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Hacking the New Normal

A Cultivation Space Report

CONTRIBUTORS

Laura CUGUSI, Sonja FISCHBAUER
Felix JUST, Fiona KRAKENBÜRGER

6 key take-aways from our report:

1. The already uneven terrain of tech innovation has been deeply transformed by capital, with profit and extreme financial speculation now standing in even starker contrast to the notion of free knowledge which animated the origins and evolution of hacker culture and spaces.

2. Hacker- and makerspaces are melting pots of people from different countries, with different backgrounds and (technical) experience, though different risk assessments concerning Covid-19 are now adding to the challenge of getting such a diverse community to work together. The demand for these spaces remains high and highlighted the importance of the social aspect of in-person gatherings. While the shift to remote access has rekindled some exchange and collaboration between existing hackspace communities, it has become much harder to reach out to newcomers.

3. The combination of a volunteer-based model and lack of funding makes it hard for spaces and organisers to regularly meet and exchange knowledge. There is a clear need for "space-exchange" events where different community organisers and hackspaces can visit each other and exchange knowledge and expertise, and discuss issues they have in common. Co-hosting events can be an excellent way of facilitating exchange between different hackspaces and community organisers.

4. Conceptions of technology, hackspaces, and hacking, in particular, are heavily freighted with stereotypes that allow some people to identify while others are kept at a distance and have trouble accessing these spaces. Power structures are never absent and it's important to acknowledge and understand their place in more formal structures. Identifying and understanding these is the first step towards designing and shaping a group's structures and processes in a healthy way, and ensuring it is functioning as intended.

5. Organisers must dedicate time and effort to put in place the structures necessary for the community to expand in a more equitable way. For example, mentoring programs focused on youth have proved an excellent way of onboarding newcomers to learning spaces. Learning groups and knowledge exchanges can also encourage newcomers to participate with greater confidence.

6. In Berlin as in many other cities, rising rent is an existential challenge to hackspaces which is also hampering growth and collaboration between spaces. Public funding should be dedicated to alleviating the problem.

Foreword

Our mission at the Center for the Cultivation of Technology is to provide a home for free software projects. This means that while we provide these projects with critical infrastructure to help meet their financial needs, we take a holistic approach and support physical space for our projects to meet, work together and learn in. Anyone working on free and open source software can come and make use of our Cultivation Space at the ExRotaPrint complex in Wedding, Berlin.

In order to better inform our stewardship of the Cultivation Space, we reached out to four veteran organisers of hacker/maker/learning spaces to learn from their varied and unique experiences. We asked them about how they see the current state of these communities, what seems to be working and what isn't, and what we should do in the future. Finally, since our practice and learnings are grounded in the realities of our city, we wanted to hear from them about how we can work together and practice solidarity as a community of hackers, makers, and learners.

The timing of this report is opportune. While the pandemic has presented significant challenges to organising in physical spaces, it has also highlighted their importance and value, particularly for learning and co-hacking. We are pleased to present these four very different expert contributions and hope they inform your ideas and work as meaningfully as they have shaped our own quest to hack the new normal.

Laura
CUGUSI

Bio

Laura Cugusi is an artist, writer, researcher and producer. Her practice has been nomadic across languages, disciplines and media. After studies in media theory, politics, sociology and urban design, Laura has worked in research and reporting, documentary photography and video production, project coordination and programme design with artists, collectives, international organisations, academic and art institutions and media in Europe, the Mediterranean region and the UK. She is currently a contributor and visual editor for the Weird Economies platform.

Since 2020 Laura has been working as programme curator with ADEB (Arab Digital Expression Foundation) in Berlin.

Rebel Aesthetics

Almost two decades ago, as internet access was spreading exponentially, if unevenly, across the globe, a myriad of subcultures splintered off and carved their (my)space(s) across the potentially infinite world wide web. While the evolution of this "hacker culture" has been marked by phases, stages and trends that have spilled over into pop, literature, cinema, TV and fashion, some of these subcultures gained widespread popularity and eventually laid the groundwork for the dominant collective imaginary of the Tech World that gradually emerged and has consolidated in the following years, up to the present day.

