

KNOWLEDGE COMMONS AND ACTIVIST PEDAGOGIES: FROM IDEALIST POSITIONS TO COLLECTIVE ACTIONS

*Conversation with Marcell Mars and Tomislav Medak (co-authored with
Ana Kuzmanić)*

Marcell Mars is an activist, independent scholar, and artist. His work has been instrumental in development of civil society in Croatia and beyond. Marcell is one of the founders of the Multimedia Institute – mi2 (1999) (Multimedia Institute, 2016a) and Net.culture club MaMa in Zagreb (2000) (Net.culture club MaMa, 2016a). He is a member of Creative Commons Team Croatia (Creative Commons, 2016). He initiated GNU GPL publishing label EGOBOO.bits (2000) (Monoskop, 2016a), meetings of technical enthusiasts Skill sharing (Net.culture club MaMa, 2016b) and various events and gatherings in the fields of hackerism, digital cultures, and new media art. Marcell regularly talks and runs workshops about hacking, free software philosophy, digital cultures, social software, semantic web etc. In 2011–2012 Marcell conducted research on Ruling Class Studies at Jan Van Eyck in Maastricht, and in 2013 he held fellowship at Akademie Schloss Solitude in Stuttgart. Currently, he is PhD researcher at the Digital Cultures Research Lab at Leuphana Universität Lüneburg.

Tomislav Medak is a cultural worker and theorist interested in political philosophy, media theory and aesthetics. He is an advocate of free software and free culture, and the Project Lead of the Creative Commons Croatia (Creative Commons, 2016). He works as coordinator of theory and publishing activities at the Multimedia Institute/MaMa (Zagreb, Croatia) (Net.culture club MaMa, 2016a). Tomislav is an active contributor to the Croatian Right to the City movement (Pravo na grad, 2016). He interpreted to numerous books into Croatian language, including *Multitude* (Hardt & Negri, 2009) and *A Hacker Manifesto* (Wark, 2006c). He is an author and performer with the internationally acclaimed Zagreb-based performance collective BADco (BADco, 2016). Tomislav writes and talks about politics of technological development, and politics and aesthetics.

Tomislav and Marcell have been working together for almost two decades. Their recent collaborations include a number of activities around the Public Library project, including HAIP festival (Ljubljana, 2012), exhibitions in Württembergischer Kunstverein (Stuttgart, 2014) and Galerija Nova (Zagreb, 2015), as well as coordinated digitization projects Written-off (2015), Digital Archive of Praxis and the Korčula Summer School (2016), and Catalogue of Liberated Books (2013) (in Monoskop, 2016b).

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Ana Kuzmanić is an artist based in Zagreb and Associate Professor at the Faculty of Civil Engineering, Architecture and Geodesy at the University in Split (Croatia), lecturing in drawing, design and architectural presentation. She is a member of the Croatian Association of Visual Artists. Since 2007 she held more than a dozen individual exhibitions and took part in numerous collective exhibitions in Croatia, the UK, Italy, Egypt, the Netherlands, the USA, Lithuania and Slovenia. In 2011 she co-founded the international artist collective Eastern Surf, which has “organised, produced and participated in a number of projects including exhibitions, performance, video, sculpture, publications and web based work” (Eastern Surf, 2017). Ana’s artwork critically deconstructs dominant social readings of reality. It tests traditional roles of artists and viewers, giving the observer an active part in creation of artwork, thus creating spaces of dialogue and alternative learning experiences as platforms for emancipation and social transformation. Grounded within a postdisciplinary conceptual framework, her artistic practice is produced via research and expression in diverse media located at the boundaries between reality and virtuality.

ABOUT THE CONVERSATION

I have known Marcell Mars since student days, yet our professional paths have crossed only sporadically. In 2013 I asked Marcell’s input about potential interlocutors for this book, and he connected me to McKenzie Wark. In late 2015, when we started working on our own conversation, Marcell involved Tomislav Medak. Marcell’s and Tomislav’s recent works are closely related to arts, so I requested Ana Kuzmanić’s input in these matters. Since the beginning of the conversation, Marcell, Tomislav, Ana, and I occasionally discussed its generalities in person. Yet, the presented conversation took place in a shared online document between November 2015 and December 2016.

NET.CULTURE AT THE DAWN OF THE CIVIL SOCIETY

Petar Jandrić & Ana Kuzmanić (PJ & AK): In 1999, you established the Multimedia Institute – mi2 (Multimedia Institute, 2016a); in 2000, you established the Net.culture club MaMa (both in Zagreb, Croatia). The Net.culture club MaMa has the following goals:

To promote innovative cultural practices and broadly understood social activism. As a cultural center, it promotes wide range of new artistic and cultural practices related in the first place to the development of communication technologies, as well as new tendencies in arts and theory: from new media art, film and music to philosophy and social theory, publishing and cultural policy issues.

As a community center, MaMa is a Zagreb’s alternative ‘living room’ and a venue free of charge for various initiatives and associations, whether they are promoting minority identities (ecological, LBGQT, ethnic, feminist and

others) or critically questioning established social norms. (Net.culture club MaMa, 2016a)

Please describe the main challenges and opportunities from the dawn of Croatian civil society. Why did you decide to establish the Multimedia Institute – mi2 and the Net.culture club MaMa? How did you go about it?

Marcell Mars & Tomislav Medak (MM & TM): The formative context for our work had been marked by the process of dissolution of Yugoslavia, ensuing civil wars, and the rise of authoritarian nationalisms in the early 1990s. Amidst the general turmoil and internecine bloodshed, three factors would come to define what we consider today as civil society in the Croatian context. First, the newly created Croatian state – in its pursuit of ethnic, religious and social homogeneity – was premised on the radical exclusion of minorities. Second, the newly created state dismantled the broad institutional basis of social and cultural diversity that existed under socialism. Third, the newly created state pursued its own nationalist project within the framework of capitalist democracy. In consequence, politically undesirable minorities and dissenting oppositional groups were pushed to the fringes of society, and yet, in keeping with the democratic system, had to be allowed to legally operate outside of the state, its loyal institutions and its nationalist consensus – as civil society. Under the circumstances of inter-ethnic conflict, which put many people in direct or indirect danger, anti-war and human rights activist groups such as the Anti-War Campaign provided an umbrella under which political, student and cultural activists of all hues and colours could find a common context. It is also within this context that the high modernism of cultural production from the Yugoslav period, driven out from public institutions, had found its recourse and its continuity.

Our loose collective, which would later come together around the Multimedia Institute and MaMa, had been decisively shaped by two circumstances. The first was participation of the Anti-War Campaign, its BBS network ZaMir (Monoskop, 2016c) and in particular its journal *Arkin*, in the early European network culture. Second, the Open Society Institute, which had financed much of the alternative and oppositional activities during the 1990s, had started to wind down its operations towards end of the millennium. As the Open Society Institute started to spin off its diverse activities into separate organizations, giving rise to the Croatian Law Center, the Center for Contemporary Art and the Center for Drama Art, activities related to Internet development ended up with the Multimedia Institute. The first factor shaped us as activists and early adopters of critical digital culture, and the second factor provided us with an organizational platform to start working together. In 1998 Marcell was the first person invited to work with the Multimedia Institute. He invited Vedran Gulin and Teodor Celakoski, who in turn invited other people, and the group organically grew to its present form.

Prior to our coming together around the Multimedia Institute, we have been working on various projects such as setting up the cyber-culture platform Labinary in the space run by the artist initiative Labin Art Express in the former miner town of Labin located in the north-western region of Istria. As we started working

together, however, we began to broaden these activities and explore various opportunities for political and cultural activism offered by digital networks. One of the early projects was ‘Radioactive’ – an initiative bringing together a broad group of activists, which was supposed to result in a hybrid Internet/FM radio. The radio never arrived into being, yet the project fostered many follow-up activities around new media and activism in the spirit of ‘don’t hate the media, become the media.’ In these early days, our activities had been strongly oriented towards technological literacy and education; also, we had a strong interest in political theory and philosophy. Yet, the most important activity at that time was opening the Net.culture club MaMa in Zagreb in 2000 (Net.culture club MaMa, 2016a).

PJ & AK: What inspired you to found the Net.culture club MaMa?

