

Michelle Poon; Wilhelm E.J. Klein

Identity Crisis in the Pearl River Data. A Conversation with the Hong Kong Hackerspace Community

2017

<https://doi.org/10.25969/mediarep/1136>

Veröffentlichungsversion / published version
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Poon, Michelle; Klein, Wilhelm E.J.: Identity Crisis in the Pearl River Data. A Conversation with the Hong Kong Hackerspace Community. In: *Digital Culture & Society*, Jg. 3 (2017), Nr. 1, S. 159–184. DOI: <https://doi.org/10.25969/mediarep/1136>.

Erstmalig hier erschienen / Initial publication here:

<https://doi.org/10.14361/dcs-2017-0111>

Nutzungsbedingungen:

Dieser Text wird unter einer Creative Commons - Namensnennung - Nicht kommerziell - Keine Bearbeitungen 4.0 Lizenz zur Verfügung gestellt. Nähere Auskünfte zu dieser Lizenz finden Sie hier:

<https://creativecommons.org/licenses/by-nc-nd/4.0>

Terms of use:

This document is made available under a creative commons - Attribution - Non Commercial - No Derivatives 4.0 License. For more information see:

<https://creativecommons.org/licenses/by-nc-nd/4.0>

Identity Crisis in the Pearl River Delta

A Conversation with a Hong Kong Hackerspace Community

Michelle Poon and Wilhelm E.J. Klein

Abstract

This paper is a conversation-based reflection on hacker-, maker- and DIY-culture. It focuses on the unique cultural and socio-economic setting of Hong Kong, using Dim Sum Labs, its first hacker/makerspace as its primary subject of investigation. To provide context, we begin with an outline of the cultural, economic and physical challenges presented by Hong Kong. We then proceed to present and relay conversation pieces from interviews with members and non-members of Dim Sum Labs, who speak about their respective perspectives on notions of “hacking,” “making” and “DIY-culture.” Finally, we provide some reflections on our own experiences as members of the hacker/maker/DIY-culture and past directors of Dim Sum Labs.

Hacking and making

Open any newspaper these days, flip through some of the pages and you will almost certainly come across some article that makes reference to a topic related to hacking, making and do-it-yourself (DIY) practices. You may find an article, for example, about someone somewhere, who used 3D printing technology to produce prosthetic hands for children.¹ Or about how a project called “real vegan cheese,” by some self-proclaimed bio-hackers in the middle of nowhere who is trying to train yeast to produce the necessary building blocks needed for vegan yet authentic, real cheese² (Wohlsen 2015). Things one would have assumed to require the resources and facilities of at least a major corporation or university suddenly seem to be assembled in backyard sheds and kitchen sinks. Flip further to the business section, and you will find articles about *Uber* and *Lyft*’s recent market evaluation, *Facebook*’s “internet-for-all” aspirations and maybe about the latest sharing-economy app, *Pooper*, helping you to get rid of your best friend’s sidewalk

1 See Enabling the Future (2016) and The Open Hand Project (2016).

2 See Real Vegan Cheese (2016).

droppings.³ These news items could be seen as products of a different kind of DIY, the *Silicon Valley* variety, where small software-based companies often jump-start within just a couple of years or even months (while many start-ups likewise crash and burn instead). Keep turning pages and you may arrive at international affairs and politics section with articles about another *WikiLeaks* release, a quote by Julian Assange or Edward Snowden and maybe an article about *Anonymous* or the *Chaos Computer Club* engaging in some sort of activism on matters of global privacy, surveillance and the abuse of government or corporate power.

All these developments refer to a shared theme: using technologies in ways different from the average user. Some individuals seem to pick up their gear and make and hack and modify their houses, their computers, their jobs and their political environment. It appears that, in recent years, a significant increase in hacker-, maker- and DIY-culture has become evident. Self-repair, self-upgrade, jail-breaking (of smartphones) and various other modifications seem to become more prevalent. At the same time, new tech-related companies seem to pop up every other day. Just a few years ago, you probably had no idea what a selfie stick was, what “drop me a pin on whatsapp” or “snap me that” meant (and what role they could play in your life). Yet today this seems to be very much part of everyday life. Similarly, global politicians probably never envisioned having to care as much about user-level peer-to-peer encryption, the political effect of automated twitter bots (Kollanyi/Howard/Woolley 2016), profit-seeking Macedonian fake-news creators (Kirby 2016) and “cyber-vigilantes” leaking their secrets (Sharma 2015). Interestingly, articles about these phenomena: 3D printing, entrepreneurial news and political digital activism, all seem to use the same word “hacking.” Is this mere media-confusion failure of semantics? Or is there really something that connects these seemingly different notions of hacking? What is hacking? What is making? What is DIY-culture, and how are all these notions connected?

This paper seeks to examine these questions through the lens and in conversation with members and affiliates of *Dim Sum Labs*, Hong Kong’s first hacker/maker spaces. While the contemporary portrayal of a hacker is typically situated in “cyberspace,” that is presented as lines typed on *IRC*, code running in some *Linux* shell or ominous online-avatars, much, if not most of real-world hacking/making, actually takes place in real physical spaces. Be it a college computer society, a local meetup group, a corporation or a hackerspace, contrary to fictional and pop-culture examples like *Mr. Robot* or *Anonymous*, many hackers and makers do like to meet in person, in a designated place. Physical spaces and face-to-face contact are valuable when it comes to collaboration, mingling and socialising, in addition to the technical side of things towards hacking and making (Moilanen 2012; Schön/Ebner/Kumar 2014). There is good reason to argue that social presence

3 Fortunately (or maybe unfortunately for some?), this app turned out to be a hoax (Brulliard 2016).

enables a different mode or quality of human interaction in which meta-questions such as the one about hacking and making “in principle” may arise – which may be further influenced by additional factors (such as the organisational structure of the group, projects and so on) (Olson 2000; Trainer et al. 2016). And although this has yet to be formally researched, according to our own experience, the more diverse the group of people, the more influencing factors are present, the more complex the conditions, the higher the potential for conflict and polarisation as well as creativity and innovation. *Dim Sum Labs* is exactly this kind of place. A place where people come to discuss, socialise, hack and make in a very unique setting, unique in terms of geography, culture, politics and diversity. Accordingly, we believe that the conversation with members and affiliates of the space, as presented in this paper, provides some interesting perspectives on the diversity of notions of *hacking*, *making* and *DIY-culture*.

More about *Dim Sum Labs*

Before presenting the conversations, we will provide some more information about the context they took place in. *Dim Sum Labs*' history is not unlike that of many other hackerspaces. It began in 2010 as informal weekly meetings (called *HackJam*) in Hong Kong's first co-working space, *BootHK*.⁴ After about a year, with more regular and dedicated participants, it seeded the idea of establishing a physical space to call their own. After some time, a lot of hard work and dedication, *Dim Sum Labs* had found a home in a commercial building located right in the middle of one of its busiest districts, *Sheung Wan* (Lanyon 2013). From the very beginning, the space was defined not by a unified identity, but by the heterogeneity of its founding community. What we shared though was a fundamental intent to create and provide a space of education, inspiration and freedom to explore equipment and tools tinker around projects and join on-going discussion about everything and anything related to technology, art and science. The original founding “manifesto” states:

“The objects for which the Association is established are:

- A. To promote and support science, engineering and art;
- B. To provide a physical location for members to practice their interests in science, engineering and art;
- C. To provide a forum for members to find like minded people to further their interests in science, engineering and art;
- D. To foster collaboration between its members and members of similar organizations in other jurisdictions;

4 *BootHK* began in Hong Kong's Wanchai district by Jonathan Buford and William Liang, a few of the founding members of *Dim Sum Labs* (*BootHK* 2016).

