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## **Ecologies of Smart Unstructuring: Silicon Regimes, Alternatives in Commons, and Unparallel Librarian**

**Mario Hibert**

Department of Comparative Literature and Librarianship, Faculty of Philosophy, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

E-mail address: [mario.hibert@ff.unsa.ba](mailto:mario.hibert@ff.unsa.ba)



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### **Abstract:**

*Absence of critical insights on how a discourse regime of “smart” is constituted make libraries prone to structuring that have not been developed in dialogue with the communities whose lives are being increasingly digitized. In that light, I would argue for the role of librarian in co-designing a debate which needs to be uncovered, developed and advocated by those who are seen as participating fuel for algorithmically enhanced systems of pattern recognition.*

*If strategies of data behaviourism are to foster futures in which a post-democratic, machinic vision outsmarts alternatives in digital transformations, then the LIS community has responsibility not to align itself with a technocratic ideological assertion that precludes „a social relation that is of collective interest and that necessarily needs to act itself out off-limits to the logics of capitalization and marketization“.*

*In other words, „commoning“ practices, which are gaining a great political significance in shaping new expectations about possible courses of action, should not be left unspoken.*

**Keywords:** Smart communities, smart libraries, commons, social role of libraries, librarians in their communities.

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## INTRODUCTION

Paradigmatic presence of a “smartification”<sup>1</sup> discourse, followed by overhyped optimism surrounding intelligent infrastructures and digitally connected communities, is shaped under the flag of data: whatever they tell us, we will find truth (Cheney-Lippold, 2017). Transformation of our existences into computable living capital is dominated by algorithmic interpretations about datafied selves saying that our social identities, technologically understood, are not social at all. Algorithmic processing of real-time data generates pattern-based abstractions for motives of profit and control, „connecting people apart” (Apprich, 2018, p. 102). We entered in the age of organization of attention, „the technology industry wasn't designing products, it was designing users” (Williams, 2018, p. 10) by a not neutral communication pipeline. However, prevalence of distributed machinic logic in today's society among librarians did not trigger wider critical approaches<sup>2</sup>, quite contrary, libraries are still coping to regain their undermined societal impact with IT narratives now contextualized over smart futures.

Technology is both function and fiction<sup>3</sup>, it shapes production of subjectivity and destruction of the social. Trapped by a technocratic culture operating through black-box, proprietary regimes that progressively make us oblivious to the material processes behind the digital condition, we are coping with introduced rethinking of the libraries of tomorrow. It is not rarely emphasized exactly the role of their infrastructure in a growing, global, socio-economic disproportion that skyrocketed under the platform model of capitalism. Yet, librarians are hardly claiming a clear distance from a political culture of techno-liberal consensus “There is No Alternative”. Heralded by top-down corporate programmers and developers of systems of intelligent persuasion, the logic of technological solutionism<sup>4</sup> (Morozov, 2013) too easily enchanted our conjunctures. Neglecting of a human component in the financialisation of everyday life in algorithmic factory erects highly depoliticized context in which datafication occurs through extraction of surplus value from our social interactions. It is not a lack of awareness to this critical situation, rather the upholding of an attitude in which data economy is inevitable.

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<sup>1</sup> Data-centered logic of Silicon Valley.

<sup>2</sup> It has been a decade since Gloria J. Leckie and John Buschman edited „Information technology in librarianship: new critical approaches”, the volume that examined ongoing need for librarianship to be critical of technology, especially emphasizing critical perspectives over prevailing paradigms in LIS. Two years ago, has been inaugurated Journal of Critical Library and Information Studies (published by Litwin Books) as a platform for applying diverse critical and trans-disciplinary perspectives but there is an obvious deficit of critical LIS research, especially within specific context of “datafied society”. Here I suggest consulting articles of Ramon Salim Diab (2017) that outlines on how critical LIS studies might „theorize big data, datafication and big data analytics as technologies embedded within historically specific political, economic and social relations of control society” and Tami Oliphant (2017) who claims we are in „immediate need for empirical work on critical data studies in LIS” urging for discussions about critical data studies “in terms of research methodologies, philosophical underpinnings, and application of critical social theory, values, and ethics”.

<sup>3</sup> Garcia, J. L. (2016). Introduction: Towards a Critical Philosophy of Networks – Reflections on the Perspective of Pierre Musso. In J. L. Garcia (Ed.), *Pierre Musso and the Network Society: From Saint-Simonian to the Internet* (pg. 6). Cham, Switzerland: Springer.