MM & TM: We were not keen on continuing the line of work that the Multimedia Institute was doing under the Open Society Institute, which included, amongst other activities, setting up the first non-state owned Internet service provider ZamirNet. The growing availability of Internet access and computer hardware had made the task of helping political, cultural and media activists get online less urgent. Instead, we thought that it would be much more important to open a space where those activists could work together. At the brink of the millennium, institutional exclusion and access to physical resources (including space) needed for organizing, working together and presenting that work was a pressing problem. MaMa was one of the only three independent cultural spaces in Zagreb – capital city of Croatia, with almost one million inhabitants! The Open Society Institute provided us with a grant to adapt a former downtown leather-shop in the state of disrepair and equip it with latest technology ranging from servers to DJ decks. These resources were made available to all members of the general public free of charge. Immediately, many artists, media people, technologists, and political activists started initiating own programs in MaMa. Our activities ranged from establishing art servers aimed at supporting artistic and cultural projects on the Internet (Monoskop, 2016d) to technology-related educational activities, cultural programs, and publishing. By 2000, nationalism had slowly been losing its stranglehold on our society, and issues pertaining to capitalist globalisation had arrived into prominence. At MaMa, the period was marked by alter-globalization, Indymedia, web development, East European net.art and critical media theory.

The confluence of these interests and activities resulted in many important developments. For instance, soon after the opening of MaMa in 2000, a group of young music producers and enthusiasts kicked off a daily music program with live acts, DJ sessions and meetings to share tips and tricks about producing electronic music. In parallel, we had been increasingly drawn to free software and its underlying ethos and logic. Yugoslav legacy of social ownership over means of production and worker self-management made us think how collectivized forms of cultural production, without exclusions of private property, could be expanded beyond the world of free software. We thus talked some of our musician friends into opening the free culture label EGOBOO.bits and publishing their music, together with films, videos and literary texts of other artists, under the GNU General Public License. The EGOBOO.bits project had soon become uniquely

successful: producers such as Zvuk broda, Blashko, Plazmatick, Aesqe, No Name No Fame, and Ghetto Booties were storming the charts, the label gradually grew to fifty producers and formations, and we had the artists give regular workshops in DJ-ing, sound editing, VJ-ing, video editing and collaborative writing at schools and our summer camp Otokultivator. It inspired us to start working on alternatives to the copyright regime and on issues of access to knowledge and culture.

PJ & AK: The civil society is the collective conscious, which provides leverage against national and corporate agendas and serves as a powerful social corrective. Thus, at the outbreak of the US invasion to Iraq, Net.culture club MaMa rejected a \$100 000 USAID grant because the invasion was:

- a) a precedent based on the rationale of pre-emptive war, b) being waged in disregard of legitimate processes of the international community, and c) guided by corporate interests to control natural resources (Multimedia Institute, 2003 in Razsa, 2015: 82).

Yet, only a few weeks later, MaMa accepted a \$100 000 grant from the German state – and this provoked a wide public debate (Razsa, 2015; Kršić, 2003; Stubbs, 2012).

Now that the heat of the moment has gone down, what is your view to this debate? More generally, how do you decide whose money to accept and whose money to reject? How do you decide where to publish, where to exhibit, whom to work with? What is the relationship between idealism and pragmatism in your work?

MM & TM: Our decision seems justified yet insignificant in the face of the aftermath of that historical moment. The unilateral decision of US and its allies to invade Iraq in March 2003 encapsulated both the defeat of global protest movements that had contested the neoliberal globalisation since the early 1990s and the epochal carnage that the War on Terror, in its never-ending iterations, is still reaping today. Nowadays, the weaponized and privatized security regime follows the networks of supply chains that cut across the logic of borders and have become vital both for the global circuits of production and distribution (see Cowen, 2014). For the US, our global policeman, the introduction of unmanned weaponry and all sorts of asymmetric war technologies has reduced the human cost of war down to zero. By deploying drones and killer robots, it did away with the fundamental reality check of own human casualties and made endless war politically plausible. The low cost of war has resulted in the growing side-lining of international institutions responsible for peaceful resolution of international conflicts such as the UN.

Our 2003 decision carried hard consequences for the organization. In a capitalist society, one can ensure wages either by relying on the market, or on the state, or on private funding. The USAID grant was our first larger grant after the initial spin-off money from the Open Society Institute, and it meant that we could employ some people from our community over the period of next two years. Yet at the same time, the USAID had become directly involved in Iraq, aiding the US forces and various private contractors such as Halliburton in the dispossession and

plunder of the Iraqi economy. Therefore, it was unconscionable to continue receiving money from them. In light of its moral and existential weight, the decision to return the money thus had to be made by the general assembly of our association.

People who were left without wages were part and parcel of the community that we had built between 2000 and 2003, primarily through Otokultivator Summer Camps and Summer Source Camp (Tactical Tech Collective, 2016). The other grant we would receive later that year, from the Federal Cultural Foundation of the German government, was split amongst a number of cultural organizations and paid for activities that eventually paved the way for Right to the City (Pravo na grad, 2016). However, we still could not pay the people who decided to return USAID money, so they had to find other jobs. Money never comes without conditionalities, and passing judgements while disregarding specific economic, historic and organizational context can easily lead to apolitical moralizing.

We do have certain principles that we would not want to compromise – we do not work with corporations, we are egalitarian in terms of income, our activities are free for the public. In political activities, however, idealist positions make sense only for as long as they are effective. Therefore, our idealism is through and through pragmatic. It is in the similar manner that we invoke the ideal of the library. We are well aware that reality is more complex than our ideals. However, the collective sense of purpose inspired by an ideal can carry over into useful collective action. This is the core of our interest ...

PJ & AK: There has been a lot of water under the bridge since the 2000s. From a ruined post-war country, Croatia has become an integral part of the European Union – with all associated advantages and problems. What are the main today's challenges in maintaining the Multimedia Institute and its various projects? What are your future plans?

MM & TM: From the early days, Multimedia Institute/MaMa took a twofold approach. It has always supported people working in and around the organization in their heterogeneous interests including but not limited to digital technology and information freedoms, political theory and philosophy, contemporary digital art, music and cinema. Simultaneously, it has been strongly focused to social and institutional transformation.

The moment zero of Croatian independence in 1991, which was marked by war, ethnic cleansing and forceful imposition of contrived mono-national identity, saw the progressive and modernist culture embracing the political alternative of anti-war movement. It is within these conditions, which entailed exclusion from access to public resources, that the Croatian civil society had developed throughout the 1990s. To address this denial of access to financial and spatial resources to civil society, since 2000 we have been organizing collective actions with a number of cultural actors across the country to create alternative routes for access to resources – mutual support networks, shared venues, public funding, alternative forms of funding. All the while, that organizational work has been implicitly situated in an understanding of commons that draws on two sources – the social contract of the free software community, and the legacy of social ownership under socialism.

Later on, this line of work has been developed towards intersectional struggles around spatial justice and against privatisation of public services that coalesced around the Right to the City movement (2007 till present) (Pravo na grad, 2016) and the 2015 Campaign against the monetization of the national highway network.

In early 2016, with the arrival of the short-lived Croatian government formed by a coalition of inane technocracy and rabid right wing radicals, many institutional achievements of the last fifteen years seemed likely to be dismantled in a matter of months. At the time of writing this text, the collapse of broader social and institutional context is (again) an imminent threat. In a way, our current situation echoes the atmosphere of Yugoslav civil wars in 1990s. Yet, the Croatian turn to the right is structurally parallel to recent turn to the right that takes place in most parts of Europe and the world at large. In the aftermath of the global neoliberal race to the bottom and the War on Terror, the disenfranchised working class vents its fears over immigration and insists on the return of nationalist values in various forms suggested by irresponsible political establishments. If they are not spared the humiliating sense of being outclassed and disenfranchised by the neoliberal race to the bottom, why should they be sympathetic to those arriving from the impoverished (semi)-periphery or to victims of turmoil unleashed by the endless War on Terror? If globalisation is reducing their life prospects to nothing, why should they not see the solution to their own plight in the return of the regime of statist nationalism?

At the Multimedia Institute/MaMa we intend to continue our work against this collapse of context through intersectionalist organizing and activism. We will continue to do cultural programs, publish books, and organise the Human Rights Film Festival. In order to articulate, formulate and document years of practical experience, we aim to strengthen our focus on research and writing about cultural policy, technological development, and political activism. Memory of the World/Public Library project will continue to develop alternative infrastructures for access, and develop new and existing networks of solidarity and public advocacy for knowledge commons.

LOCAL HISTORIES AND GLOBAL REALITIES

PJ & AK: Your interests and activities are predominantly centred around information and communication technologies. Yet, a big part of your social engagement takes place in Eastern Europe, which is not exactly on the forefront of technological innovation. Can you describe the dynamics of working from the periphery around issues developed in global centres of power (such as the Silicon Valley)?