- E. To provide a platform through which to raise the awareness amongst the general public of practicing science, engineering and art in everyday lives, and to foster this culture in Hong Kong”

Involvement ranged from weekend hobbies, such as a *maneki-neko* (Japanese beckoning cat) that meowed when one approached it, or long-term developments such as *Ambi Climate*, an IOT-based add-on for air conditioners. Education included introducing children to the possibilities of 3D printing and laser cutting with craft workshops or classes on field-programmable gate arrays (FPGA). However, discussions surrounded new developments, the existential argument over the identity of *Dim Sum Labs* or even simply how the bills are going to be paid next month.

Situated in a unique setting like Hong Kong, such aspirations are bound to be majorly influenced by the external factors and constraints of the city. Issues of identity with respect to the socio-political surroundings are particularly cognizant in a place like Hong Kong, which has its own identity crisis with respect to its political history. The precarious balance of local traditions and new urbanism is constantly under threat. Cramped for space, the towers push back the sky, as the epitome of a vertical megacity. As the physical landscape is compacted to the limits, the borders of each district converging upon one another, these edge conditions collide into forms of tactical urbanism. The cracks and fissures allow participants in the city to engage in insurgent acts upon the urban landscape; they instigate change, offer their own solutions to local problems and reclaim space from the city (Lydon et al. 2012).

As there are differing scales of these tactical activities, one may take the rhizomatic *Kowloon Walled City* as a prime example for people-driven re-calibration of an urban space. Its beginnings were founded on principles of feng shui,⁵ facing the open sea with the mountain range flanking its rear. History took its toll upon the city, stuck in a tug of war between the British and Chinese occupation, as a military watchpost to management of salt production. During World War II, entering the Japanese occupation, the outer walls of the village were dismantled in order to build the Kai Tak Airport. Lost to decrepit remains, it attracted squatters and other less-fortunates, and by 1947 after World War II and China’s own civil war,⁶ it became the de facto asylum for post-war refugees (Sinn 1987). The shady history of *Kowloon Walled City* can be attributed to its political anomaly – within British territory, but outside British Jurisdiction, with the Chinese keeping what they found significant until denying responsibility for the district. Without central planning or approval, inhabitants transformed the space into an anarchist enclave,

5 Feng shui (風水) is the Chinese philosophy of creating a harmonic balance between people and built-environment with respect to qi, (氣), energy or life force.

6 Generally speaking, the civil wars involving the Kuomintang and the Communist Party of China (CPC) spanned about 23 years, beginning in 1927. The occurrence of World War II (and Japanese presence) added complication to the numerous conflicts.

where building and infrastructure developed organically. The lack of ordinance and sheer density allowed for an incalculable labyrinth, naturally unnavigable by strangers. Makeshift tunnels and bridges linked separate buildings, overlapping and fusing into one another. Unable to expand beyond its limits, both vertically and horizontally, use of space was dictated by its ever-changing requirements – shop-fronts had forgone concrete walls for metal grilles in order to display more wares while allowing for narrow passage, while in the evening those closed-up shop-fronts would erupt into lively games of mahjong. As resources were scarce, many if not all of the machines and appliances were either self-built or highly modified and constantly repurposed to serve yet another purpose inside the city. *Kowloon Walled City* was probably among the most extensive and intensive experiments of living in extreme proximity, connection and self-sufficiency.⁷ The richness of life and vitality from these overlapping, undefined layers of space result in a friendly, tight-knit community of mutual understanding and living in the superlative.⁸

While it lasted, *Kowloon Walled City* sat as an example for the particular constraints and adverse circumstances of Hong Kong – in interplay with the political, legal, economical, cultural and social conditions it found itself in. However, this sprawling city-within-the-city eventually had to give way to the insurmountable pressure of commercialism, real estate bubbling, profit-maximising imperatives and, ultimately, the wrecking balls of Hong Kong's government, who, wanted to clean up this eyesore once and for all (Girard/Lambot 1993: 208–212). *Dim Sum Labs* still finds itself within the same sorts of constraints. The city's pressure towards commercialism and real estate continues, making space one of the rarest and most expensive commodities to find. Architecturally speaking, one could refer to Rem Koolhaas' concept of *S,M,L,XL*,⁹ where Hong Kong would have to be considered the absolute epitome of XL architecture (and also lifestyle if one were to project the concept into the social realm). It is a region of shopping malls with pedestrian walkways, underground tunnels and public green spaces reaching such complex and tremendous scales that urban life, at least in Hong Kong, is distinctly entwined with the spectacle (while citizens are forced to be consumers of it). The mere fact that Hong Kong has the highest gross leasable mall area, with a figure of 5,606 m² per km², signifies its density as parcel to retail architecture

7 Living in this strange environment was so different and extraordinary an experience that a Kowloon Walled City-themed arcade was built in Japan (Gilbert 2013). If the reader has never heard of Kowloon Walled City, further information and images can be found in Girard and Lambot (1993).

8 Similarly as with *Dim Sum Labs* (or any hackerspace, really), the interlocking mechanisms that run smoothly are contingent upon the compatibility of the community.

9 *S,M,L,XL* is a title of the book written by Bruce Mau and Rem Koolhaas, arranging architectures that are small to medium (S, M) involving issues on a domestic to public scale, while large (L) reaching the “the architecture of Bigness” where its immensity moves beyond context, and extra-large (XL) as urban scale (Koolhaas/Mau 1995).

(second to Hong Kong is Singapore at 4,023 m², and third the Netherlands at 253 m² [Al 2016]). Hong Kong is a disconcerting arrangement of many conglomerate mixed-use shopping malls connected to one another with above-ground passages, its borders defined triumphantly by expressways – these float upon a real estate bubble that has been incubating since 2003 (Chan 2015; UBS 2015), leeching on the lower social strata to feed the wealthy. As one of the most expensive cities in the world for housing, there is an extreme absurdity of paying for a home that barely fits your bed.^{10, 11} While the wealthiest of the city seem to barely ever touch ground, traversing the city in their helicopters, elevators and chauffeured cars, the worse-off live in conditions virtually unthinkable in most other places around the world. To a large degree, this is born out of the crass inequality present in Hong Kong.

Fostered by the British government's restrictions on land use, the scarcity of space and overpopulation result in highly compressed housing which remains the state's commodity. Subject to the highest bidder, the urban landscape boasts grand shopping malls nestled between luxurious hotels and office buildings only by compressing the physical and segregating the social space of ordinary people (Huang 2004). It currently ranks as one of the countries with the highest income inequality worldwide (Vines 2015), creating an environment where any kind of freedom has to be either bought or wrestled from government or private interest through hard lobbying and community efforts. Since the latter is not a viable option for a small hackerspace like *Dim Sum Labs*, it had to opt for the former and pay the premium prices of Hong Kong properties. In consequence, it probably pays one of the highest rents relative to space among hackerspaces worldwide, likewise resulting in relatively high membership fees and a constant struggle to produce sufficient funds to pay each month's rent and utilities.¹² Hong Kong also prides itself for being home of one of the freest market economies in the world (Heritage 2016) and emphasises business, corporatism and entrepreneurship. Accordingly, while registering a company takes only a couple of hours, a proof of address and a telephone number, registering a charity, society or virtually any non-profit organisation requires significantly more work and fulfilment of preconditions. For this

10 The "Mont Vert" development has been colloquially described as "Mosquito flats" are 180 square feet, with entry-level prices at HKD\$ 2 million (roughly USD\$ 258,000), unfurnished of course (Steger 2015). While according to the Hong Kong Government Planning Department, the standard car park space is 135 square feet ("Table 11: Parking Standards," 2016).

11 The notorious cage homes are extremely basic flats with double- or triple-stacked beds enclosed by cages. More modern versions (subdivided flats) will have thin plywood dividing the spaces to provide slightly more privacy. Rental prices hover in the HKD\$1800 (roughly USD\$ 235) range (Journeyman Pictures 1995).

