jeswani, 2011; SVT, 2012) and has inspired people in other places in Sweden to start Bike Kitchens.

4. Analysis

4.1 The Bike Kitchen as a space for convivial tools

As noted above, the bicycle is a clear example of a convivial tool. It is fairly easy to understand, to repair, to tinker with, and to make fit the purpose chosen by the user. It can be modified to include child seats, cargo boxes, electric motors, different forms of brakes and gears, etc. While most bicycles are industrially mass produced, they can be maintained and developed by everyday people, and users can even build new bikes from spare parts. As a cyclist, at least in a fairly small city such as Malmö, users are not dependent on having to pay for public transport or a car. Motorways, subways and other capital-intensive infrastructure are not needed for the bike. Bike paths are at least less costly compared to roads. In this way, cyclists do not need to be reliant on a body of specialists in order to use, repair and remake bicycles. This is precisely in line with how Illich (1973) defined a convivial tool.

However, the focus in this paper is not primarily on the tool itself, but more on the socio-economic and physical space of the Bike Kitchen. It can be argued that the Bike Kitchen is a way to enhance the conviviality of an already convivial tool. Through the Bike Kitchen, repair and tinkering skills are collaboratively developed, tools and space are shared, and hence what is necessary for maintaining or building an individual's means of transport becomes available outside the money-based sphere, meaning less dependency on the industrial and consumerist system. In this way the Bike Kitchen functions as a non-commercial social and physical infrastructure that promotes the continued conviviality of the bicycle and protects it from being commodified. This also

applies to preventing commodification of the repair and maintenance *services* need for the bike. As has been illustrated with the Malmö Bike Kitchen, external funding sources can help improve the facilities and the openness of the space, however it also makes the Kitchen more vulnerable the day when funding streams dry up. Certain Bike Kitchens have as part of their strategy decided not to take on municipal or private funding, but entirely build on the engagement of its users. Bike Kitchens are of course not entirely independent of monetary flows or the commodity market, the rent of the space needs to be paid, the kitchen relies on that somebody else has bought (and abandoned bikes), etc, however, the users do not need to pay any fees, but rather "pay" with their own time and engagement.

4.2 The Bike Kitchen as a commons-based peer economy

The operations at the Bicycle Kitchen can be regarded as an example of non-capitalist relations and forms of work. More specifically, the operations can be interpreted as an example of a commons-based peer economy (Benkler, 2006; Kostakis and Bauwens, 2014). The work at the Bicycle Kitchens is conducted in the form of peer-to-peer relations (rather than in the form of buyer-seller, boss-worker relations), it is based on contributions (rather than equivalent exchange), it has the aim of creating use value (rather than exchange value) and it is run on a not-for-profit basis. The bikes are private property, the space is owned by the municipality, but the socio-cultural entity of the Bicycle Kitchen is a collaboratively created and managed commons based on an ethic of sharing and common ownership of the tools, skills and social place. The users are, to various extent, engaged in practices of commoning, through being at the space and

helping others in a collaborative effort to repair and build bikes, they contribute to and benefit from the sociomaterial commons that the Bike Kitchen constitute.

4.3 The relevance of Bike Kitchens in a context of degrowth

A path towards degrowth entails less use of non-renewable resources, e.g. downshifting and/or reuse, repair and sharing of resources, relocalisation of economies, democratisation and cultivation of non-capitalist forms of economies and relations (see e.g. Demaria et al., 2013; Johanisova et al., 2013; Schneider et al., 2010). These dimensions of degrowth are all facets of the Bike Kitchen. Together with tool libraries, maker spaces, seed swaps, food sharing and ride sharing schemes, the Bike Kitchen has become a symbol of the contemporary wave of sharing and DIY culture and the non-profit sharing economy (see Bliss, 2015; Johnson, 2014). The Bike Kitchen is particularly relevant in contexts and amongst people who cannot afford, or do not want to be reliant on, capital-intensive modes of transport or commercial bike repair services.

It can be noted that the Bike Kitchen in Malmö is situated in an affluent societal context, but still have relevance in a society where there is abundance of unwanted bikes and bike parts and where at least some citizens have an interest in and time for DIY culture. Also, they are often situated in and/or organized so as to cater for underserved communities, socioeconomically or otherwise marginalized societal groups. In the case of the Malmö Bike Kitchen its location, in somewhat of a post-industrial no-mans-land, not being claimed by one specific social group, is a key to attract users from diverse backgrounds.

The prime relevance of Bike Kitchens is perhaps in a context of economic hardship, where people have to get by on a constrained budget and where public transport systems are limited or underfunded. In cities that have faced an economic decline, such as Detroit in the USA, where several bus lines have been closed down, low-cost DIY transport becomes necessary. In such contexts, Bike Kitchens could be particularly useful.[11] In a society with a growing bike culture like Malmö, there appears to be little or no competition between commercial bike dealers/repairers and the Bike Kitchen. However, one could imagine that the situation might be different if biking culture was more saturated, as in a presumptive degrowth context, then the competition might be more fierce between market and non-market bike operations.