In a similar way to the fashion industry's artificially engineered revivals of past aesthetic tendencies (long enough ago to be remembered with nostalgia), the advent of hacker culture has since been romanticised and repackaged as the latest promise of future progress. Like clockwork, the aesthetics of the late 90s and early 2000s are now again on-trend – even *The Matrix* has been resurrected – and with the advent of Web3, the tech sector seems to be on an analogous path, deep in the third wave of the information technology ecosystem's evolution.

At the threshold of what is often heralded as a "new era", many predict a further wave of democratisation, decentralisation, redistribution of knowledge and redefinition of "value". Nevertheless, *it is hard to ignore the extent to which the already uneven terrain of tech innovation has been deeply transformed by capital, with profit and extreme financial speculation now standing in even starker contrast to the notion of free knowledge which animated the origins and evolution of hacker culture and spaces.*[1] At the dark edges of the early internet, hackers foresaw the enclosure of the public commons.

If the "counterculture" of the 90s could be encapsulated in the slogan "Steal this book!"[2] – an explicit incitement to deliberate acts of sabotage and rebellion against corporate greed for the public good, which aimed to reach as many people as possible as simply as possible – Web3's slang predominantly gravitates towards obscure acronyms, evocative and mysterious jargon and exclusive club passwords.

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[1] In Hackers: Heroes of the Computer Revolution, Steven Levy formulates and summarizes general hacker attitudes: "Access to computers – and anything that might teach you something about the way the world works – should be unlimited and total [...] All information should be free [...] Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position. [...] You can create art and beauty on a computer. Computers can change your life for the better." The hacker ethics evolved in a time when computers were scarce; and the people sharing a machine had to think about rules of cooperation. Hacker ethics are in constant discussion and development and the excerpted rules above should only be considered as guidelines and basis for discussion.
[2] Steal This Book by Abbie Hoffman. Written in 1970 and published in 1971, the book exemplified the counterculture of the sixties.

Is a revival of tech optimism possible today? What public arenas and audiences can contemporary hacker spaces represent and tend towards? What alliances, movements and collective efforts across fields can steer the tendency to glorify all forms of private property into a culture of abundance, participation and free knowledge?

The terms "cyberspace", "counterculture" and "hackerlabs", "makerspaces" and "hacktivism" are only a few examples of the symbolic proliferation of tech jargon which originated at least in part from the "Californian Ideology"[3] represented by Silicon Valley that "simultaneously reflects the disciplines of market economics and the freedoms of hippie artisanship"[4]. Yet the 90s saw also the mushrooming of initiatives for grassroots reporting, citizen journalism and anonymous peer-to-peer exchange, such as Indymedia, Anonymous, ICQ, Napster, Limewire and their clones, the infamous Chatroulette as well as innumerable blogs, microblogs and forums. This was the WWW's Wild West, and the pervasive ethos was of making all kinds of information – from song chords and lyrics to first aid manuals and coding tutorials – accessible to everyone, regardless of their status and location.

Throughout the 2000s, self-taught developers, designers, experimental artists and tech aficionados who first met in chat rooms and virtual games took advantage of relatively affordable pre-gentrification real estate (thanks at least in part to the squatting movements in many European cities) to gather in cheap studios, office spaces and warehouses in derelict urban neighbourhoods. These spaces offered basic but crucial infrastructure for knowledge production, collaboration and informal skill exchange, and naturally served as technical support for community development and political movements explicitly focused on access and rights.

Founded in 1981 in Berlin, the Chaos Computer Club came to represent *"one of the most influential digital organisations at the intersection of any discussion of democratic and digital rights."*[5] The CCC frequently criticises new legislation and products with weak information security that endanger citizens' rights or users' privacy. Members of the CCC regularly function as expert witnesses for the German constitutional court, organise lawsuits and campaigns, and generally influence the political processes.