12 During the summer, where Hong Kong temperatures rise above 35 °C, with humidity levels that can make it feel even hotter, resulting in significant costs for air conditioning for at least half of the year.

reason, *Dim Sum Labs* had originally registered as a company, rather than a society or club as most other hackerspaces are around the world – adding further potential for confusion over what exactly *Dim Sum Labs* is or is not. This also illustrates the dynamic aspects of hackerspaces: they are not merely physical spaces for coding projects or the creation of material objects but are embedded locally in societal conditions and existing norms.¹³

Another external factor to consider in the context of the conversations to follow is Hong Kong's political environment. From the first days as people began to settle there, its geographical position as a port city has made it an important political space. Through early history, imperial China and, most recently and probably most importantly, the colonial area and Great Britain's appropriation of the city, Hong Kong has maintained a surprisingly defiant people and prides itself in a long history of peaceful rallying, for any and all infractions as part of its safe, democratic and orderly culture. This includes, for example, demonstrations across the city with citizens holding banners and calling attention to issues such as animal welfare,¹⁴ the latest housing crisis,¹⁵ the yearly commemoration of the Tiananmen Square protests of 1989¹⁶ or even governments of other countries.¹⁷ For the most part, these are "honorable tradition[s] of rational and civilized mass protests" (Cheung 2014), with none or very little civil disobedience or confrontation. The "Umbrella Revolution" that made headlines in 2014 is probably one of the most famous instantiations of such protests, and very much the result of colossal wealth inequality, a lack of clear direction for the city, a lack of cultural identity and a very bleak outlook for younger generations about to graduate university (although the protest quickly spread to other social groups).¹⁸

In summary, the conversations that follow take place in a unique environment of significant economic, social, cultural and political pressure, which hackers, makers and DIY-enthusiasts inside and outside *Dim Sum Labs* have to navigate on a daily basis.

-
- 13 In November 2016, three former and current members of *Dim Sum Labs* (including the co-author) registered "*Dim Sum Labs*" as a society, due to ideological differences with the limited company. While identifying it as a nebulous concept that no longer requires a physical location, it adds further complexity, or confusion, to this matter.
 - 14 Examples are the carnivalesque, yet civil demonstration by animal activists against the Hong Kong International Fur & Fashion Fair (Lam 2015) and recent protests against the sale and/or consumption of shark fins (Lee 2016).
 - 15 Excessive lead content in water pipes was found in public housing estates around the city in 2015 (Cheung 2015).
 - 16 June the fourth marks the major annual event (Lau 2016).
 - 17 See, for example, the protest against the Philippine government's handling over Manila bus hijacking which involved Hong Kong tourists (BBC 2010).
 - 18 A significant exception to this was the local instance of the global Occupy movement, which held its ground for nine months until being evicted by court bailiffs (BBC 2014; Kaiman 2014).

Hacking and making in context

Before we move to the conversations presented in this article, in the following, we would like to outline three major themes of hacking/making culture that appear relevant to contemporary culture. More importantly, as you will see shortly, these are prevalent in the perceptions and opinions of our interviewees. We have labelled them (tentatively) as follows:¹⁹

- **DIY-culture:** this subsumes the maker movement (MAKE magazine, Maker Faire, etc.), fab labs and so on. It is signified by a general apathy towards both political interests, focusing on the joy of tinkering with things.
- **Start-up-ism:** this subsumes Silicon Valley-style start-ups, tech-solutionism and “business hacking” with commercial success as the primary goal.
- **Hactivism:** this subsumes themes of political and societal engagement, be it through technological or social means.

Although very difficult to define, at least to some degree these themes seem to reflect certain socio-economic backgrounds and influences. With regard to the DIY-culture, the qualities that are pertinent to creative expression by way of physical production are definitely not a hobby naturalised in Hong Kong, most obvious for reasons such as the lack of physical space to pursue such activities. If we connect this concept to the Arts and Crafts Movement (1880–1910) of aesthetics and reforms of industrialisation, the ability to express values and identities that are divorced from manufactured consumerist goods allows individuals to redefine themselves and the lifestyle that is partnered to it. Living in *Kowloon Walled City* was a situational circumstance where the nature of the beast was carving out a life from the crumbs that were left behind; changes or modifications to one’s environment were out of necessity, from maintaining privacy among dense sleeping quarters to simple social activities such as communal eating with the neighbours. Hacking/making in this context differs from most American DIY counterparts, due to its intent of creating ad hoc solutions rather than the purposeful joy of taking “pleasurable interest in all the details” (Morris 1886: 108). While in these versions of *making* and *meaning* – where one is for basic needs while the former is the spirit of reformation – they share the common nature of modifying the circumstances of something beyond its original intended purpose.

However, one cannot help but notice certain parallels to Hong Kongese pragmatism (which, to some extent, appears to be also prevalent in mainland China [Lindtner/Greenspan/Li 2015]). Already described previously in the context of Hong Kong’s social, economic and political history, the Chinese style of innovation often (and particularly for the last couple of decades) involved and involves

19 These categories are heavily simplified and should only be read as attempts to roughly categorise certain ideological streams within a very diverse group of individuals.

adoption and adaptation. Rather than inventing new products or business models, this method generates iterations of existing technologies and encouraged through incremental design and innovation growth, one can pivot towards success.²⁰ Other examples would be China's local substitutes for Google (Baidu), Twitter (Weibo) or Whatsapp (WeChat), which started as copies but turned into very successful and innovative businesses themselves, in many ways outdoing the technologies they were modelled after in the first place.²¹ This kind of mentality seems to be also reflected in the opinions recorded from our local members bearing the qualities of both DIY-culture and start-up-ism which may prove that more is at hand than simple cultural conditioning. Nevertheless, this "just do it" mentality seems to be one of the prominent themes in hacking and making.²² It focuses on the making itself and only secondarily may ask about monetisation or political implications (if at all).

Start-up-ism is closely related to Silicon Valley and its many technology-based companies and start-ups (Kenney 2000) as well as its cyber-libertarianism (Dahlberg 2009) and tech solutionism (Morozov 2013). Here, for example, the term "hackathon" received its current meaning. While originally derived and used in the *Free and Open Source Community* (OpenBSD 2016), it is now most frequently used within commercial settings, and following Silicon Valley rationales (Irani 2015), for example, for recruitment purposes or corporate-sponsored competitions. Another form of commercial interest may be exemplified by the traction for the wider DIY maker movement being significantly generated by large-scale corporations. MAKE media, for example, has a paid subscription of thousands of followers and organises global Maker Faire events on a yearly basis (Maker Media 2016). In the Chinese context, start-up-ism has surpassed its American counterparts in many ways. Despite the restrictions from the cultural conformity and Chinese Communist Party, the support from China's Ministry of Science and Technology (by way of the Torch program) is one of the world's largest entrepre-

20 Take ArduPilot Mega as an example, where its associated community members of DIYdrones.com were upset about "yet again Chinese piracy" but the founder not only accepted, but approved their actions and brought them in officially (as they had no malicious intent and helped to expand the network) (Anderson 2012).

21 The definition of "outdoing" could be quantified in terms of user engagement and retention. First, the Chinese substitutes outrank their Western counterparts for the sheer fact that many foreign websites and apps are blocked, thus the need for alternatives. Second, WeChat has integrated multiple services within their chat platform, including taxi hire, restaurant reservations, money transfer, sightseeing reviews and so on, where such conveniences, for some, render other well-known websites (with singular purpose) unhelpful. Third, the user information that can be collected from these activities is extremely thorough.