MM & TM: Computers in their present form had been developed primarily in the Post-World War II United States. Their development started from the military need to develop mathematics and physics behind the nuclear weapons and counter-air defense, but soon it was combined with efforts to address accounting, logistics and administration problems in diverse fields such as commercial air traffic, governmental services, banks and finances. Finally, this interplay of the military

and the economy was joined by enthusiasts, hobbyists, and amateurs, giving the development of (mainframe, micro and personal) computer its final historical blueprint. This story is written in canonical computing history books such as *The Computer Boys Take Over: Computers, Programmers, and the Politics of Technical Expertise*. There, Nathan Ensmenger (2010: 14) writes: “the term computer boys came to refer more generally not simply to actual computer specialists but rather to the whole host of smart, ambitious, and technologically inclined experts that emerged in the immediate postwar period.”

Very few canonical computing history books cover other histories. But when that happens, we learn a lot. Be that Slava Gerovitch’s *From Newspeak to Cyberspeak* (2002), which recounts the history of Soviet cybernetics, or Eden Medina’s *Cybernetic Revolutionaries* (2011), which revisits the history of socialist cybernetic project in Chile during Allende’s government, or the recent book by Benjamin Peters *How Not to Network a Nation* (2016), which describes the history of Soviet development of Internet infrastructure. Many (other) histories are yet to be heard and written down. And when these histories get written down, diverse things come into view: geopolitics, class, gender, race, and many more.

With their witty play and experiments with the medium, the early days of the Internet were highly exciting. Big corporate websites were not much different from amateur websites and even spoofs. A (different-than-usual) proximity of positions of power enabled by the Internet allowed many (media-art) interventions, (rebirth of) manifestos, establishment of (pseudo)-institutions ... In these early times of Internet’s history and geography, (the Internet subculture of) Eastern Europe played a very important part. Inspired by Alexei Shulgin, Lev Manovich wrote ‘On Totalitarian Interactivity’ (1996) where he famously addressed important differences between understanding of the Internet in the West and the East. For the West, claims Manovich, interactivity was a perfect vehicle for the ideas of democracy and equality. For the East, however, interactivity was merely another form of (media) manipulation. Twenty years later, it seems that Eastern Europe was well prepared for what the Internet would become today.

PJ & AK: The dominant (historical) narrative of information and communication technologies is predominantly based in the United States. However, Silicon Valley is not the only game in town ... What are the main differences between approaches to digital technologies in the US and in Europe?

MM & TM: In the ninties, the lively European scene, which equally included the East Europe, was the centre of critical reflection on the Internet and its spontaneous ‘Californian ideology’ (Barbrook & Cameron, 1996). Critical culture in Europe and its Eastern ‘countries in transition’ had a very specific institutional landscape. In Western Europe, art, media, culture and ‘post-academic’ research in humanities was by and large publicly funded. In Eastern Europe, development of the civil society had been funded by various international foundations such as the Open Society Institute aka the Soros Foundation. Critical new media and critical art scene played an important role in that landscape. A wide range of initiatives, medialabs, mailing lists, festivals and projects like Next5minutes (Amsterdam/Rotterdam), Nettime & Syndicate (mailing lists), Backspace & Irational.org

(London), Ljudmila (Ljubljana), Rixc (Riga), C3 (Budapest) and others constituted a loose network of researchers, theorists, artists, activists and other cultural workers.

This network was far from exclusively European. It was very well connected to projects and initiatives from the United States such as Critical Art Ensemble, Rhizome, and Thing.net, to projects in India such as Sarai, and to struggles of Zapatistas in Chiapas. A significant feature of this loose network was its mutually beneficial relationship with relevant European art festivals and institutions such as Documenta (Kassel), Transmediale/HKW (Berlin) or Ars Electronica (Linz). As a rule of thumb, critical new media and art could only be considered in a conceptual setup of hybrid institutions, conferences, forums, festivals, (curated) exhibitions and performances – and all of that at once! The Multimedia Institute was an active part of that history, so it is hardly a surprise that the Public Library project took a similar path of development and contextualization.

However, European hacker communities were rarely hanging out with critical digital culture crowds. This is not the place to extensively present the historic trajectory of different hacker communities, but risking a gross simplification here is a very short genealogy. The earliest European hacker association was the German Chaos Computer Club (CCC) founded in 1981. Already in the early 1980s, CCC started to publicly reveal (security) weaknesses of corporate and governmental computer systems. However, their focus on digital rights, privacy, cyberpunk/cypherpunk, encryption, and security issues prevailed over other forms of political activism. The CCC were very successful in raising issues, shaping public discussions, and influencing a wide range of public actors from digital rights advocacy to political parties (such as Greens and Pirate Party). However, unlike the Italian and Spanish hackers, CCC did not merge paths with other social and/or political movements. Italian and Spanish hackers, for instance, were much more integral to autonomist/anarchist, political and social movements, and they have kept this tradition until the present day.

PJ & AK: Can you expand this analysis to Eastern Europe, and ex-Yugoslavia in particular? What were the distinct features of (the development of) hacker culture in these areas?

MM & TM: Continuing to risk a gross simplification in the genealogy, Eastern European hacker communities formed rather late – probably because of the turbulent economic and political changes that Eastern Europe went through after 1989.

In MaMa, we used to run the programme g33koskop (2006–2012) with a goal to “explore the scope of (term) geek” (Multimedia Institute, 2016b). An important part of the program was to collect stories from enthusiasts, hobbyists, or ‘geeks’ who used to be involved in do-it-yourself communities during early days of (personal) computing in Yugoslavia. From these makers of first 8-bit computers, editors of do-it-yourself magazines and other early day enthusiasts, we could learn that technical and youth culture was strongly institutionally supported (e.g. with nation-wide clubs called People’s Technics). However, the socialist regime did not adequately recognize the importance and the horizon of social changes coming

from (mere) education and (widely distributed) use of personal computers. Instead, it insisted on an impossible mission of own industrial computer production in order to preserve autonomy on the global information technology market. What a horrible mistake ... To be fair, many other countries during this period felt able to achieve own, autonomous production of computers – so the mistake has reflected the spirit of the times and the conditions of uneven economic and scientific development.

Looking back on the early days of computing in former Yugoslavia, many geeks now see themselves as social visionaries and the avant-garde. During the 1990s across the Eastern Europe, unfortunately, they failed to articulate a significant political agenda other than fighting the monopoly of telecom companies. In their daily lives, most of these people enjoyed opportunities and privileges of working in a rapidly growing information technology market. Across the former Yugoslavia, enthusiasts had started local Linux User Groups: HULK in Croatia, LUGOS in Slovenia, LUGY in Serbia, Bosnia and Hercegovina, and Macedonia. In the spirit of their own times, many of these groups focused on attempts to convince the business that free and open source software (at the time GNU/Linux, Apache, Exim ...) was a viable IT solution.

PJ & AK: Please describe further developments in the struggle between proponents of proprietary software and the Free Software Movement.

MM & TM: That was the time before Internet giants such as Google, Amazon, eBay or Facebook built their empires on top of Free/Libre/Open Source Software. GNU General Public Licence, with its famous slogan “free as in free speech, not free as in free beer” (Stallman, 2002), was strong enough to challenge the property regime of the world of software production. Meanwhile, Silicon Valley experimented with various approaches against the challenge of free software such as ‘tivoizations’ (systems that incorporate copyleft-based software but impose hardware restrictions to software modification), ‘walled gardens’ (systems where carriers or service providers control applications, content and media, while preventing them from interacting with the wider Internet ecosystem), ‘software-as-a-service’ (systems where software is hosted centrally and licensed through subscription). In order to support these strategies of enclosure and turn them into profit, Silicon Valley developed investment strategies of venture capital or leveraged buyouts by private equity to close the proprietary void left after the success of commons-based peer production projects, where a large number of people develop software collaboratively over the Internet without the exclusion by property (Benkler, 2006).

There was a period when it seemed that cultural workers, artists and hackers would follow the successful model of the Free Software Movement and build a universal commons-based platform for peer produced, shared and distributed culture, art, science and knowledge – that was the time of the Creative Commons movement. But that vision never materialized. It did not help, either, that start-ups with no business models whatsoever (e.g. De.lic.io.us (bookmarks), Flickr (photos), Youtube (videos), Google Reader (RSS aggregator), Blogspot, and others) were happy to give their services for free, let contributors use Creative

Commons licences (mostly on the side of licenses limiting commercial use and adaptations), let news curators share and aggregate relevant content, and let *Time* magazine claim that “You” (meaning “All of us”) are The Person of the Year (*Time Magazine*, 2006).