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3 As defined on MetaMute By Richard Barbrook and Andy Cameron, 1 September 1995: "The California Ideology is a mix of cybernetics, free market economics, and counter-culture libertarianism and is promulgated by magazines such as WIRED and MONDO 2000 and preached in the books of Stewart Brand, Kevin Kelly and others. The new faith has been embraced by computer nerds, slacker students, 30-something capitalists, hip academics, futurist bureaucrats and even the President of the USA himself. As usual, Europeans have not been slow to copy the latest fashion from America. While a recent EU report recommended adopting the Californian free enterprise model to build the 'infobahn', cutting-edge artists and academics have been championing the 'post-human' philosophy developed by the West Coast's Extropian cult. With no obvious opponents, the global dominance of the Californian ideology appears to be complete."
4 See *The Californian Ideology* by Richard Barbrook and Andy Cameron. The MIT Artificial Intelligence Laboratory, the University of California, Berkeley and Carnegie Mellon University were particularly well-known hotbeds of early hacker culture.
5 'Berlin's digital exiles: where tech activists go to escape the NSA' by Carole Cadwalladr, in The Guardian, 9 November 2014. https://www.theguardian.com/world/2014/nov/09/berlins-digital-exiles-tech-activists-escape-nsa

Netflix's recent mini-series, *The Billion Dollar Code*, provides a revealing account of the evolution of Berlin's hacker scene. The series tells the story of a group of original punk geeks, some of whom were affiliated with the CCC, after the fall of the Berlin Wall. It portrays the free software movement and hacker culture in the early 2000s and effectively conveys the enthusiasm, as well as the naivety, of a generation of creative "techies" who had the unique opportunity of playing with state-of-the-art machines and experimenting purely for the sake of cultivating artistic expression and satisfying their thirst for knowledge.

In 1993, the founders of ART+COM and their team developed TerraVision, a navigation and mapping software that would eventually become the blueprint for Google Earth, one of the most transformative digital services whose users today number billions. Without the opportunity of cultivating a playful approach to R&D, and without the limited constraints afforded by operating in a non-strictly commercial space, the creation of this original, ground-breaking tool might only have happened much later, if at all. TerraVision was the first direct manifestation of planetary-scale computation available to everyone, and its original design was not driven by commercial success.

Hacker- and makerspaces have proliferated across the globe, particularly in the past decade. This is due in part to the relative affordability of high-tech machines such as 3D printers, laser cutters, Arduino controllers and other open source tools used in robotics, as well as wireless routers and tools for building mesh networks used in fabrication and gaming (to name just a few uses). Throughout the 2010s, as the ethos of free experimentation and cheap rent became less and less sustainable, hackerspaces in Berlin and Europe widely began to operate more as cultural hubs, hosting publishing spaces, community radio stations and video collectives. This has gradually shifted them towards becoming something more along the lines of start-up incubators.[6]

As Francesca Bria noted in her interview with Evgeny Mozorov,[7] many of the self-made pioneers of free software whose work blossomed in the DIY context ended up joining or selling to corporate tech platforms. For example, "Harry Halpin, who was involved in D-CENT, went on to found Nym, one of the Web3 privacy start-ups that has recently attracted funding from a16z. Chainspace, a start-up founded by George Danezis and his team at UCL, who were involved in Decode, was acquired by Facebook. More recently, the same team formed Mysten Labs, another start-up to have recently received funding from a16z."

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[6]   "The hacker produces the new; the entrepreneur merely discovers its price. In the vectoral economy, where much of what is on offer has no use value whatsoever, and exchange value is a mere speculative possibility, the entrepreneur is a heroic figure when and if he or she can invent new necessities ex nihil. Here the "invisible hand" is a poker player's bluff. The entrepreneur merely reiterates unnecessary necessity; the hacker expresses the virtual.." (...) duped by the blandishments of prestige and put virtuality in the service of conformity, professional elitism in place of collective experience, and depart from the emergent culture of the hacker class. This happens when hackers make a fetish of what their education represents, rather than expressing themselves through knowledge". A Hacker Manifesto, McKenzie Wark.