22 For a description of this notion of hacking/making, see Toombs, Shaowen and Jeffrey (2014).

neurial programs spending 320 billion RMB²³ towards business incubators, seed funding and the like (Ding/Li 2015).²⁴ Some notable international corporations have emerged as start-ups from these programs, including Lenovo, Huawei and ZTE (Kuhn 2010: 283). The emerging role of Shenzhen as a manufacturing hub and “shift[ing] from hobby to entrepreneurial practice” (Lindtner 2015), with the ease of business investment, favourable entrepreneurship laws and adaptable culture in Hong Kong, there is no question to why companies and entrepreneurs are chasing their technological futures to China, vis-à-vis Hong Kong. With the start-up ecosystem gaining more traction within the past several years, the proliferation of incubators, co-working spaces and fablabs have an unavoidable presence.²⁵ Perhaps this could be attributed to the ease of commodification towards *DIY-culture* by way of pay-per-use equipment in fablabs and hobbyist technology; while commodification of *Start-up-ism* prevails in the form of co-working spaces and networking events. This leaves no space for activism or is relegated to such fringes of society such as hackerspaces.

Here, the more political perspective on hacking/making, particularly the European and German influence of organisations like the *Chaos Computer Club* (CCC) comes to mind.^{26, 27} This European-style hacking is particularly politically and ethically engaged²⁸ and applies, for example, to the CCC and its many, and very public, political engagements. The earliest activities by the CCC can be traced back to 1981 – CCC founders Wau Holland and Steffen Wernery became world famous after they managed to appropriate 134,000 Deutsche Marks from a bank in Hamburg. The sum was returned the very next day, after having notified the press (Denker 2014). Another notable public engagement was the CCC’s public

23 Roughly USD\$ 46 billion.

24 The table of Central Government Expenditures on key national S&T (science and technology) programs indicates spending for the Torch program has a growth of 457% from 2001 to 2011.

25 A cursory look to Jumpstart Magazine’s Directory of Accelerator and Incubator Programs (2015) can highlight the traction of start-up-ism in Hong Kong, or the simple fact that a magazine (founded in 2014) dedicated solely to Hong Kong’s start-up culture would indicate so.

26 Given ample evidence of politically motivated hacking and making in other countries as well (e.g. Lopht [Moore 2015], Anonymous [Coleman 2014] or the Cult of the Dead Cow [Moore 2015]), the selection of Europe and Germany may be biased by the fact that the hackers/makers which are most vocal about politics at Dim Sum Labs all happen to be from European (and mostly German-speaking) countries.

27 While more difficult to find (probably due to the riskiness of such activities), evidence for hacktivism/political hacking can be found in Hong Kong/China as well, for example, Free Software Foundation Asia and the Hong Kong Blondes (Wong 2015).

28 For supporting material of the political hackerspace notion in contrast to more DIY-centred spaces, see Guthrie (2014).

takedown of the election computers planned to be introduced to Germany. Protesting their potential flaws, the CCC rigorously tested the Nedap-computer and, with its verdict (Kurz 2009) achieved the change of plans (Germany still does not use counting computers). Since then, the CCC, its members and spokespeople have been called upon the government on numerous occasions to provide expert-opinions and statements about technological issues. Some more hacktivist type members of *Dim Sum Labs* explicitly reference this as an influence which should be a major part of hacking and hackerspaces.²⁹

In conversation with *Dim Sum Labs* members and affiliates

Moving from external factors and background information to the inner workings of *Dim Sum Labs*, we take a look at this hackerspace's members and affiliates. An important international hub for business, finance and supply chain management, Hong Kong is also one of the cities with the highest amount of expatriates from all over the world. This is reflected in the composition of *Dim Sum Labs*' membership base. From the very beginning, it was and continues to be a wild mix of locals, expatriates and visitors from all over the globe. As one may expect, this too brought all sorts of differing influences to notions of hacking and making to the space. To capture these and ultimately attempt to identify major themes of "hacking" and "making" as represented in the space, we conducted interviews with ten members and affiliates of *Dim Sum Labs* and asked them the following questions:

- What is your field of research/interest
- What is a hackerspace/makerspace? (Is there a difference?)
- Have you been member of another hackerspace/makerspace before? If so, where?
- Is *Dim Sum Labs* different from other hackerspaces/makerspaces? If so how?

The interviews were conducted through emails, chats or in-person and in a very informal, relaxed, conversational manner.³⁰ In the following, we will introduce the interviewees, then present and discuss their answers following the general outline of the interview/conversation. Understandably, the analysis of such responses will

29 The CCC environment is also often described as the origin of the hackerspace phenomenon in general (Tweney 2009).

30 That is as this is not a social science experiment, we cared less about the precision of the data and more about creating a comfortable environment for the interviewee to express their opinions freely and uninhibited. Despite the informal setting, we did, of course, inform all of our interviewees about our research project and that their answers would appear in a published journal under their first name, if they allowed us to – which all of them did.

be limited by the fact that that the reader has no access to the complexities and histories of the interviewees, so we will also provide some context information where necessary. Our primary goal in this is to present their responses unaltered and “uncurated” in order to allow the reader to observe the differences in wording and understanding of hacking, making, DIY, etc. and draw his/her own conclusions. Our interviewees were the following (Name in bold):

Sebastien

That's a long story [...] but it's essentially physics.

Alexander

Enabling others to hack, Telecommunications, wired/wireless networks, community networks, bottom-up/grassroots networking, digital rights, Free and Open Source Software and Hardware.

Lionello

I like learning new skills, so generally there's no particular thing that I'm more interested in. Lately I'm interested in connected devices and IoT, but I also like mobility and just messing with cool tools.

He also added his short CV blurb:

Lio is an engineer and community organizer with Electrical Engineering and Computer Science background and 20 years of international industry experience doing software and hardware. AVR pioneer, he built and sold VR solutions from his first startup in 1997. In 2001 his company was acquired by a multinational company for his real-time 3D stereo rendering technology. After having started new development teams in Bucharest (Romania) and Beijing, he joined Microsoft in 2010 in Shanghai. Having worked on a wide range of projects, in startups and multinationals, Lionello has accrued broad expertise in areas such as virtual reality, e-commerce, cloud computing, blockchain, and IoT.

Allan

I am more from computer science but I got my Master Degree in Interactive Digital Media. I am interested in Art, in applying technology in an Art context. I am working with Fine Art Artist, Architects, Product and Fashion Designers. I am keen on collaboration and see whether can applying technology to create a new experience for the audience. Most of the time, projects have come with a very limited budget. That's why I picked up electronics and hacking stuff to achieving what is needed to deploy. Domains included computer vision, projection mapping, interactive installation, physical computing, AR, VR, parametric design, 3D printing, lighting control, motion control, responsive environment, sensor network, internet of things, smart home, home automation, etc.

Andy

All our stuff is made for performing. From LEDs, robots, sewing, woodwork, metal work, CNC, PCB design Here are some links of the type of stuff I make for events in HK. At uni I did computer science but sewing was the first major maker skill I learnt. Now I have moved onto electronics but everything we do usually requires some sewing elements.

Julian

My main field of interest is in physical making, e.g. CNC machining as well as some electronics (PCBs, arduinos, etc.)

David

I'm an electrical engineer involved into developing free hardware and software. For instance I'm kernel maintainer for the sunxi-mmc driver in Linux mainline (Allwinner SD card driver).

Stewart

Named Data Networking, Computer Programming Paradigms and Concepts, Vacuum Systems, Ion Traps and eventually Quantum Computing.

William

My field of research was in systems engineering, operations research, but my area of interest now is in innovation, entrepreneurship, and making (especially getting the next generation to make more).

Manolis

The intersection of art and technology.