PJ & AK: Please describe the interplay between the Free Software Movement and the radically capitalist Silicon Valley start-up culture, and place it into the larger context of political economy of software development. What are its consequences for the hacker movement?

MM & TM: Before the 2008 economic crash, in the course of only few years, most of those start-ups and services had been sold out to few business people who were able to monetize their platforms, users and usees (mostly via advertisement) or crowd them out (mostly via exponential growth of Facebook and its ‘magic’ network effect). In the end, almost all affected start-ups and services got shut down (especially those bought by Yahoo). Nevertheless, the ‘golden’ corporate start-up period brought about a huge enthusiasm and the belief that entrepreneurial spirit, fostered either by an individual genius or by collective (a.k.a. crowd) endeavour, could save the world. During that period, unsurprisingly, the idea of hacker labs/spaces exploded.

Fabulous (self)replicating rapid prototypes, 3D printers, do-it-yourself, the Internet of Things started to resonate with (young) makers all around the world. Unfortunately, GNU GPL (v.3 at the time) ceased to be a priority. The infrastructure of free software had become taken for granted, and enthusiastic dancing on the shoulders of giants became the most popular exercise. Rebranding existing Unix services (finger > twitter, irc > slack, talk > im), and/or designing the ‘last mile’ of user experience (often as trivial as adding round corners to the buttons), would often be a good enough reason to enclose the project, do the slideshow pitch, create a new start-up backed up by an angel investor, and hope to win in the game of network effect(s).

Typically, software stack running these projects would be (almost) completely GNU GPL (server + client), but parts made on OSX (endorsed for being ‘true’ Unix under the hood) would stay enclosed. In this way, projects would shift from the world of commons to the world of business. In order to pay respect to the open source community, and to keep own reputation of ‘the good citizen,’ many software components would get its source code published on GitHub – which is a prime example of that game of enclosure in its own right. Such developments transformed the hacker movement from a genuine political challenge to the property regime into a science fiction fantasy that sharing knowledge while keeping hackers’ meritocracy regime intact could fix all world’s problems – if only we, the hackers, are left alone to play, optimize, innovate and make that amazing technology!

THE SOCIAL LIFE OF DIGITAL TECHNOLOGIES

PJ & AK: This brings about the old debate between technological determinism and social determinism, which never seems to go out of fashion. What is your take,

as active hackers and social activists, on this debate? What is the role of (information) technologies in social development?

MM & TM: Any discussion of information technologies and social development requires the following parenthesis: notions used for discussing technological development are shaped by the context of parallel US hegemony over capitalist world-system and its commanding role in the development of information technologies. Today's critiques of the Internet are far from celebration of its liberatory, democratizing potential. Instead, they often reflect frustration over its instrumental role in the expansion of social control. Yet, the binary of freedom and control (Chun, 2008), characteristic for ideological frameworks pertaining to liberal capitalist democracies, is increasingly at pains to explain what has become evident with the creeping commercialization and concentration of market power in digital networks. Information technologies are no different from other general-purpose technologies on which they depend – such as mass manufacture, logistics, or energy systems.

Information technologies shape capitalism – in return, capitalism shapes information technologies. Technological innovation is driven by interests of investors to profit from new commodity markets, and by their capacity to optimize and increase productivity of other sectors of economy. The public has some influence over development of information technologies. In fact, publicly funded research and development has created and helped commercialize most of the fundamental building blocks of our present digital infrastructures ranging from microprocessors, touch-screens all the way to packet switching networks (Mazzucato, 2013). However, public influence on commercially matured information technologies has become limited, driven by imperatives of accumulation and regulatory hegemony of the US.

When considering the structural interplay between technological development and larger social systems, we cannot accept the position of technological determinism – particularly not in the form of Promethean figures of entrepreneurs, innovators and engineers who can solve the problems of the world. Technologies are shaped socially, yet the position of outright social determinism is unacceptable either. The reproduction of social relations depends on contingencies of technological innovation, just as the transformation of social relations depends on contingencies of actions by individuals, groups and institutions. Given the asymmetries that exist between the capitalist core and the capitalist periphery, from which we hail, strategies for using technologies as agents of social change differ significantly.

PJ & AK: Based on your activist experience, what is the relationship between information technologies and democracy?

MM & TM: This relation is typically discussed within the framework of communicative action (Habermas, 1984 [1981], 1987 [1981]) which describes how the power to speak to the public has become radically democratized, how digital communication has coalesced into a global public sphere, and how digital communication has catalysed the power of collective mobilization. Information technologies have done all that – but the framework of communicative action

describes only a part of the picture. Firstly, as Jodi Dean warns us in her critique of communicative capitalism (Dean, 2005; see also Dean, 2009), the self-referential intensity of communication frequently ends up as a substitute for the hard (and rarely rewarding) work of political organization. Secondly, and more importantly, Internet technologies have created the ‘winner takes all’ markets and benefited more highly skilled workforce, thus helping to create extreme forms of economic inequality (Brynjolfsson & McAfee, 2011). Thus, in any list of world’s richest people, one can find an inordinate number of entrepreneurs from information technology sector. This feeds deeply into neoliberal transformation of capitalist societies, with growing (working and unemployed) populations left out of social welfare which need to be actively appeased or policed. This is the structural problem behind liberal democracies, electoral successes of the radical right, and global “Trumpism” (Blyth, 2015). Intrinsic to contemporary capitalism, information technologies reinforce its contradictions and pave its unfortunate trail of destruction.

PJ & AK: Access to digital technologies and digital materials is dialectically intertwined with human learning. For instance, Stallman’s definition of free software directly addresses this issue in two freedoms: “Freedom 1: The freedom to study how the program works, and change it to make it do what you wish,” and “Freedom 3: The freedom to improve the program, and release your improvements (and modified versions in general) to the public, so that the whole community benefits” (Stallman, 2002: 43). Please situate the relationship between access and learning in the contemporary context.

MM & TM: The relationships between digital technologies and education are marked by the same contradictions and processes of enclosure that have befallen the free software. Therefore, Eastern European scepticism towards free software is equally applicable to education. The flip side of interactivity is audience manipulation; the flip side of access and availability is (economic) domination. Eroded by raising tuitions, expanding student debt, and poverty-level wages for adjunct faculty, higher education is getting more and more exclusive. However, occasional spread of enthusiasm through ideas such as MOOCs does not bring about more emancipation and equality. While they preach loudly about unlimited access for students at the periphery, neoliberal universities (backed up by venture capital) are actually hoping to increase their recruitment business (models). MOOCs predominantly serve members of privileged classes who already have access to prestige universities, and who are “self-motivated, self-directed, and independent individuals who would push to succeed anywhere” (Konnikova, 2014). It is a bit worrying that such rise of inequality results from attempts to provide materials freely to everyone with Internet access!

The question of access to digital books for public libraries is different. Libraries cannot afford digital books from world’s largest publishers (Digitalbookworld, 2012), and the small amount of already acquired e-books must be destroyed after only twenty six lendings (Greenfield, 2012). Thus, the issue of access is effectively left to competition between Amazon, Google, Apple and other companies. The state of affairs in scientific publishing is not any better. As we wrote in the collective open

letter ‘In solidarity with Library Genesis and Sci-Hub’ (Custodians.online, 2015), five for-profit publishers (Elsevier, Springer, Wiley-Blackwell, Taylor & Francis and Sage) own more than half of all existing databases of academic material, which are licensed at prices so scandalously high that even Harvard, the richest university of the Global North, has complained that it cannot afford them any longer. Robert Darnton, the past director of Harvard Library, says: “We faculty do the research, write the papers, referee papers by other researchers, serve on editorial boards, all of it for free ... and then we buy back the results of our labor at outrageous prices.” For all the work supported by public money benefiting scholarly publishers, particularly the peer review that grounds their legitimacy, prices of journal articles prohibit access to science to many academics – and all non-academics – across the world, and render it a token of privilege (Custodians.online, 2015).

PJ & AK: Please describe the existing strategies for struggle against these developments. What are their main strengths and weaknesses?