[7]   https://the-crypto-syllabus.com/francesca-bria-on-decentralisation/

The aesthetics of disruption, decentralised agency and horizontal ownership that historically characterised Hackerspaces represent a cultural currency which often stands in contrast to the de facto corporate / business-oriented logic in which they often operate. Designing contemporary hacker- and makerspaces and programs in Berlin in 2022 requires confronting questions such as:

- **What forms of participatory practice do creative coding, games and gaming engender for youth?**

- **Which forms of learning are present, missing or reinforced through tech experimentation and gaming?**

- **How does play-act as a point of entry or departure for other forms of knowledge, literacies and social organization?**

- **What barriers to entry exist for tech, coding, tool design, gaming and game communities, and what are the implications for those who haven't been invited to play?**

- **How can local initiatives, grounded in real communities, counter platform tech hegemony?**

To continue fostering creativity, knowledge exchange and playful experimentation, and to establish strategic collaborations and synergies across diverse groups, single virtuous hackerspace initiatives cannot survive by themselves. Infrastructure and access are fundamental but can function only when consistently supported by active cultural criticality, awareness of extractivist tendencies and resistance to the monetisation and financialization of social relationships.

Hacker culture was born out of a pioneering spirit to establish something radically new at the intersection of art and technology in the early days of the Internet. Since then, *the aesthetic provocation of hacker culture has been drained by marketing and commercialization, while the notion of social connection and community has exploded into splinters that can't be easily mapped.* At the same time, neither pop culture nor internet subcultures have managed to convey a generic "vibe" of what these new spaces could look and feel like, not only as fragmented nodes but as entities that belong to a larger cultural ecosystem. Aesthetics and narrative can open up or narrow down the range of practices and structural, spatial and architectural features of hackerspaces, as well as the networks of solidarity and modes of collective organisation they can activate, both in the local and transnational context.

To hack is to produce or apply the abstract to information and express the possibility of new worlds, beyond necessity.

Hackers use their knowledge and their wits to maintain their autonomy. Some take the money and run. (We must live with our compromises.) Some refuse to compromise. (We live as best we can.) All too often those of us who take one of these paths resent those who take the other. One lot resents the prosperity it lacks, the other resents the liberty it lacks to hack away at the world freely. What eludes the hacker class is a more abstract expression of our interests as a class, and of how this interest may meet those of others in the world.

McKenzie Wark,
A Hacker Manifesto

Sonja
FISCHBAUER

Bio

Sonja Fischbauer is a community strategist, organisational development specialist, and former freelance consultant for volunteer-driven movements such as Open Knowledge, Open Data, and Wikimedia in Austria and Germany.

Sonja is currently employed at the Open Knowledge Foundation Germany where she is the point of contact for Code for Germany, a network of over 500 expert volunteers across Civic Tech, Open Government, and Open Data working on sustainable digital change in politics and administration.

Sonja ensures appropriate structures and participative processes are in place so people can do their best and feel good doing it. A large part of her work involves helping movements thrive by opening them up– not only in terms of Open Knowledge, Open Data or Open Source but also in the sense of welcoming new people with open arms.

Providing Equitable Experiences in Hackspaces & Adjacent Communities

Introduction

My documentation is aimed at organizers and hosts. My input is coming from my professional expertise of designing and organizing community spaces and events, as well as from my personal experiences of being in the role of a participant and visitor in hackspaces. Through a series of examples, I address four questions regarding the future of hackspaces and adjacent communities.

What will Hackspaces look like in 2022 and beyond?