Quite visibly, our interviewees are coming from very diverse backgrounds. One should note that the introductory question is not a specific inquiry of their occupation or education, but rather what drives their personal development, for example, of knowledge and skills. To further elaborate on this point, we shall proceed with the replies to our second question, "Have you been member of another hackerspace before? If so, where?":

Sebastien

I've been a core member of /tmp/lab (2008–2010, near Paris) where the atmosphere was magic during the first couple years. I also organized a hacking conference in Rennes (2010) that helped spark the first hackerspace there (Breizh Entropy). I spent some time in Le Loop (Paris), a hackerspace that has strong connections with the squatter movement, which was pretty awesome there. I was involved in the Abbenay Hackerspace in Stockholm (2009), which, during its short existence in the occupied former offices of a concrete factory, drew the most interesting "underground" people

from all over Scandinavia. I lived in Berlin, where I was a member of the c-base for a short while (2011), until all the drugs, smoking and contemptible people drew me away.

Alexander

Yes, cofounder of realraum.at/Graz, Austria, Europe.

Lionello

I am a founding member of China's first makerspace Xinchajian, in Shanghai. I tend to visit hackerspace wherever my travels take me, since these are good places to meet link minded people. Hackerspace I've visited:

- *Fab Lab Sassari (Sardinia)*
- *Modulab (Bucharest)*
- *Xinchajian (Shanghai)*
- *Chaihuo (Shenzhen)*
- *Noisebridge (San Francisco)*
- *De Haag (Amsterdam)*
- *Beijing Hackspace*

Allan

I am a member of a maker group in Fotan (a district in Hong Kong known for grass-roots artist groups) which is an open studio from an artist friend. We have a group of people who are more from art/design background.

Andy

I have not been a member anywhere. I find most stuff online is all I need and for any questions I usually go to a forum of some sort. I find Reddit to be a great source. They have forums (called sub-reddits) on almost any area and a quick skim on a daily basis can keep you up to date with what's going in. They have groups such as: Arduino, Teensy, Electronics, CNC , Sewing , [...] it really goes on forever. When you get really stuck on a problem I go to a dedicated forum (arduino.cc e.c.t). I have been to the DSL [authors' note: the colloquial short form for Dim Sum Labs] and it's great to have in HK but too small unfortunately. You need to more ppl in one room to get more fields of expertise. Say I have an issue with TWI, I could go there and get lucky and find someone who knows all about TWI but it's probably a 1 in 100 chance so I hit the forums.

Julian

I have visited several other hackerspaces/makerspaces, including Tokyo Hacker Space, Xinchajian and Makerbay.

David

I'm one of the early members and founders of the CCCZH (Chaos Computer Club Zuerich) and helped building up our space in Switzerland very much.

Stewart

The only other space is m-labs, which is filled with competent people, it's exclusive, privately run and funded environment. I would not classify m-labs as a hackerspace.

William

I was not a member of, but spent some time in Noisebridge (San Francisco), as well as HackerDojo (Mountain View) before returning to HKG and gathered the germ of members who started Dim Sum Labs.

Manolis

Nope.

These members come from very heterogeneous backgrounds with regard to both areas of interest as well as country of origin and line of work. They have been members and affiliates of hackerspaces all around the world. It is difficult to say how they have been influenced by those experiences or if those experiences come to fruition by way of their own influence. In any case, the particular phenomena of hackerspaces and with those coming together to create/join such communities has less of a bearing upon one's history, educational background or particular skillset, but rather a quality towards autodidacticism. Sebastien, for example, seems to favour the defiant and underground in the name of scientific research, while Allan and Andy are more interested in artistic expression. Stewart emphasises the distinction of his experiences in terms of, what appears to be, support towards his personal education and growth, while the responses from Alex and David suggest more desire for cohort-based goals.

Within the discourse of hacking, hackers and hackerspaces, a contentious topic is hackers' "political agenda," be its location on the spectrum or whether it even exists. We have tacit knowledge that the usage of the word "hack-" does not come without its connotations, creating apparent differences in perception about hacking versus making. This point is illustrated by replies to our next question. We asked our interviewees about their explicit opinion about hacker/maker spaces: "What is a hackerspace/makerspace? (Is there a difference?)"

Sebastien

In theory, it is a community place for people to work together on technology projects. In practice, the "community" aspect imposes extremely constraining limits. "Hacking" is seen as a weekend hobby besides someone's day job, a not-so-serious activity with very limited resources and commitment. And when some money is on the table, it tends to cause conflicts (see e.g. the lopht story on <http://www.washingtonpost.com/>)

sf/business/2015/06/22/net-of-insecurity-part-3/) that are particularly difficult to manage considering the anti-authoritarian politics of many members. The capacity of hackerspaces to innovate is severely hindered by those issues.

As a result, the position of the hackerspace in the economy became very much that of another mass consumer. As “making” became popular, corporations saw a market, and many modern-day “makers” are often simple users of the latest cool gadget marketed to them – Broadcom’s Raspberry Pi, Makerbot, Intel Edison, etc.

Alexander

A hackerspace is a place for people to tinker with electronics, hard- and software, physical making, to meet likeminded people, and have fun. Hackerspaces often serve as early stage incubators for startups, when there is no business plan yet, for people to work on proofs of concept, in an environment with the freedom to experiment, tinker, develop, innovate, without economic pressure.

Lionello

A place where you can play with all kinds of tools and materials, and meet other people doing the same.

Allan

For me, hackerspace/makerspace is different.

Hackerspace could be more for the geek, more technology oriented, aim to change the function of ordinary objects or enhance it which acquire knowledge in different engineering domains.

Makerspace could be more for people who enjoying DIY culture or making something out from tools (hand tools/machinery/digital fabrication like laser cut and 3D print).

But both spaces are for people who

- 1. embracing creativity*
- 2. passionate in creating something rather than obtain satisfaction from consuming*
- 3. socialize, share and exchange ideas with like-minded people.*
- 4. look for help and learn from others*
- 5. look for collaborators/teammate/partner.*

Andy

Well it’s a place that has all the tools and a tonne of parts. I find it’s best to order everything and have tonnes of spares. I am probably one of the few that isn’t really into 3d printers. I prefer CNC due to the materials it will handle. I have only ever used my 3d printer once. I can’t see what the hype is about. People seems to print basic toys and other junk. CNC can make some serious machinery. Here in HK my workshop is divided into 4, 1./ Sewing – large cutting table and 2 machine, 2./ Electronics 3./ General tools 4./ Messy tools – bench drills, table saw, CNC, bench grinders.

Julian

A makerspace is a place where people focus on making things. A hackerspace is a special type of makerspace where people are also interested in a wider range of interests, including societal impact, alternate forms of governance/management, etc.

David

A hackerspace is much more versatile and cooler than a sole makerspace because of the social structure in a hackerspace which are very different to a makerspace. A makerspace usually is a purely service based and cold place which feels more like a company where you buy something. A hackerspace (what the DSL should stay) is more like a big home to many people the hackers are kind of a family to each other, and so besides of the manufacturing of physical goods there can also come more projects into existence, for instance software projects or political projects (anti censorship campaign for instance)

Stewart

It's a place to partake in political strife for nothing.

William

I think makers/hackers spend too much time splitting hair on terminologies. A space is needed for a community of makers, hackers, crafters, DIYers, etc. The spectrum between a hacker of the CCC sort, and a maker of the TechShop is wide, and they may not necessarily share the same views, which may cause a lot of wasted energy through friction.

Manolis

It's difficult to define what a hackerspace is because everyone has his own opinion on what it is. For me, it's place where freedom reigns and people of every background are welcomed and free to learn, experiment, play and pass on their knowledge. Kind of an unstructured anarchic university. Hackerspaces should organically adapt to the culture of the hosting country and work with the local community for political and cultural change. I believe that hackerspaces and makerspaces are more or less the same thing, since you can't have hacking without making and vice versa, if there is a difference maybe that sometimes makerspaces are less ideological and more practical.