MM & TM: Contemporary problems in the field of production, access, maintenance and distribution of knowledge regulated by globally harmonized intellectual property regime have brought about tremendous economic, social, political and institutional crisis and deadlock(s). Therefore, we need to revisit and rethink our politics, strategies and tactics. We could perhaps find inspiration in the world of free software production, where it seems that common effort, courage and charming obstinacy are able to build alternative tools and infrastructures. Yet, this model might be insufficient for the whole scope of crisis facing knowledge production and dissemination. The aforementioned corporate appropriations of free software such as ‘tivoizations,’ ‘walled gardens,’ ‘software-as-a-service’ etc. bring about the problem of longevity of commons-based peer-production.

Furthermore, the sense of entitlement for building alternatives to dominant modes of oppression can only arrive at the close proximity to capitalist centres of power. The periphery (of capitalism), in contrast, relies on strategies of ‘stealing’ and bypassing socio-economic barriers by refusing to submit to the harmonized regulation that sets the frame for global economic exchange. If we honestly look back and try to compare the achievements of digital piracy vs. the achievements of reformist Creative Commons, it is obvious that the struggle for access to knowledge is still alive mostly because of piracy.

PJ & AK: This brings us to the struggle against (knowledge as) private property. What are the main problems in this struggle? How do you go about them?

MM & TM: Many projects addressing the crisis of access to knowledge are originated in Eastern Europe. Examples include Library Genesis, Science Hub, Monoskop and Memory of the World. Balázs Bodó’s research (2016) on the ethos of Library Genesis and Science Hub resonates with our beliefs, shared through all abovementioned projects, that the concept of private property should not be taken for granted. Private property can and should be permanently questioned, challenged and negotiated. This is especially the case in the face of artificial scarcity (such as lack of access to knowledge caused by intellectual property in context of digital networks) or selfish speculations over scarce basic human

resources (such as problems related to housing, water or waterfront development) (Mars, Medak, & Sekulić, 2016).

The struggle to challenge the property regime used to be at the forefront of the Free Software Movement. In the spectacular chain of recent events, where the revelations of sweeping control and surveillance of electronic communications brought about new heroes (Manning, Assange, Snowden), the hacker is again reduced to the heroic cypherpunk outlaw. This firmly lies within the old Cold War paradigm of us (the good guys) vs. them (the bad guys). However, only rare and talented people are able to master cryptography, follow exact security protocols, practice counter-control, and create a leak of information. Unsurprisingly, these people are usually white, male, well-educated, native speakers of English. Therefore, the narrative of us vs. them is not necessarily the most empowering, and we feel that it requires a complementary strategy that challenges the property regime as a whole. As our letter at Custodians.online says:

We find ourselves at a decisive moment. This is the time to recognize that the very existence of our massive knowledge commons is an act of collective civil disobedience. It is the time to emerge from hiding and put our names behind this act of resistance. You may feel isolated, but there are many of us. The anger, desperation and fear of losing our library infrastructures, voiced across the Internet, tell us that. This is the time for us custodians, being dogs, humans or cyborgs, with our names, nicknames and pseudonyms, to raise our voices. Share your writing – digitize a book – upload your files. Don't let our knowledge be crushed. Care for the libraries – care for the metadata – care for the backup. (Custodians.online, 2015)

FROM CIVIL DISOBEDIENCE TO PUBLIC LIBRARY

PJ & AK: Started in 2012, The Public Library project (Memory of the World, 2016a) is an important part of struggle against commodification of knowledge. What is the project about; how did it arrive into being?

MM & TM: The Public Library project develops and affirms scenarios for massive disobedience against current regulation of production and circulation of knowledge and culture in the digital realm. Started in 2012, it created a lot of resonance across the peripheries of an unevenly developed world of study and learning. Earlier that year, takedown of the book-sharing site Library.nu produced the anxiety that the equalizing effects brought about by piracy would be rolled back. With the takedown, the fact that access to most recent and most relevant knowledge was (finally) no longer a privilege of the rich academic institutions in a few countries of the Global West, and/or the exclusive preserve of the academia to boot – has simply disappeared into thin air. Certainly, various alternatives from deep semi-periphery have quickly filled the gap. However, it is almost a miracle that they still continue to exist in spite of prosecution they are facing on everyday basis.

Our starting point for the Public Library project is simple: public library is the institutional form devised by societies in order to make knowledge and culture accessible to all its members regardless their social or economic status. There is a political consensus across the board that this principle of access is fundamental to the purpose of a modern society. Only educated and informed citizens are able to claim their rights and fully participate in the polity for common good. Yet, as digital networks have radically expanded availability of literature and science, provision of de-commodified access to digital objects has been by and large denied to public libraries. For instance, libraries frequently do not have the right to purchase e-books for lending and preservations. If they do, they are limited in regards to how many times and under what conditions they can lend digital objects before the license and the object itself is revoked (Greenfield, 2012). The case of academic journals is even worse. As journals become increasingly digital, libraries can provide access and ‘preserve’ them only for as long as they pay extortionate subscriptions. The Public Library project fills in the space that remains denied to real-world public libraries by building tools for organizing and sharing electronic libraries, creating digitization workflows and making books available online. Obviously, we are not alone in this effort. There are many other platforms, public and hidden, that help people to share books. And the practice of sharing is massive.

PJ & AK: The Public Library project (Memory of the World, 2016a) is a part of a wider global movement based, amongst other influences, on the seminal work of Aaron Swartz. This movement consists of various projects including but not limited to Library Genesis, Aaaaarg.org, UbuWeb, and others. Please situate The Public Library project in the wider context of this movement. What are its distinct features? What are its main contributions to the movement at large?

MM & TM: The Public Library project is informed by two historic moments in the development of institution of public library. The first defining moment happened during the French Revolution – the seizure of library collections from aristocracy and clergy, and their transfer to the *Bibliothèque Nationale* and municipal libraries of the post-revolutionary Republic. The second defining moment happened in England through working class struggles to make knowledge accessible to the working class. After the revolution of 1848, that struggle resulted in tax-supported public libraries. This was an important part of the larger attempt by the Chartist movement to provide workers with “really useful knowledge” aimed at raising class consciousness through explaining functioning of capitalist domination and exploring ways of building workers’ own autonomous culture (Johnson, 1988). These defining revolutionary moments have instituted two principles underpinning the functioning of public libraries: a) general access to knowledge is fundamental to full participation in the society, and b) commodification of knowledge in the form of book trade needs to be limited by public de-commodified non-monetary forms of access through public institutions.

In spite of enormous expansion of potentials for providing access to knowledge to all regardless of their social status or geographic location brought about by the digital technologies, public libraries have been radically limited in pursuing their mission. This results in side-lining of public libraries in enormous expansion of

commodification of knowledge in the digital realm, and brings huge profits to academic publishers. In response to these limitations, a number of projects have sprung up in order to maintain public interest by illegal means.

PJ & AK: Can you provide a short genealogy of these projects?

MM & TM: Founded in 1996, Ubu was one of the first online repositories. Then, in 2001, Textz.com started distributing texts in critical theory. After Textz.com got shot down in early 2004, it took another year for Aaaaarg to emerge and Monoskop followed soon thereafter. In the latter part of the 2000s, Gigapedia started a different trajectory of providing access to comprehensive repositories. Gigapedia was a game changer, because it provided access to thousands and thousands of scholarly titles and made access to that large corpus no longer limited to those working or studying in the rich institutions of the Global North. In 2012 publishing industry shut down Gigapedia (at the time, it was known as Library.nu). Fortunately, the resulting vacuum did not last for long, as Library.nu repository got merged into the holdings of Library Genesis. Building on the legacy of Soviet scholars who devised the ways of shadow production and distribution of knowledge in the form of samizdat and early digital distribution of texts in the post-Soviet period (Balázs, 2014), Library Genesis has built a robust infrastructure with the mission to provide access to the largest online library in existence while keeping a low profile. At this moment Library Genesis provides access to books, and its sister project Science Hub provides access to academic journals. Both projects are under threat of closure by the largest academic publisher Reed Elsevier. Together with the Public Library project, they articulate a position of civil disobedience.

PJ & AK: Please elaborate the position of civil disobedience. How does it work; when is it justified?

MM & TM: Legitimizing discourses usually claim that shadow libraries fall into the category of non-commercial fair use. These arguments are definitely valid, yet they do not build a particularly strong ground for defending knowledge commons. Once they arrive under attack, therefore, shadow libraries are typically shut down. In our call for collective disobedience, therefore, we want to make a larger claim. Access to knowledge as a universal condition could not exist if we – academics and non-academics across the unevenly developed world – did not create own ways of commoning knowledge that we partake in producing and learning. By introducing the figure of the custodian, we are turning the notion of property upside down. Paraphrasing the Little Prince, to own something is to be useful to that which you own (Saint-Exupéry, 1945). Custodians are the political subjectivity of that disobedient work of care.