To address the most obvious change first: hackspaces and adjacent communities are extending their reach in non-physical (online) spaces. These spaces can increasingly be accessed remotely, enabling greater exchange and collaboration between community members in Germany and beyond. It also means people are more likely to drop by spontaneously if they're already familiar with the community. On the other hand, successfully reaching out to and inviting complete newcomers is harder.

Physical meetings are now more focused on social aspects such as seeing old friends, getting to know new people, falling into casual conversation, and exchanging ideas over a drink or a snack. In short, hanging out and enjoying other people's company. I think this will continue to be the case. Now, when I organise a community meeting in a physical space, I schedule less time for actual hacking and more for verbal exchange, eating, socializing, and unstructured activity.

The *Code for Germany Summit* in Berlin in November 2021 provides a good example. It was the first country-wide community meeting of the volunteer network since the pandemic. About 20 people attended, and while previous meetings of that scale had been planned with parallel sessions and coding sprints, when we designed the program for 2021's summit, attendees asked for different things. They requested that we didn't split the group, let everyone participate on the same track, that we facilitated meetings and open discussions instead of hands-on code writing sessions, allowed generous time slots for only a handful of topics, instituted a long communal lunch break, and, if we couldn't stay at the conference location after the event, provided a safe place that followed hygiene protocols to hang out as a big group for dinner and drinks.

What has worked so far and should be continued?

Mentoring programs are a great example of how to create a welcoming onboarding experience for both events and open formats. For example, _Jugend hackt_ is a program for tech-interested young adults aged between 12 to 18 which builds on the engagement of volunteer mentors who act as facilitators to bring the participants' ideas to life. Many of the program's mentors started out as participants themselves and stepped into that role because they want to give something back. Mentors involved with Jugend hackt's three-day hackathons also play a crucial role in opening the doors of hackspaces around Germany by facilitating half-day workshops and other short-term formats at the regional Jugend hackt Labs. Berlin's _Jugend hackt Lab_ is housed at the hack- and makespace _xHain_ in Friedrichshain.

When I worked with Wikimedia Austria, we adapted Jugend hackt's mentoring program for the 2017 _Wikimedia Hackathon_. Even though the community event was tailored to adults, the core principle remained the same, with a group of knowledgeable community members prioritizing the onboarding of newcomers. By sharing their technical skills and knowledge as well as providing a point of entry into the existing social group, the group created an ideal environment for successful onboarding and multi-dimensional knowledge transfer, with mentors themselves learning from new participants and newcomers helping each other out.

These interactions can and do happen in the absence of a mentoring program, but they are more likely to occur and be purposeful within a mentoring framework. Equitable experiences can be better assured when you, as a community organiser or hackspace guardian, put time and effort into establishing an onboarding experience.

What hasn't been tried but should be?

The importance of talking about power structures in community spaces is underrated. In my experience, _discussing the power dynamics present in grassroots movements and activist groups is often frowned upon. Yet power is never absent and it's important to acknowledge and understand its place in more formal structures._

In your role as a hackspace guardian or community organiser, a great way of starting a conversation on this topic can be to map your space's power structures. Start by looking at the formal power structures you have, such as job titles, officially assigned roles, and decision-making frameworks. The next step is to look beyond the formal structures to where power manifests informally. Maybe senior members are party to specific knowledge that no one else has access to, and there are certainly social networks in your community comprised of bonds, friendships, and other forms of social currency between members. If you want to create equitable experiences for all community members, it's important to make these nodes of power visible and then, where necessary and when it serves the common purpose, shape power structures for the better.

Power – formal and informal – is not bad by design. Indeed, it is necessary for changing the world for the better. Like any good tool, it needs to be checked upon and cared for regularly, to ensure it is functioning at its best.

For further reading, I recommend the essay *The Tyranny of Structurelessness* by Jo Freeman, which examines the importance of embracing power and its structures in activist movements. Nadja Taranczewski's article, *Whose Idea Was It Anyway? The Role of Source in Organizations* is especially relevant to Civic Tech and FOSS contexts, where ideas often originate from a specific person whose influence can linger long after they've moved on.