As illustrated by these anecdotes, there is still a divide with respect to semantics perpetuated not only by those on the outside (of hackerspaces) but also with those within, who are largely conscious of what the hacker lexicon entails. However, Sebastien avoids partaking in the particular debate of political spectrum of *hacker* or *maker*, but rather raises the concern of hacker culture being co-opted for the capitalist market. For example, he appears quite eager to denounce technologies that others describe as signifying aspects of hackerspaces. He identifies a few branded products, and instead of lauding the accessibility of low-cost technologies, he takes the position that such items are simply new mass consumer goods as a

clever means for corporations to enter novel markets. This could be read as a kind of anti-corporatism that would superficially allow one to judge him to be a rather activist type of hacker (he never uses the word maker). However, it makes him more difficult to categorise as he offers no adverse (or any) opinion on political or economic issues, but rather places emphasis on innovation and motivation towards this point. Allan, despite arguing for a major difference between hackerspaces and makerspaces, seems to actually produce quite a lot of qualities they share, emphasising the ability to make and create. Julian and David, on the other hand, put significant emphasis on the political and social aspects and activities that a hackerspace, but not a makerspace may (or should) engage in. Their commitment to such goals is, however, immediately contrasted with Stewart's sarcastic comment that a hackerspace is "a place to partake in political strife for nothing." We can already see, how in such an internal atmosphere, *Dim Sum Labs* may struggle quite significantly for a unified identity and credo, which may make *Dim Sum Labs* rather unique in many ways – a claim we put to the test with our next question: "Is *Dim Sum Labs* different from other hackerspaces/makerspaces? If so how?"

Sebastien

From a certain distance, there are no major differences (and DSL is very much an expat place anyway); DSL has perhaps a bit more startup people. I suspect one would find more differences in the mainland, where it seems the government has invested in the movement.

When asked about whether his work has been influenced by his experiences with hackerspaces, he replied:

In the sense that hackerspaces disappointed me: yes.

Alexander

I have the feeling that realraum is better organized, that people have more of a sense of responsibility that they are part of a community, and have to take part in running the space, organizing workshops, etc.

It is similar in that there's at least one broken 3D printer in every hackerspace, that people drink Club Mate, and that the fridge is full with stickers from other hackerspaces ;). And, of course, that you occasionally find hackers at the space ;)

Lionello

All the spaces I've visited are more or less the same, although they do tend to differentiate themselves in more subtle ways. For example, the Xinchejian one is for all-round makers, from painting to cooking to soldering. The Hong Kong makerspace Dimsum Labs is a tad more hardcore and idealistic (and its members would probably prefer to be called hackers, with the space called "hackerspace").

We asked Lionello to expand on his opinions a bit and whether he thinks that cultural differences play a role, he replied:

For sure, as a founding member of Xinchajian I helped set the atmosphere there. And it's Chinese "mainland" culture to avoid politics, so people in the space generally stay away from sensitive discussions and just stick to making stuff. Similarly, some founding members are not technical but artists, so this also helped broaden the spectrum of the events happening inside the space.

Allan

I am not coming to DSL often unless there is a talk with interesting topics (possibly related to art or technology I would like to pick up) Sometimes, I am too serious in making. I mean I would like to make something with "new approach" rather than just making something for fun. Maybe that's the key reason I enjoy more with the artists/designers group rather than people in DSL. I met few interesting people in DSL, it is more like a space for having a beer and socializing a bit. I got my own studio at work, that's why I don't need the space at DSL and didn't join the membership. I think it is all about people. Also, the space in DSL is too packed. To be fair, membership of DSL is cheap if comparing it to Makerbay or the one I visited recently (<http://threekeyshk.com/>). But they are much bigger and stylish.

We asked Allan how other spaces he has been to compare to Dim Sum Labs, to which he replied:

1. *Makerbay, went there for their grand opening and visited some people who share the space there. Enjoyed the variety of people from different projects there. Somehow, great "Project" is important for attracting people to revisiting the place over time.*
2. *Threekeys, didn't meet too many members there yet. The space is stylish, comfort and very enjoyable. Seems the people are working professionally there on their own project/business. I am looking forward to new opportunities for collaboration, kind of a place for getting new paid project or networking.*
3. *Fotan, I feel like home because of the people there. I made good friends there and enjoy doing projects with the people over there (both commercial, paid projects, non-profit art projects, etc. [...]). We share a lot, not only meet up there. also have discussion on facebook message group. I feel more comfortable to offer help and ask for help, no matter I can pay for it or only need volunteers. And I offer help for free sometimes too. This kind of relationship I treasure the most. People having their own agenda in life and don't care much about contributing time and energy into the project of the others. I think the friendship between the people there, bridge up the gap a lot.*

Andy

None, I only really started the electronics here in HK 11 years back. Before that it was mainly sewing and woodwork.

Julian

From what I've seen, I think there are several differences. The main difference is the open culture without any key decision makers, for better or for worse.

David

As I mentioned before, the space should be a place where people feel like home and are excellent to each other. But we recently had some problems. [...] We lack enough people with an actual Hacker mentality who are bringing it to the space by joining us regularly every Wednesday. Many people just wanna consume and don't wanna do any relevant for the club (like paying the bills) [...] this is a real problem, because everyone is supposed to help that the club can sustain itself and be successful. Hacking is about initiative, we need more people with initiative who are willing to spend their time in order to make the club stay as cool as it used to be. I think it might really be an issue with the culture. I learned from the German speaking founders that they had a lot of resistance from some of the local founding members against calling the space a "Hackerspace" in the first place. I think it's a cultural issue with some (but not all people). Many Hong Kongers can understand the concept a Hackerspace is based on, the only problem is to get these ones to join the club. The attitude of "time is money" and "try to make money whenever you can," some cyber hippies sharing their space with other cyber hippies blows their mind because that's not what they are interested into, "but you can't money with it" [...] "yes." [...] I think the reason deep down is just this reflex of wanting to turn everything into a business. [...] But a Hackerspace should be free of commercial use, it should be a sanctuary where creative minds can stick together their ideas and breed out new projects (no matter whether hardware, software or political)

Stewart

Dim Sum Labs is the same level of competency as nearly every other Hackerspace I've visited, incompetent.

William

I think DSL is similar to other spaces for good or bad, warts and all. I think the nature of the people attracted to XXXspace tend to have strong views. This tendency self-limits the size of these spaces unless if the place is run by a benevolent and consensus-building head-of-space.

Further asked about Hackerdojo which he has also been a member of, he replied:

I think Noisebridge is more like DSL, while Hackerdojo seems more populated with software startups, and they were sponsored by the likes of Google, which are headquartered nearby anyway.

Manolis

Most people at DSL are transient and although it makes it difficult to have a dedicated long lasting core of members, it offers a great hotspot for meeting amazing people from all over the globe.