<sup>4</sup> The idea that given the right code, algorithms and robots, technology can solve all of mankind's problems, effectively making life “frictionless” and trouble-free, Morozov argues, follows the rationale that computing could solve human problems.

Critical self-examination, confrontation with uneasy truths among LIS educators, scholars and practitioners on how a discourse regime of “smart “is constituted, make libraries prone to structuring that have not been developed in dialogue with the communities whose lives are being increasingly digitized. Moreover, the concept of „smart library” (referring to the increasing relevance of ICT infrastructures in libraries where user communities, institution, infrastructure, devices and objects are interconnected and integrated by technology) is now being used as labelling vision of their future. For this reason, introducing concepts of Internet of Things (IoT), artificial intelligence (AI), and Big Data, overall, the integration of digital process and informational feedback, loops in the public infrastructure increases importance of reflections over the wider implications of the technological evolution of libraries. Smart agendas<sup>5</sup> paired with instances of becoming fluidly responsive to datafied transactions along with its new cultural implementations therefore raise concerns whether emerging configurations are to be left without justice and equality issues in connection with technology. Facing a rising demands and expectations now addressed by smart societies transformations knowledge institutions' ultimate goal would be found in development of support from which community driven public policies could arise. Libraries should therefore openly articulate and identify risks of data-driven technologies and concomitant large-scale surveillance of netizens, thus advocate, as I will later show, for the possibilities of commons-oriented practices and strategies exploring alternatives to the current model of digital economy represented by, as Calleja-Lopez (2018) puts it, datacracy in the political arena (where new big data techniques by powerful actors are strategically used for intervening into politics and culture) and data extractivism in the economic arena (where monopolistic actors exploit citizen's data undermining privacy as well as personal and collective autonomy for profit).

## **ESCAPING THE SMART FETISH**

Executive classes of communicative capitalism are locating a new way to profit. How smart is that? Since innovation is seen as having only positive effects, as Morozov (2013) contends, few are prepared to examine its unintended consequences; as such, most innovations are presumed to be self-evidently good (p. 167). Depoliticization which comes with smart regimes of capitalist accumulation and acceleration, followed by promises how innovative solutions are means to catch up with the future, is used in promoting of the smart library concept as sound opportunity to adopt infrastructural ecology devoided of techno-political and economic effects of Big Data machine.

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<sup>5</sup> Adam Greenfield (2013), one of the earliest critics of smart cities, underlines concerns when an enormous effort to integrate networked information technology into the societal management is activated particularly when the smart city proponents are global big tech-businesses and major technology vendors of „systems-, or „solution integrators“ (IBM Corp., Cisco Sys., or Siemens AG). For the two distinct intellectual threads in the prehistory of the smart city are the idea of an instrumented environment capable of responding in real time to its users' needs, and the use of empirical data to guide the planned allocation of public resources, its founding rhetoric, that almost exclusively comes from academic engineering and technology faculties, clearly shows that affirmative visions of the „smart“ contours are not necessarily developed in accordance to urban planning, public policy or other disciplines.

Popular claims that Big Data is the world's new oil on which development clings (leading to creative possibilities) as a matter of fact results in ossifying of a digital positivism. LIS educators are too often far beyond critical researches on issues covering networked authoritarianism and exploitation, digital dehumanisation and alienation, and the rise of the surveillance society<sup>6</sup>. Even more LIS practitioners are being too close to disruptive understanding of innovation-driven economic growth. When Gary Hall (2016a) emphasizes how uberification forces led us to positions of becoming micro-entrepreneurs of professional lives whether academics, researchers, or students, there is no reason to avoid seeing librarians belong to the same group. Privatization, deregulation, and reduction to a minimum of the public sector left the rebranding of libraries to information and data management intermediaries whose imperatives further suspend democratizing practices that goes beyond “sharing economy”<sup>7</sup> badges. Disruptive impact of techno-rationalism along with neoliberal “fetishism of quantification” (Fuchs, 2018, p. 263) is perhaps most notably present in rising demands for data librarians (Khan & Du, 2018). In such circumstances looking for alternatives and advocating resistance to actual leaders of crisis management, precipitated by pushes to a “smart” marketization, technological innovation and financialization, should start from understanding the risks of digital governance. According to Chandler (2019), digital governance is a new mode of governance that is highly dependent on the application of new technologies for data analysis and real-time responsiveness that shifts away the focus of policy makers „from the formal public, legal and political sphere to the capacities and abilities of systems or societies for responsiveness to changes in their environmental context“ (25). A new sensorial forms of governance therefore instil digital technologies as enablers of more meaningful connecting and sharing, empowerers of communities to distribute knowledge, and supporters of governments to better control public its goods and services being „less concerned with adaptive change (preventing problems before they occur or with their resolution afterwards) than with responsiveness to problems understood as emergent effects“ (ibidem, 37). Ongoing fascination with techniques and ideologies of Big Data (capitalism) for C. Fuchs (2019) creates new qualities of domination and exploitation epitomising solutionism as governance that is „discursively derived 'empirically' from the world, rather than from human actors as subjects” (49). It is not only that smart prefixes do not only fulfill its emancipatory promises, what is even more complex and troublesome is that datafication logic is rooted, as Jose van Dijck (2014) noticed, in problematic and epistemological claims which as a part of a larger social media logic show characteristics of a widespread secular belief.