How can hackspaces in Berlin focus on public good and work together? What solidarity structures still need to be built?

Regular exchanges between community organisers are important but also time-consuming. This makes it one of the harder things for spaces to accomplish, especially those that are run on a (mostly) volunteer basis. For organisers from different hackspaces who want to branch out, co-hosting an event can be a good way of bringing their communities together.

It's the relations between the people involved in these spaces that create a structure of strong solidarity. We need to continually invest in these networks if we want to achieve greater impact through shared purpose. We need to continually build on and invest in these networks if we want to achieve greater impact through shared purpose.

I really appreciate the role of the CCT which uses its resources to foster exchange between hackspaces and community organisers and encourages knowledge sharing. I see a lot of potential and I look forward to what we make of the future.

Felix
JUST

Bio

Felix Just works as a software developer and process designer. He founded xHain hack+makespace in 2016 and has been managing it since then.

What will hackspaces look like in 2022 and beyond?

Hackspaces will be hackspaces, whether in 2022 or in any other year. Every hackspace is different, which makes it hard to build a general picture, but I think that in the next few years hack- and makespaces will become more diverse in terms of member structure as well as organizational forms. There will still be lots of Vereine, but companies (non- and for-profit) and municipal hackspaces will become more common.

Of course, the pandemic continues to have a serious impact on hackspaces, just as any other community project built around people gathering together in person rather than virtually/online. *Hackspaces are melting pots of people from different countries, with different backgrounds and (technical) experience, though different risk assessments concerning Covid-19 are now adding to the challenge of getting such a diverse community to work together.*

Although we closed *xHain* for several months in 2020 and 2021, we haven't lost members. We had new members signing up even during the lockdown, which just goes to show how hackspaces will continue to exist way beyond 2022. People will always need to share tools and knowledge and have access to a public space for in-person events and meetings to share ideas, help, and inspire each other.

I wish politicians would recognize the potential of the maker community. Being able to produce and distribute face shields and masks long before the government was able to supply them, clearly demonstrated that we are not just hobbyists but rather experts in networking and rapid prototyping. We're able to combine solution orientation with voluntary work and the common good.

Municipal maker spaces, where children and young people can learn the techniques and skills of the maker world in the course of school lessons, should be included in educational policy. This will demand new teaching models, the integration of external expertise into schools, and active collaboration with communities.

What has worked so far and should be continued?

xHain has always tried to be as open and welcoming as possible. You don't have to be a hacker or maker to visit, just someone who wants to hack and/or make something. The variety of interests and projects in our space makes it impossible to be an expert in everything. No one is judged for not knowing a certain technique or tool.

This ethos has very much helped keep the xHain community together. There is no hierarchy level based on skills – we are all beginners in some things and experts in others. Plus, we do not require people to become members. We hold no member-only events, though if people want to support the space, they are welcome to become a member. Our fees are relatively low (13.37€/month) and we encourage people who can afford it to pay extra to help finance reduced memberships for those who couldn't otherwise join. These reduced memberships are 1€/month and bureaucracy-free. This system works very well and our average membership fee comes to ~20.00€.

What hasn't been tried but should be?

There's a lot, so I will concentrate on three areas: (post-pandemic) community building, restructuring the way hackspace is governed and public funding of spaces.

Hackspaces are always a community project, so community building is, of course, not novel. But the pandemic has had a huge impact on our communities. Not being able to meet in person and work in the space has been hard on members. Re-opening after lockdown and restrictions on access became potential sources of conflict, especially since people have their own personal views on the pandemic and assess the risks of infection very differently. There is no single way to make everyone happy at the same time.

During the pandemic much less group work took place and some – maybe the majority – are no longer accustomed to having discussions in larger groups. I would like to get external help finding appropriate forms of decision-making and conflict resolution. The community will have to re-train to work together because while we have smaller groups of two or three people on some projects, we also have evenings with up to 50.