Practices of sharing, downloading, and uploading, are massive. So, if we want to prevent our knowledge commons from being taken away over and over again, we need to publicly and collectively stand behind our disobedient behaviour. We should not fall into the trap of the debate about legality or illegality of our practices. Instead, we should acknowledge that our practices, which have been deemed illegal, are politically legitimate in the face of uneven opportunities between the Global North and the Global South, in the face of commercialization

of education and student debt in the Global North ... This is the meaning of civil disobedience – to take responsibility for breaking unjust laws.

PJ & AK: We understand your lack of interest for debating legality – nevertheless, legal services are very interested in your work ... For instance, Marcell has recently been involved in a law suit related to Aaaaarg. Please describe the relationship between morality and legality in your (public) engagement. When, and under which circumstances, can one's moral actions justify breaking the law?

MM & TM: Marcell has been recently drawn into a lawsuit that was filed against Aaaaarg for copyright infringement. Marcell, the founder of Aaaaarg Sean Dockray, and a number of institutions ranging from universities to continental-scale intergovernmental organizations, are being sued by a small publisher from Quebec whose translation of André Bazin's *What is Cinema?* (1967) was twice scanned and uploaded to Aaaaarg by an unknown user. The book was removed each time the plaintiff issued a takedown notice, resulting in minimal damages, but these people are nonetheless being sued for 500.000 Canadian dollars. Should Aaaaarg not be able to defend its existence on the principle of fair use, a valuable common resource will yet again be lost and its founder will pay a high price. In this lawsuit, ironically, there is little economic interest. But many smaller publishers find themselves squeezed between the privatization of education which leaves students and adjuncts with little money for books and the rapid concentration of academic publishing. For instance, Taylor and Francis has acquired a smaller humanities publisher Ashgate and shut it down in a matter of months (Save Ashgate Publishing petition, 2015).

The system of academic publishing is patently broken. It syphons off public funding of science and education into huge private profits, while denying living wages and access to knowledge to its producers. This business model is legal, but deeply illegitimate. Many scientists and even governments agree with this conclusion – yet, situation cannot be easily changed because of entrenched power passed down from the old models of publishing and their imbrication with allocation of academic prestige. Therefore, the continuous existence of this model commands civil disobedience.

PJ & AK: The Public Library project (Memory of the World, 2016a) operates in various public domains including art galleries. Why did you decide to develop The Public Library project in the context of arts? How do you conceive the relationship between arts and activism?

MM & TM: We tend to easily conflate the political with the aesthetic. Moreover, when an artwork expressedly claims political character, this seems to grant it recognition and appraisal. Yet, socially reflective character of an artwork and its consciously critical position toward the social reality might not be outright political. Political action remains a separate form of agency, which is different than that of socially reflexive, situated and critical art. It operates along a different logic of engagement. It requires collective mobilization and social transformation. Having said that, socially reflexive, situated and critical art cannot remain detached from the present conjuncture and cannot exist outside the political space. Within the world of arts, alternatives to existing social sensibilities and realities can be

articulated and tested without paying a lot of attention to consistency and plausibility. Whereas activism generally leaves less room for unrestricted articulation, because it needs to produce real and plausible effects.

With the generous support of the curatorial collective *What, How and for Whom* (WHW) (2016), the Public Library project was surprisingly welcomed by the art world, and this provided us with a stage to build the project, sharpen its arguments and ascertain legitimacy of its political demands. The project was exhibited, with WHW and other curators, in some of the foremost art venues such as Reina Sofia in Madrid, Württembergischer Kunstverein in Stuttgart, 98 Weeks in Beirut, Museum of Contemporary Art Metelkova in Ljubljana, and Calvert 22 in London. It is great to have a stage where we can articulate social issues and pursue avenues of action that other social institutions might find risky to support. Yet, while the space of art provides a safe haven from the adversarial world of political reality, we think that the addressed issues need to be politicized and that other institutions, primarily institutions of education, need to stand behind the demand for universal access. For instance, teaching and research at the University in Zagreb critically depends on the capacity of its faculty and students to access books and journals from sources that are deemed illegal – in our opinion, therefore, the University needs to take a public stand for these forms of access. In the world of commercialized education and infringement liability, expecting the University to publicly support us seems highly improbable. However, it is not impossible! This was recently demonstrated by the Zürich Academy of Arts, which now hosts a mirror of *Ubu* – a crucial resource for its students and faculty alike (Custodians.online, 2016).

PJ & AK: In the current climate of economic austerity, the question of resources has become increasingly important. For instance, Web 2.0. has narrowed available spaces for traditional investigative journalism, and platforms such as Airbnb and Uber have narrowed spaces for traditional labor. Following the same line of argument, placing activism into art galleries clearly narrows available spaces for artists. How do you go about this problem? What, if anything, should be done with the activist takeover of traditional forms of art? Why?

MM & TM: Art can no longer stand outside of the political space, and it can no longer be safely stowed away into a niche of supposed autonomy within bourgeois public sphere detached from commodity production and the state. However, art academies in Croatia and many other places throughout the world still churn out artists on the premise that art is apolitical. In this view artists can specialize in a medium and create in isolation of their studios – if their artwork is recognized as masterful, it will be bought on the marketplace. This is patently a lie! Art in Croatia depends on bonds of solidarity and public support.

Frequently it is the art that seeks political forms of engagement rather than vice versa. A lot of headspace for developing a different social imaginary can be gained from that venturing aspect of contemporary art. Having said that, art does not need to be political in order to be relevant and strong.

THE DOUBLE LIFE OF HACKER CULTURE

PJ & AK: The Public Library project (Memory of the World, 2016a) is essentially pedagogical. When everyone is a librarian, and all books are free, living in the world transforms into living with the world – so The Public Library project is also essentially anti-capitalist. This brings us to the intersections between critical pedagogy of Paulo Freire, Peter McLaren, Henry Giroux, and others – and the hacker culture of Richard Stallman, Linus Torvalds, Steven Lévy, and others. In spite of various similarities, however, critical pedagogy and hacker culture disagree on some important points.

With its deep roots in Marxism, critical theory always insists on class analysis. Yet, imbued in the Californian ideology (Barbrook and Cameron, 1996), the hacker culture is predominantly individualist. How do you go about the tension between individualism and collectivism in The Public Library project? How do you balance these forces in your overall work?

MM & TM: Hacker culture has always lived a double life. Personal computers and the Internet have set up a perfect projection screen for a mind-set which understands autonomy as a pursuit for personal self-realisation. Such mind-set sees technology as a frontier of limitless and unconditional freedom, and easily melds with entrepreneurial culture of the Silicon Valley. Therefore, it is hardly a surprise that individualism has become the hegemonic narrative of hacker culture. However, not all hacker culture is individualist and libertarian. Since the 1990s, the hacker culture is heavily divided between radical individualism and radical mutualism. Fred Turner (2006), Richard Barbrook and Andy Cameron (1996) have famously shown that radical individualism was built on freewheeling counter-culture of the American hippie movement, while radical mutualism was built on collective leftist traditions of anarchism and Marxism. This is evident in the Free Software Movement, which has placed ethics and politics before economy and technology. In her superb ethnographic work, Biella Coleman (2013) has shown that projects such as GNU/Linux distribution Debian have espoused radically collective subjectivities. In that regard, these projects stand closer to mutualist, anarchist and communist traditions where collective autonomy is the foundation of individual freedom.

Our work stands in that lineage. Therefore, we invoke two collective figures – amateur librarian and custodian. These figures highlight the labor of communizing knowledge and maintaining infrastructures of access, refuse to leave the commons to the authority of professions, and create openings where technologies and infrastructures can be re-claimed for radically collective and redistributive endeavours. In that context, we are critical of recent attempts to narrow hacker culture down to issues of surveillance, privacy and cryptography. While these issues are clearly important, they (again) reframe the hacker community through the individualist dichotomy of freedom and privacy, and, more broadly, through the hegemonic discourse of the post-historical age of liberal capitalism. In this way, the essential building blocks of the hacker culture – relations of production, relations of property, and issues of redistribution – are being drowned out, and

collective and massive endeavour of commonizing is being eclipsed by the capacity of the few crypto-savvy tricksters to avoid government control. Obviously, we strongly disagree with the individualist, privative and 1337 (elite) thrust of these developments.