5. Conclusions

As regards the question of what technologies are relevant in a context of degrowth, this paper shows that one relevant form of technology is the bicycle or, more specifically, the spatial, material and social infrastructure of the Bike Kitchen. The Bike Kitchen is an example of what democratisation of technology can mean in practice – a way to make low-cost technology, tools and know-how easily available to anyone. The concept is a way to develop and cultivate the conviviality of a convivial tool, just like open maker spaces are being developed around using and tinkering with digital fabrication. Operations at the Bike Kitchen, just like those in many maker spaces, are examples of non-capitalist forms of social relations and work. A conclusion of this paper is hence

[11] Detroit has several bicycle kitchens, for instance FenderBender – a women, queer and trans bicycle workspace. See http://fenderbenderdetroit.org. accessed 8 January 2016.

that these non-profit collaborative spaces could be understood as *spaces for convivial tools*, i.e. social and physical institutions that prevent commodification and cultivate the continued conviviality of the tool and generation of use value for people, which are just as important as the convivial tools themselves. It is hence pointed out that technologies relevant for a degrowth trajectory also need sociospatial settings that can foster conviviality. Bike Kitchens alone might play a marginal role, however seen together with the development of other non-commercial spaces for repair, making and tinkering as Fab labs, maker spaces, tool banks, and DIY repair workshops, these could potentially impact people's ability to understand, get access to and appropriate different forms of technologies.

It should be noted, however, that the DIY and conviviality culture of Bike Kitchens stands in contrast to other trends. Commercial bicycle dealers have started to develop concepts with life-long services included in the price, while private-public partnerships around bike sharing schemes, where corporations own, maintain and charge for the bicycles, are growing in many cities in the world (Fishman, 2015). While these trends might result in more people finding it easier to use bicycles, the systems involved are unconvivial since they lock the users into commercial systems and foster little individual understanding or scope for tinkering with the tool. In light of this development, socio-material spaces that cultivate non-capitalist relations, which the Bike Kitchen is one example of, gain increasing relevance.

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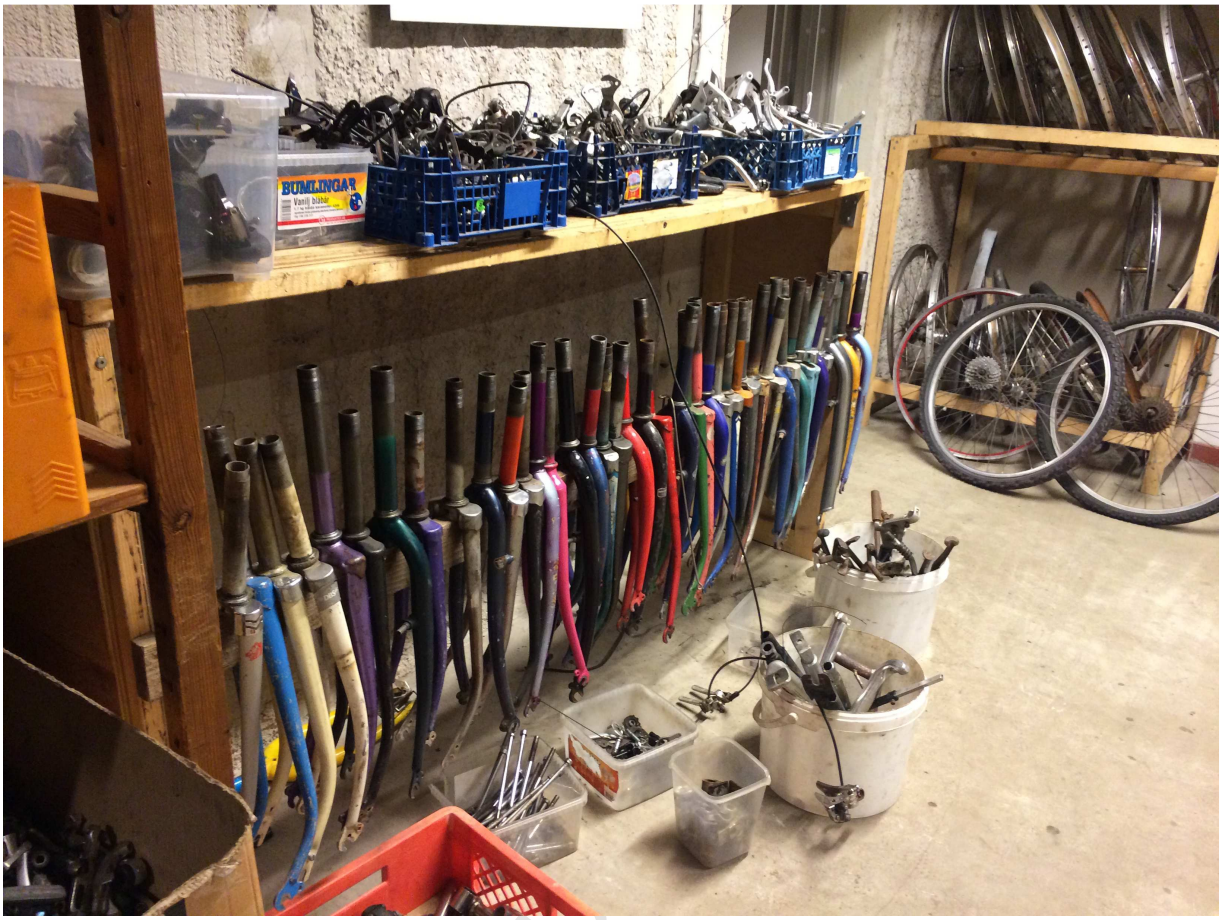


1.
"God dag, god dag, Kul att du är här. Ska du laga, byta ut ... bygga?"
2.
"Här är verk-tygen du be-höver. Och här och här och här finns begagnade reserv-delar.
3
"Fråga gärna om du be-höver hjälp. Och låna ut en hand till den som mekar intill."
CYKELKÖKETS V