The organizational structure of xHain has changed in the last six years. What started out as a "benevolent dictatorship", with the sole founder being the only one to make decisions, became a "benevolent junta" of two, then a three-headed monkey, and finally a fuzzy cloud of eight. For various reasons, mostly to do with diverging perspectives on Covid-19 protocols, the fuzzy cloud dissolved in January, and xHain is now developing a new organizational structure through a process that is open to all.

Evolving the structure of a space brings many risks and advantages and while this process has not been easy, it is definitely worth trying. Working on the structure without preconceptions and trying to include as many members as possible and the views on the space should be governed is a serious challenge for the community. But I believe the result will help xHain be a truly community-driven space.

Finally, I would like to see a real municipal hack- and makespace that is well-funded and big enough to become an educational centre that can collaborate with schools and universities. As a state-funded institution, it would offer every student in the area at least a day per year in the space as part of the curriculum. To do this would require new teaching models and the integration of external communities into the educational plan.

How can hackspaces focus on public good in Berlin work together?

Hackspaces in Berlin need to interact more with each other. There are lots of great people and places in this city but they are spread across town and it is rare to find someone who regularly visits or participates in more than one space. Lots of things are happening, but people tend to only know about their own space. In my opinion, the spaces in Berlin should try to organize more space exchange events so members from different spaces can meet each other, exchange ideas, help each other out, and work together on projects.

During the pandemic, most hackspaces were closed, so I hope that as things re-open, it will become easier to visit other spaces and find projects on which to collaborate. It would be really helpful if spaces were funded well enough to employ (or simply pay) someone to facilitate community management and organize inter-space exchange programs (for example).

What solidarity structures still need to be built?

To be honest, I can't think of any. I believe the solidarity between spaces depends more on interaction than on a certain structure. If people are already working together, solidarity follows more easily. *To achieve real solidarity between spaces, hackspaces should also be publicly funded. As long as rents for locations remain as high as they are now, all communities will struggle with the monthly costs of having a physical space*, and so long as a community is struggling, it will find it hard to help out other spaces.

Fiona KRAKENBÜRGER

Bio

Fiona has been a manager of various funding programs in Germany and the US, supporting open source technologies in the realm of human rights, Internet freedom and civic tech. She is currently a Resident Fellow at the US-based organization Reset, where she focuses on the validation and implementation of a new funding model that effectively supports open source infrastructure.

Fiona has a background in Science and Technology Studies and engages as an activist in various diversity and digital literacy initiatives. She is an active member of the women's hackspace Heart of Code in Berlin Kreuzberg.

Hackspaces in 2022

Around 2015 in Berlin, there already existed an array of hackspaces with specific affiliations, located in different districts and catering to a variety of needs – even for non-smokers! But however much we cherished these hackspaces, we were also aware of their sometimes exclusionary dynamics and how their various cultures still did not fit everyone. Non-technical (or rather, not-yet-technical) had a hard time accessing these hackspaces and there existed no hackspace specifically for women and those who identify as women.

It was because of this lack that we decided to found our own hackspace in 2017, the *Heart of Code*. Originally for women, it is now open to those who identify as women, trans, non-binary, and intersex. We have since seen a greater diversity of hackspaces emerge, some specifically for queer people, others just located in different places in Berlin. All have unique features to do with their members and how they treat visitors and potential new members. Through this new generation of hackspaces, a greater variety of people are now able to enter and make their way in the worlds of tech and hacking.

Why Diversity matters

Our conceptions of technology, hackspaces, and hacking, in particular, are heavily freighted with stereotypes that allow some people to identify while others are kept at a distance and have trouble accessing these spaces. Different hackspaces, which draw on their own cultures to convey specific and varied images of belonging, will eventually serve different people. Those differences might be as simple as location or orientation – whether a hackspace is tucked away in a backyard or has a shopfront facing the pavement that is visible to pedestrians. Their focus might also distinguish them, be it hardware hacking, politics, gaming, or 3D printers. It also boils down to the way a hackspace communicates – how welcoming does it sound on its website, for example?