PJ & AK: The Public Library project (Memory of the World, 2016a) arrives very close to visions of deschooling offered by authors such as Ivan Illich (1971), Everett Reimer (1971), Paul Goodman (1973), and John Holt (1967). Recent research indicates that digital technologies offer some fresh opportunities for the project of deschooling (Hart, 2001; Jandrić, 2014, 2015b), and projects such as Monoskop (Monoskop, 2016) and The Public Library project (Memory of the World, 2016a) provide important stepping-stones for emancipation of the oppressed. Yet, such forms of knowledge and education are hardly – if at all – recognised by the mainstream. How do you go about this problem? Should these projects try and align with the mainstream, or act as subversions of the mainstream, or both? Why?

MM & TM: We are currently developing a more fine-tuned approach to educational aspects of amateur librarianship. The forms of custodianship over knowledge commons that underpin the practices behind Monoskop, Public Library, Aaaaarg, Ubu, Library Genesis, and Science Hub are part and parcel of our contemporary world – whether you are a non-academic with no access to scholarly libraries, or student/faculty outside of the few well-endowed academic institutions in the Global North. As much as commercialization and privatization of education are becoming mainstream across the world, so are the strategies of reproducing one’s knowledge and academic research that depend on the de-commodified access of shadow libraries.

Academic research papers are narrower in scope than textbooks, and Monoskop is thematically more specific than Library Genesis. However, all these practices exhibit ways in which our epistemologies and pedagogies are built around institutional structures that reproduce inequality and differentiated access based on race, gender, class and geography. By building own knowledge infrastructures, we build different bodies of knowledge and different forms of relating to our realities – in words of Walter Mignolo, we create new forms of epistemic disobedience (2009). Through Public Library, we have digitized and made available several collections that represent epistemologically different corpuses of knowledge. A good example of that is the digital collection of books selected by Black Panther Herman Wallace as his dream library for political education (Memory of the World, 2016b).

PJ & AK: Your work breaks traditional distinctions between professionals and amateurs – when everyone becomes a librarian, the concepts of ‘professional librarian’ and ‘amateur librarian’ become obsolete. Arguably, this tension is an inherent feature of the digital world – similar trends can be found in various occupations such as journalism and arts. What are the main consequences of the new (power) dynamics between professionals and amateurs?

MM & TM: There are many tensions between amateurs and professionals. There is the general tension, which you refer to as “the inherent feature of the

digital world,” but there are also more historically specific tensions. We, amateur librarians, are mostly interested in seizing various opportunities to politicize and renegotiate the positions of control and empowerment in the tensions that are already there. We found that storytelling is a particularly useful, efficient and engaging way of politicization. The naïve and oft overused claim – particularly during the Californian nineties – of the revolutionary potential of emerging digital networks turned out to be a good candidate for replacement by a story dating back two centuries earlier – the story of emergence of public libraries in the early days of the French bourgeois revolution in the 19th century.

The seizure of book collections from the Church and the aristocracy in the course of revolutions casts an interesting light on the tensions between the professionals and the amateurs. Namely, the seizure of book collections didn’t lead to an Enlightenment in the understanding of the world – a change in the paradigm how we humans learn, write and teach each other about the world. Steam engine, steam-powered rotary press, railroads, electricity and other revolutionary technological innovations were not seen as results of scientific inquiry. Instead, they were by and large understood as developments in disciplines such as mechanics, engineering and practical crafts, which did not challenge religion as the foundational knowledge about the world.

Consequently, public prayers continued to act as “hoped for solutions to cattle plagues in 1865, a cholera epidemic in 1866, and a case of typhoid suffered by the young Prince (Edward) of Wales in 1871” (Gieryn, 1983). Scientists of the time had to demarcate science from both the religion and the mechanics to provide a rationale for its superiority as opposed to the domains of spiritual and technical discovery. Depending on whom they talked to, asserts Thomas F. Gieryn, scientists would choose to describe the science as either theoretical or empirical, pure or applied, often in contradictory ways, but with a clear goal to legitimate to authorities both the scientific endeavor and its claim to resources. Boundary-work of demarcation had the following characteristics:

- (a) when the goal is expansion of authority or expertise into domains claimed by other professions or occupations, boundary-work heightens the contrast between rivals in ways flattering to the ideologists’ side;
- (b) when the goal is monopolization of professional authority and resources, boundary-work excludes rivals from within by defining them as outsiders with labels such as ‘pseudo,’ ‘deviant,’ or ‘amateur’;
- (c) when the goal is protection of autonomy over professional activities, boundary-work exempts members from responsibility for consequences of their work by putting the blame on scapegoats from outside. (Gieryn, 1983: 791–192)

Once institutionally established, modern science and its academic system have become the exclusive instances where emerging disciplines had now to seek recognition and acceptance. The new disciplines (and their respective professions), in order to become acknowledged by the scientific community as legitimate, had to

repeat the same boundary-work as the science in general once had to go through before.

The moral of this story is that the best way for a new scientific discipline to claim its territory was to articulate the specificity and importance of its insights in a domain no other discipline claimed. It could achieve that by theorizing, formalizing, and writing own vocabulary, methods and curricula, and finally by asking the society to see its own benefit in acknowledging the discipline, its practitioners and its practices as a separate profession – giving it the green light to create its own departments and eventually join the productive forces of the world. This is how democratization of knowledge led to the professionalization of science.

Another frequent reference in our storytelling is the history of professionalization of computing and its consequences for the fields and disciplines where the work of computer programmers plays an important role (Ensmenger, 2010: 14; Krajewski, 2011). Markus Krajewski in his great book *Paper Machines* (2011), looking back on the history of index card catalog (an analysis that is formative for our understanding of the significance of library catalog as an epistemic tool), introduced a thought-provoking idea of the logical equivalence of the developed index card catalog and the Turing machine, thus making the library a vanguard of the computing. Granting that equivalence, we however think that the professionalization of computing much better explains the challenges of today's librarianship and tensions between the amateur and professional librarians.

The world recognized the importance and potential of computer technology much before computer science won its own autonomy in the academia. Computer science first had to struggle and go through its own historical phase of boundary-work. In 1965 the Association for Computing Machinery (ACM) had decided to pool together various attempts to define the terms and foundations of computer science analysis. Still, the field wasn't given its definition before Donald Knuth and his colleagues established the algorithm as the principle unit of analysis in computer science in the first volume of Knuth's canonical *The Art of Computer Programming* (2011) [1968]. Only once the algorithm was posited as the main unit of study of computer science, which also served as the basis for ACM's 'Curriculum '68' (Atchison et al., 1968), the path was properly paved for the future departments of computer science in the university.

PJ & AK: What are the main consequences of these stories for computer science education?

MM & TM: Not everyone was happy with the algorithm's central position in computer science. Furthermore, since the early days, computer industry has been complaining that the university does not provide students with practical knowledge. Back in 1968, for instance, IBM researcher Hal Sackman said:

new departments of computer science in the universities are too busy teaching simon-pure courses in their struggle for academic recognition to pay serious time and attention to the applied work necessary to educate programmers and systems analysts for the real world. (in Ensmenger, 2010: 133)

Computer world remains a weird hybrid where knowledge is produced in both academic and non-academic settings, through academic curricula – but also through fairs, informal gatherings, homebrew computer clubs, hacker communities and the like. Without the enthusiasm and the experiments with ways how knowledge can be transferred and circulated between peers, we would have probably never arrived to the Personal Computer Revolution in the beginning of 1980s. Without the amount of personal computers already in use, we would have probably never experienced the Internet revolution in the beginning of 1990s. It is through such historical development that computer science became the academic centre of the larger computer universe which spread its tentacles into almost all other known disciplines and professions.

PJ & AK: These stories describe the process of professionalization. How do you go about its mirror image – the process of amateurisation?

MM & TM: Systematization, vocabulary, manuals, tutorials, curricula – all the processes necessary for achieving academic autonomy and importance in the world – prime a discipline for automatization of its various skills and workflows into software tools. That happened to photography (Photoshop, 1990; Instagram, 2010), architecture (AutoCAD, 1982), journalism (Blogger, 1999; WordPress, 2003), graphic design (Adobe Illustrator, 1986; Pagemaker, 1987; Photoshop, 1988; Freehand, 1988), music production (Steinberg Cubase, 1989), and various other disciplines (Memory of the World, 2016b).