Once again the contrast is very apparent. In order to dissect the relative “hacking” versus “making” quality of a space, we can only rely on the member’s personal reflections with their previous experiences. While Sebastien sees a higher amount of “start-up people” to be the main difference between *Dim Sum Labs* and other hackerspaces, Lionello’s opinion seems to contradict this observation diametrically, as he perceives the space to be “a tad more hardcore and idealistic.” This could be attributed to Sebastien’s previous experiences, in the European hacker culture, as typically more politically activated and scientifically motivated, whereas Lionello has spent significant time in China (exemplified by co-founding the Shanghai space), where hacking/making could be mostly understood in Silicon Valley terms. Allan, on the other hand, does not mention ideological or political differences at all and simply focuses on questions of how well (in terms of facilities and collaboration) one is able to make and create objects. His position is supported by Andy, who likewise focuses exclusively on questions of expertise and the ability to pursue his projects. David, in his description of differences, states that “a Hackerspace should be free of commercial use, it should be a sanctuary where creative minds can stick together their ideas and breed out new projects (no matter whether hardware, software or political),” clearly communicating that he wants more than physical expression as Allan and Andy had suggested, but intellectual and ethical as well. If we assume the contrast between Sebastien and Lionello to be on the spectrum of science versus start-up (or to be terribly reductive, research versus business opportunity), then the differences between Allan and David could be on the aspect of creative arts versus political engagement. In the meantime, both Stewart and Sebastien issue general statements of disappointment about hackerspaces (one that seems to explicitly include *Dim Sum Labs*) whereas Manolis is wholly positive. This appears to indicate that Manolis is able to find benefit of diversity that exists in *Dim Sum Labs*, while for Stewart, and more notably Sebastien (as having much previous experience with hackerspaces), in-group homogeneity may be more important, producing a kind of lack of cultural fit.³¹ Finally, William and Alexander remain rather neutral, both calling the space somewhat similar to others and struggling with the same kind of problems everyone else does. In this case, we can observe their views as more holistic and pluralist, as they are able to acquiesce to the ubiquitous issue of diversity, in all forms.

31 The term “cultural fit” as being defined by the progress and qualities of *Dim Sum Labs* and its members themselves, not necessarily the culture of Hong Kong.

Final thoughts and the future of *Dim Sum Labs*

In Hong Kong, as in many other places, largely due to the ever-widening income gap, it becomes increasingly difficult to access the lifestyles that prior generations used to enjoy – despite the difficulties in the circumstance of *Kowloon Walled City*, one may argue, that those were times where it was possible to “work hard to achieve what you want”; these days, there is great emphasis on not only who you know, but even finding a place within a distinguished preschool will set your course in life. These issues are global,³² the exciting and robust nature of our urban landscapes take us onto trajectories with both positive and negative influences, including those issues of wealth, identity and community. In this environment, a hackerspace represents a sanctuary but also a microcosm reflecting its surroundings. What is at hand is not so much an issue of inherent struggles of creative cohesiveness in homogenous groups, as it is a struggle against pressures that are looming outside. The urban environmental stress can turn us into rats trapped within a Skinnerian experiment – or maybe like cogs in a machine – environmental, cultural, political and social factors create causal chains of pressure, leading to a space cramped physically and psychologically. Given the particular homogenous nature of the Hong Kong cultural environment, one may expect quite some interesting discourse from the collision of cultures and ideas, yet, in the ubiquitous corporate and commercial setting that also exists here, these divergences rarely come to light – as Hong Kong’s overarching pressure is to get paid and be paid, simplifying the end goal into this one, looming objective towards money.

Reflecting on the previous conversations with members and affiliates of *Dim Sum Labs*, common values of learning, discovery and sharing have become evident. However, significant differences with regard to notions of hacking, making and DIY-culture also became apparent, which is particularly related to the three major themes of hacking/making introduced earlier: *Making/DIY-culture*, *Political Hacktivism* and *Silicon Valley-esque Startup-ism*.

In conclusion, what we have recorded in this conversation with Hong Kong hackers, is a struggle for identity mirrored from the metropolis that surrounds it – which itself has yet to reconcile its identity in the face of British colonialism, Chinese rule, a constant flow of immigrants and expatriates, environmental damage, political unease and all the other pressures that remained unnamed.³³

32 We refer to issues of inequality as being global; whether or not globalisation or technology is a factor in such, the mere fact that such contention exists (of the role globalisation plays) would suggest that this is indeed a global issue.

33 A supplemental, anecdotal evidence regarding the continuous development and fluidity of the *Dim Sum Labs* identity from the perspective of the authors: At the beginning of the writing of this paper, the prevailing stream at *Dim Sum Labs* was rather clearly that of *Startup-ism*, due to recent media coverage that pitched *Dim Sum Labs*

List of references

- Al, Stefan (2016): *Mall City: Hong Kong's Dreamworlds of Consumption*. Hawaii: University of Hawaii Press.
- Anderson, Chris (2012): *Makers: The New Industrial Revolution*. New York: Crown Business.
- BBC News (2010): "Hong Kong Protest Over Manila Hostage Deaths." In: BBC News, August 29 (<http://www.bbc.co.uk/news/world-asia-pacific-11123869>).
- BBC News (2014): "Hong Kong Protests: Timeline of the Occupation." In: BBC News, December 11 (<http://www.bbc.co.uk/news/world-asia-china-30390820>).
- "BootHK," August 12 2016 (<http://boot.hk/>).
- Brulliard, Karin (2016): "Update: Sorry, Lazy Dog Owners. The App that Finds Someone to Scoop Poop is Fake." In: *The Washington Post*, August 2 (<https://www.washingtonpost.com/news/animalia/wp/2016/07/22/so-it-has-come-to-this-an-app-that-finds-someone-to-pick-up-your-dogs-poop/>).
- "Cage People," A Journeyman Pictures Documentary, 1995 (<https://youtu.be/9g4quQgguzk>).
- Chan, Billy/Frost, Richard (2015): "Hong Kong's Decade-Long Property Boom Could Be Ending: Chart." In: *Bloomberg*, March 17 (<http://www.bloomberg.com/news/articles/2015-03-16/hong-kong-property-price-boom-seen-nearing-end-chart-of-the-day>).
- Cheung, Chor-yung (2014): "Hong Kong's Systemic Crisis of Governance and the Revolt of the 'Post-80s' Youths." In: Joseph Y. S. Cheng (ed.), *New Trends of Political Participation in Hong Kong*. Hong Kong: City University of Hong Kong Press, Print, pp. 417–448.
- Cheung, Elizabeth (2015): "'Protect Our Children': Protesters Demand Water Tests in Every Hong Kong School After Lead-in-water Scandal Deepens." In: *South China Morning Post*, August 27 (<http://www.scmp.com/news/hong-kong/health-environment/article/1852985/protect-our-children-call-action-after-excessive>).

as a low-cost co-working space, and coincidentally in tandem, the loss of significant presence from Making/DIY-culture members. While the reasons for such absences vary, the common reason mentioned by leaving members was a lack of free time to devote to the space, mostly owed to the financial and professional pressures outlined earlier. Some 8–10 weeks later, the Hacktivist faction seemed to be most prevalent as the result of an influx of European "hackers". At this time of final revision (c. a. 4 months later), there is a steady mix of Hacktivist and Making/DIY-culture, with emphasis on workshops or space improvements (visualised by workshops, laser-cut artefacts and Github archives). We shall see what comes next. The only thing that seems certain is that Dim Sum Labs will remain a place of polarisation and change. Why don't you stop by yourself and contribute to the debate and join a conversation much as the one we presented earlier.