As long as we continue to diversify the landscape, all these hackspaces, with their distinctive traits and particular people, will have their own legitimacy. The positive effects of a diversified landscape extend beyond the individual hackspace and I see a lot of potential for the community of hackspaces to grow. When we started out, members of other hackspaces reached out to ask us how we organized our community and what we were doing to maintain a healthy culture. Since we were bootstrapping new approaches, we were able to share these with other hackspaces and their members. I understood then how important it is to let new hackspaces test novel ways of finding, organizing, building, and honing their own approaches. We have always been very open and transparent about our methods and approaches, though I am sure we could always be doing more.

What has worked?

At the Heart of Code, a lot of what later emerged as our culture and principles happened organically. Developments mostly coalesced around individuals who were central figures in the small but growing community. Since nothing was ever written down in a structured way, other members likely have a different perception of what things looked like, but I am sure they overlap.

It has been important for us to welcome non-technical people and make the common denominator of our community not what we can do, but what we want to do. That people are eager to learn is more important to us than proficiency. The Heart of Code provides a space for people to learn, build learning groups, and exchange knowledge. We want to make it easier for people to take their first steps.

We've learned that a big part of creating a welcoming culture is about being specific and explicit. If you do welcome amateurs and those who are just interested, it is important to make that explicit. The Heart of Code has been clear about welcoming beginners and women, for example to crypto parties – events that allow people to teach and learn about encryption techniques. Before we founded the Heart of Code, these crypto parties usually had a really low diversity rate. One problem we encountered when we spread the news about our events was that we received far more requests for slots than we could accommodate. Women were prepared to travel to Berlin from other federal states to attend. We learned to address a lot of default assumptions about people's fit and belonging to technical spaces and groups by being specific and explicit.

Design is another side to communication and our logo, website and the colours we use are not those of a "typical" hackspace. We usually let our personal taste guide us, which leads to a rather quirky, colourful and, I think, less intimidating pattern of design. You might say our logo, brand design, and how we have decorated our hackspace appear less tech-focused, less male, and less dark. I believe this creates a welcoming environment, particularly for those who might feel bewildered at another hackspace or those who might feel more at home in places that take a different approach.

It took a while for the Heart of Code to come up with its own Code of Conduct. Even before we were more explicit about our rules, the conduct introduced and tacitly maintained by the central figures in our community was very positive. Based on my experience at the Heart of Code and other hackspaces, the conduct of central actors is key to establishing the space's culture and hence affects every member of the community. That being said, a Code of Conduct that makes the community's agreements explicit is usually an important element in maintaining a healthy community.

What will Hackspaces look like in 2022 and beyond?

In 2022, I think a lot of hackspaces will reconvene and rebuild. A lot of what makes a hackspace a hackspace couldn't happen for almost two years and the implications can be felt in the community and among hackspace members. Time will be needed to mobilize community members and make hackspaces vibrant and dynamic again.

This makes it a bit hard to imagine what hackspaces will look like beyond this crucial rebuilding work. However, in the course of time, it will be fun and worthwhile to think about how to connect the different spaces in more deliberate and intentional ways. Ideas might include hosting evening parties, organizing *"Night of the Hackspaces"* – an idea that has been floating around for a while – or just visiting trips.

cultivation.space

Hacking the New Normal

A Cultivation Space Report

Contributors	Laura CUGUSI
	Sonja FISCHBAUER
	Felix JUST
	Fiona KRAKENBÜRGER
Editor	Katherine WATERS
Layout Design	Ura Design

Host Organization

Center for the Cultivation of Technology gGmbH
Gottschedstrasse 4, 13357 Berlin
Germany

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