Are librarians willing to question and include unpopular or minority views regarding “computational theocracy” (Bogost, 2015, January 15) or rather pretend to be neutral players while expressing their affinities to reaffirm themselves as data librarians navigating through lucrative algorithmic culture? Innovative “cool tools” (Liu, 2004) and services are smart<sup>8</sup> only insofar they are not just user-friendly and user-centered but grounded in the vision or

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<sup>6</sup> For German media philosopher Erich Hörl (2017), the „general ecology“ of techno-sphere analyses the contemporary condition of governance and cybernetic control in a technical world: “environmental culture of control that, thanks to the radical environmental distribution of agency by environmental media technologies, ranging from sensorial to algorithmic environments, from bio- to nano- and geo-technologies, renders environmentality visible and prioritizes it like never before“ (pg. 9).

<sup>7</sup> Questioning unconditioned cultural legitimacy of the notion sharing economy (used interchangeably with “collaborative economy” and “collaborative consumption”) Marco Pedroni (2019, February 4) suggests replacing it with the notion neoliberal entanglement economy. See more: <https://firstmonday.org/ojs/index.php/fm/article/view/9113>

<sup>8</sup> Smartness means, as Schöpfel (2018) points out, that development of new tools and services is based on the assessment of real usage and smart libraries, as made for and with smart people, are required to adapt themselves to user needs.

assumption of the smart library that emancipate its users as an active (co)-producer of knowledge, not as a passive consumer of information (Schöpfel, 2018). Due to that shift is particularly important to address issues of surveillance and lost privacy, moreover, institutional and political dimension of “smart governance”, as Schöpfel fairly notices, but if these risks are not appropriately anticipated, prevented, and dealt with (yet not critically re-contextualized) we are to continually fail on ethics, democracy and social responsibility. Furthermore, yet another “design challenge” will likely again prevent political and social aspects of librarianship to be re-discovered yet reclaimed<sup>9</sup>. As Shannon Mattern puts it “Again, we need to look to the infrastructural ecology — the larger network of public services and knowledge institutions of which each library is a part. How might towns, cities and regions assess what their various public (and private) institutions are uniquely qualified and sufficiently resourced to do, and then deploy those resources most effectively? Should we regard the library as the territory of the civic *mind* and ask other social services to attend to the civic *body*? The assignment of social responsibility isn’t so black and white — nor are the boundaries between mind and body, cognition and affect — but libraries do need to collaborate with other institutions to determine how they leverage the resources of the infrastructural ecology to serve their publics, with each institution and organization contributing what it’s best equipped to contribute — and each operating with a clear sense of its mission and obligation.” It is not a new that we too often allow our purpose to be driven by outside forces, „that increasing commodification and monetization of scholarship as well as narrow definitions and conceptions of library and information studies that privilege or cast the field in the terms and methods of positivist or empiricist paradigms and dominant epistemological and ontological constructs, and the normative tendencies of the field to center such paradigms“ (Lau, Sellie, & Day 2017) prevail among majority of librarians and information science scholars<sup>10</sup>. So instead of awaiting for even yet another critical theory to be formulated and then, alike many others in LIS, ignored, I will focus on commoning practice also frequently left out of debates on the “smart” society paradigm.

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<sup>9</sup> As G. Lovink (2012) states in his criticism towards digital humanities (which yet another buzz-fuzzy concept by which scholars but librarians as well re-design their identities) and need for inputs from the critical humanities and social sciences: „We do not need more tools; what’s required are large research programs run bytechnologically informed theorists that finally put critical theory in the driver’s seat. Th submissive attitude in the arts and humanities towards the hard sciences and industries needs to come to an end“(p. 22-23).