Usually, after such software tool gets developed and introduced into the discipline, begins the period during which a number of amateurs start to ‘join’ that profession. An army of enthusiasts with a specific skill, many self-trained and with understanding of a wide range of software tools, join. This phenomenon often marks a crisis as amateurs coming from different professional backgrounds start to compete with certified and educated professionals in that field. Still, the future development of the same software tools remains under control by software engineers, who become experts in established workflows, and who promise further optimizations in the field. This crisis of old professions becomes even more pronounced if the old business models – and their corporate monopolies – are challenged by the transition to digital network economy and possibly face the algorithmic replacement of their workforce and assets.

For professions under these challenging conditions, today it is often too late for boundary-work described in our earlier answer. Instead of maintaining authority and expertise by labelling upcoming enthusiasts as ‘pseudo,’ ‘deviant,’ or ‘amateur,’ therefore, contemporary disciplines need to revisit own roots, values, vision and benefits for society and then (re-)articulate the corpus of knowledge that the discipline should maintain for the future.

PJ & AK: How does this relate to the dichotomy between amateur and professional librarians?

MM & TM: We regard the e-book management software Calibre (2016), written by Kovid Goyal, as a software tool which has benefited from the knowledge produced, passed on and accumulated by librarians for centuries. Calibre has made the task of creating and maintaining the catalog easy.

Our vision is to make sharing, aggregating and accessing catalogs easy and playful. We like the idea that every rendered catalog is stored on a local hard disk, that an amateur librarian can choose when to share, and that when she decides to share, the catalog gets aggregated into a library together with the collections of other fellow amateur librarians (at <https://library.memoryoftheworld.org>). For the purpose of sharing we wrote the Calibre plugin named let's share books and set up the related server infrastructure – both of which are easily replicable and deployable into distributed clones.

Together with Voja AntoniĆ, the legendary inventor of the first eight-bit computer in Yugoslavia, we also designed and developed a series of book scanners and used them to digitize hundreds of books focused to Yugoslav humanities such as the Digital Archive of Praxis and the Korčula Summer School (2016), Catalogue of Liberated Books (2013), books thrown away from Croatian public libraries during ideological cleansing of the 1990s Written-off (2015), and the collection of books selected by the Black Panther Herman Wallace as his dream library for political education (Memory of the World, 2016b).

In our view, amateur librarians are complementary to professional librarians, and there is so much to learn and share between each other. Amateur librarians care about books which are not (yet) digitally curated with curiosity, passion and love; they dare to disobey in pursuit for the emancipatory vision of the world which is now under threat. If we, amateur librarians, ever succeed in our pursuits – that should secure the existing jobs of professional librarians and open up many new and exciting positions. When knowledge is easily accessed, (re)produced and shared, there will be so much to follow up upon.

TOWARDS AN ACTIVIST PUBLIC PEDAGOGY

PJ & AK: You organize talks and workshops, publish books, and maintain a major regional hub for people interested in digital cultures. In Croatia, your names are almost synonymous with social studies of the digital – worldwide, you are recognized as regional leaders in the field. Such engagement has a prominent pedagogical component – arguably, the majority of your work can be interpreted as public pedagogy. What are the main theoretical underpinnings of your public pedagogy? How does it work in practice?

MM & TM: Our organization is a cluster of heterogeneous communities and fields of interest. Therefore, our approaches to public pedagogy hugely vary. In principle, we subscribe to the idea that all intelligences are equal and that all epistemology is socially structured. In practice, this means that our activities are syncretic and inclusive. They run in parallel without falling under the same umbrella, and they bring together people of varying levels of skill – who bring in various types of knowledge, and who arrive from various social backgrounds. Working with hackers, we favour hands-on approach. For a number of years Marcell has organized weekly Skill Sharing program (Net.culture club MaMa, 2016b) that has started from very basic skills. The bar was incrementally raised to today's level of the highly specialized meritocratic community of 1337 hackers. As

the required skill level got too demanding, some original members left the group – yet, the community continues to accommodate geeks and freaks. At the other end, we maintain a theoretically inflected program of talks, lectures and publications. Here we invite a mix of upcoming theorists and thinkers and some of the most prominent intellectuals of today such as Jacques Rancière, Alain Badiou, Saskia Sassen and Robert McChesney. This program creates a larger intellectual context, and also provides space for our collaborators in various activities.

Our political activism, however, takes an altogether different approach. More often than not, our campaigns are based on inclusive planning and direct decision making processes with broad activist groups and the public. However, such inclusiveness is usually made possible by a campaigning process that allows articulation of certain ideas in public and popular mobilization. For instance, before the Right to the City campaign against privatisation of the pedestrian zone in Zagreb's Varšavska Street coalesced together (Pravo na grad, 2016), we tactically used media for more than a year to clarify underlying issues of urban development and mobilize broad public support. At its peak, this campaign involved no less than 200 activists involved in the direct decision-making process and thousands of citizens in the streets. Its prerequisite was hard day-to-day work by a small group of people organized by the important member of our collective Teodor Celakoski.

PJ & AK: Your public pedagogy provides great opportunity for personal development – for instance, talks organized by the Multimedia Institute have been instrumental in shaping our educational trajectories. Yet, you often tackle complex problems and theories, which are often described using complex concepts and language. Consequently, your public pedagogy is inevitably restricted to those who already possess considerable educational background. How do you balance the popular and the elitist aspects of your public pedagogy? Do you intend to try and reach wider audiences? If so, how would you go about that?

MM & TM: Our cultural work equally consists of more demanding and more popular activities, which mostly work together in synergy. Our popular Human Rights Film Festival (2016) reaches thousands of people; yet, its highly selective programme echoes our (more) theoretical concerns. Our political campaigns are intended at scalability, too. Demanding and popular activities do not contradict each other. However, they do require very different approaches and depend on different contexts and situations. In our experience, a wide public response to a social cause cannot be simply produced by shaping messages or promoting causes in ways that are considered popular. The response of the public primarily depends on a broadly shared understanding, no matter its complexity, that a certain course of action has an actual capacity to transform a specific situation. Recognizing that moment, and acting tactfully upon it, is fundamental to building a broad political process.

This can be illustrated by the aforementioned Custodians.online letter (2015) that we recently co-authored with a number of our fellow library activists against the injunction that allows Elsevier to shut down two most important repositories providing access to scholarly writing: Science Hub and Library Genesis. The letter is clearly a product of our specific collective work and dynamic. Yet, it clearly

articulates various aspects of discontent around this impasse in access to knowledge, so it resonates with a huge number of people around the world and gives them a clear indication that there are many who disobey the global distribution of knowledge imposed by the likes of Elsevier.

PJ & AK: Your work is probably best described by John Holloway's phrase "in, against, and beyond the state" (Holloway, 2002, 2016). What are the main challenges of working under such conditions? How do you go about them?

MM & TM: We could situate the Public Library project within the structure of tactical agency, where one famously moves into the territory of institutional power of others. While contesting the regulatory power of intellectual property over access to knowledge, we thus resort to appropriation of universalist missions of different social institutions – public libraries, UNESCO, museums. Operating in an economic system premised on unequal distribution of means, they cannot but fail to deliver on their universalist promise. Thus, while public libraries have a mission to provide access to knowledge to all members of the society, they are severely limited in what they can do to accomplish that mission in the digital realm. By claiming the mission of universal access to knowledge for shadow libraries, collectively built shared infrastructures redress the current state of affairs outside of the territory of institutions. Insofar, these acts of commoning can indeed be regarded as positioned beyond the state (Holloway, 2002, 2016).

Yet, while shadow libraries can complement public libraries, they cannot replace public libraries. And this shifts the perspective from 'beyond' to 'in and against': we all inhabit social institutions which reflect uneven development in and between societies. Therefore, we cannot simply operate within binaries: powerful vs. powerless, institutional vs. tactical. Our space of agency is much more complex and blurry. Institutions and their employees resist imposed limitations, and understand that their spaces of agency reach beyond institutional limitations. Accordingly, the Public Library project enjoys strong and unequivocal complicity of art institutions, schools and libraries for its causes and activities. While collectively building practices that abolish the present state of affairs and reclaim the dream of universal access to knowledge, we rearticulate the vision of a radically equal society equipped with institutions that can do justice to that "infinite demand" (Critchley, 2013). We are collectively pursuing this collective dream – in words of our friend and our continuing inspiration Aaron Swartz: "With enough of us, around the world, we'll not just send a strong message opposing the privatization of knowledge – we'll make it a thing of the past. Will you join us?" (Swartz, 2008).