- Coleman, Gabriella (2014): *Hacker, Hoaxer, Whistleblower, Spy: The Many Faces of Anonymous*. London/New York: Verso Books.
- Dahlberg, Lincoln (2009): "Libertarian Cyber-Utopianism and Global Digital Networks." In: *Globalization and Utopia 2009*. London: Palgrave Macmillan, pp. 176–189.
- Denker, Kai (2014): "Heroes Yet Criminals of the German Computer Revolution." In: Gerard Alberts, Ruth Oldenziel (eds.), *Hacking Europe*. London: Springer, pp. 167–187.
- Ding, Xuedong/Li, Jun (2015): *Incentives for Innovation in China: Building an Innovative Economy*. New York: Routledge.
- "Enabling The Future – A Global Network of Passionate Volunteers Using 3D Printing to Give the World A 'Helping Hand.'" July 29 2016 (<http://enablingthefuture.org/>).
- Gilbert, David (2013): "Kowloon Walled City Rebuilt in Japan as Arcade, Theme Park." In: *Huffington Post*, September 24 (http://www.huffingtonpost.ca/2013/09/24/kowloon-walled-city-japan-photos_n_3982944.html).
- Girard, Greg/Ian Lambot (1993): *City of Darkness: Life in Kowloon Walled City*. Chiddingfold: Watermark.
- Guthrie, Cameron (2014): "Empowering the Hacker in US: A Comparison of Fab Lab and Hackerspace Ecosystems." In: 5th LAEMOS (Latin American and European Meeting on Organization Studies) Colloquium, Havana Cuba.
- Heritage Foundation (2016): "2016 Index of Economic Freedom," (<http://www.heritage.org/index/country/hongkong>).
- Huang, Tsung-Yi Michelle (2004): *Walking Between Slums and Skyscrapers: Illusions of Open Space in Hong Kong, Tokyo, and Shanghai*. Hong Kong: Hong Kong University Press.
- Irani, Lilly (2015): "Hackathons and the Making of Entrepreneurial Citizenship." In: *Science, Technology & Human Values* 40(5), pp. 799–824.
- Kaiman, Jonathan (2014): "Hong Kong's Umbrella Revolution – The Guardian Briefing." In: *The Guardian*, September 30 (<https://www.theguardian.com/world/2014/sep/30/-sp-hong-kong-umbrella-revolution-pro-democracy-protests>).
- Kenney, Martin (2000): *Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region*. Stanford, CA: Stanford University Press.
- Kirby, Emma Jane (2016): "The City Getting Rich from Fake News." In: *BBC News Magazine*, December 5 (<http://www.bbc.co.uk/news/magazine-38168281>).
- Kollanyi B./Howard PN/Woolley SC (2016): "Bots and Automation Over Twitter During the First US Presidential Debate." COMPROP Data Memo.
- Koolhaas Rem/Mau, Bruce (1995): *SMLXL*. New York: Monacelli.
- Kuhn, Robert L. (2010): *How China's Leaders Think: The Inside Story of China's Past, Current, and Future Leaders*. Singapore: John Wiley & Sons.
- Kurz, Constanze/Rieger, Frank (2009): "Sicherheitsanalyse der Nedap-Wahlcomputer." In: *Datenschutz und Datensicherheit-DuD* 33(2) pp. 84–87.

- Lam, Oiwan (2015): “No Blood For Vanity! Hong Kong Animal Right Activists Protest the Fur Fair.” In: Global Voices, March 4 (<https://globalvoices.org/2015/03/04/no-blood-for-vanity-hong-kong-animal-right-activists-protest-the-fur-fair/>).
- Lanyon, Charley (2013): “At HackJam, Great Minds Tinker Alike.” In: South China Morning Post, June 18 (<http://www.scmp.com/lifestyle/technology/article/1262979/hackjam-great-minds-tinker-alike>).
- Lau, Stuart/Siu, Phila/Fung, Owen/Lam, Jeffie/Zhao, Shirley (2016): “June 4 Vigil Organiser Estimates 125,000 at Victoria Park as Speeches and Stage Incident Mark Event.” In: South China Morning Post, June 04 (<http://www.scmp.com/news/hong-kong/politics/article/1964153/june-4-vigil-organiser-estimates-125000-victoria-park>).
- Lee, Danny (2016): “Cathay Pacific Targeted in Shark Fin Protest at Hong Kong International Airport.” In South China Morning Post, May 30 (<http://www.scmp.com/news/hong-kong/health-environment/article/1958732/cathay-pacific-targeted-shark-fin-protest-hong>).
- Lindtner, Silvia (2015): “Hacking with Chinese Characteristics the Promises of the Maker Movement against China’s Manufacturing Culture.” In: *Science, Technology & Human Values* 40(5), pp. 854–879.
- Lindtner, Silvia/Greenspan, Anna/Li, David (2015): “Designed in Shenzhen: Shanzhai Manufacturing and Maker Entrepreneurs.” In: *Aarhus Series on Human Centered Computing*, [S.l.] 1(1), p. 12.
- Lydon, Mike/Bartman, Dan/Garcia, Tony/Preston, Russ/Woudstra, Ronald (2012): “Tactical Urbanism Short-term Action Long-term Change Volume 2.” In: *The Street Plans Collaborative*.
- “Maker Media,” August 19 2016 (<https://makermedia.com/>).
- Moilanen, J. (2012): “Emerging Hackerspaces–Peer-Production Generation.” In: *IFIP International Conference on Open Source Systems*. Berlin, Heidelberg: Springer, pp. 94–111.
- Moore, R. (2015) *Cybercrime: Investigating High-Technology Computer Crime*. New York: Routledge.
- Morozov, E. (2013): *To Save Everything, Click Here: Technology, Solutionism, and the Urge to Fix Problems that Don’t Exist*. London: Penguin.
- Morris, W. (1886). *Useful Work Versus Useless Toil*. London: Socialist League Office.
- Olson, Gary/Olson, Judith (2000): “Distance Matters.” In: *Human-Computer Interaction* 15(2), pp. 139–178.
- “OpenBSD Hackathons,” August 29 2016 (<http://www.openbsd.org/hackathons.html>).
- “Real Vegan Cheese,” August 12 2016 (<https://realvegancheese.org/>).
- Schön, Sandra/Ebner, Martin/Kumar, Swapna (2014): “The Maker Movement. Implications of New Digital Gadgets, Fabrication Tools and Spaces for Creative Learning and Teaching.” In: *eLearning Papers* 39, pp. 14–25.

- Sharma, R. (2015): "Leaks, Whistle-Blowers, and Radical Transparency: Government Accountability in the Internet Age." *Debates for the Digital Age: The Good, the Bad, and the Ugly of our Online World*, 23:119.
- Sinn, E. (1987): "Kowloon Walled City: Its Origin and Early History." In: *Journal of the Hong Kong Branch of the Royal Asiatic Society* 27, pp. 30–45.
- Steger, Isabella (2015): "In Hong Kong, the Apartments Are Fit for a Mosquito." In: *The Wall Street Journal*, June 2 (<http://www.wsj.com/articles/in-hong-kong-the-apartments-are-fit-for-a-mosquito-1433237582>).
- "Table 11 : Parking Standards." June 2016 (http://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/ch8/ch8_tbl_11a.htm).
- "The Open Hand Project," July 29 2016 (<http://www.openhandproject.org/>).
- Toombs, Austin/Shawwen Bardzell/Jeffrey Bardzell (2014): "Becoming Makers: Hackerspace Member Habits, Values, and Identities." In: *Journal of Peer Production* 5.
- Trainer, Eric H. et al. (2016): "How to Hackathon: Socio-technical Tradeoffs in Brief, Intensive Collocation." In: *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work and Social Computing*.
- Tweney, Dylan (2009): "DIY Freaks Flock to 'Hacker Spaces' Worldwide." In: *Wired Magazine*. March 29 (<http://www.wired.com/gadgetlab/2009/03/hackerspaces>).
- UBS (2015): "UBS Global Real Estate Bubble Index" (https://www.agefi.com/uploads/media/UBS_Global_Real_Estate_Bubble_Index_Study.pdf).
- Vines, Stephen (2015): "Housing Policy Makes Hong Kong One of World's Most Unequal Societies." In: *South China Morning Post*, January 22 (<http://www.scmp.com/comment/insight-opinion/article/1688228/housing-policy-makes-hong-kong-one-worlds-most-unequal>).
- Wohlsen, Marcus (2015): "Cow Milk Without the Cow Is Coming to Change Food Forever." In: *Wired Magazine*, April 15 (<http://www.wired.com/2015/04/diy-biotech-vegan-cheese>).
- Wong, Kam C. (2015): *Policing in Hong Kong: History and Reform*. Boca Raton, FL: CRC Press.