<sup>10</sup> Critical theory and critical pedagogy submit important, yet indispensable, background for socially responsible praxis, as well as repolitization of LIS education. Critical consciousness in librarianship arises from questioning the library neutrality, a critical pedagogical instruction aligned political literacy to question social justice and civic engagement, ethos of intellectual freedom and professional’s free-speech rights in particular. Overlooking these roots prevents bringing theories and methods of critical instruction to most of the information science curricula. Engaged scholarship is being left to techno-rational (informational), techno-managerial (economic), techno-deterministic (sociocultural) impulses which prevail over political issues in teaching production, organization, use and dissemination of information. See more: Hibert, M. (2018). Post-Human Condition – Epistemic Disruption: How Information (Science) Lost Its Body to Data-Based Knowledge. In T. Aparac-Jelušić, V. Casarosa & E. Macevičiūtė (Eds.), *The Future of Education in Information Science*. Proceedings from FEIS – International EINFOSE Symposium, 10–11 September 2018 Pisa, Italy. Osijek: Faculty of Humanities and Social Sciences. Retrieved from: <http://einfose.ffos.hr/news/>

## ALTERNATIVES IN COMMONS

Due to a performativity of digital condition<sup>11</sup>, the institutions of liberal, representative democracy are in deep presentation crisis which has given rise to two highly divergent political tendencies: *post-democracy* (reduction of institutions of democracy to empty shells for the sake of efficiency) and *commons* which could be seen as driving force for the renewal (Stalder, 2018). Contending over risks when librarians are introduced to “smartification” agendas without being exposed to the concept of commons, or putting it plainly, what happens when the smart overrides the commons, is not just a rhetorical question. The concept of commons is referred to as the institutional approach to governing and coordination of production, use, management, and/or preservation of a particular type of resource. Commons as a concept is based on equality and self-governance denoting “approaches for developing new and comprehensive institutions that not only directly combine participation and decision-making but also integrate economic, social, and ethical spheres – spheres that Modernity has tended to keep apart” (Stalder, 2018, p. 6). According to Caffentzis (2012) making of the knowledge commons<sup>12</sup> requires “a level of social imagination and collective will that surpass the technical imagination, and will that has created the digital computer and the internet” (p. 40). Nevertheless, merging of commons with knowledge production models resulted in digital commoning practices unfold from collaboration of different actors<sup>13</sup>. Emerging from Internet-mediated social practice, peer production (including FOSS<sup>14</sup>), as Benkler (2016) remarks, is an organizational innovation (p. 99). Being oriented to favour use and reuse, rather than to exchange as a commodity commons-based peer production as a socio-economic system of production that is emerging in the digitally networked environment creates conflict with capitalistic logic, particularly classical market-oriented institutions developed in response to price signals and hierarchical chains of command. Producing of digital commons, defined as an information and knowledge resources that are collectively created and owned or shared between or among a community and that tend to be non-excludible, that is, be (generally freely) available to third parties (Fuster Morell, 2011), and engaging in commons-based peer production, although mostly discussed in the domain of free and open source software, offer inputs for cooperative human systems design as well as emancipatory potentials in terms of building of a political platform upon which various progressive movements could converge.

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<sup>11</sup> F. Stalder (2018) explains that all the three non-representative new forms of generating meaning and orientation (referentiality, communality, and algorithmicity) accelerated the slow but clear loss of legitimacy of liberal institutions.

<sup>12</sup> As described by Madison, Frischmann, and Strandburg (2014) knowledge commons represents institutionalized community governance of the sharing and, in some cases, creation, of information, science, knowledge, data, and other types of intellectual and cultural resources and it is subject of enormous recent interest and enthusiasm with respect to policymaking about innovation, creative production, and intellectual property.

<sup>13</sup> As J. Benkler (2016) notes: “Peer production more generally, when it relies on commons – that is, on symmetrical access privileges (with or without use rules) to the resource without transaction – allows (1) diverse people, irrespective of organizational affiliation or property/contract nexus to a given resource or project, (2) dynamically to assess and reassess the available resources, projects, and potential collaborators, and (3) to self-assign to projects and collaborations” (p. 102)

<sup>14</sup> It should be noted that free and open source software are fundamental for digital commons peer production. FOSS was invented in 1984 by Richard Stallman, who introduced the GNU General Public License (GPL) as a legal hack in the traditional copyright system, allowing programmers to freely access, copy, modify and distribute software on the same copyright terms.

Although librarians are not unfamiliar with FOSS further articulations of commoning alternatives in libraries are still rather rare<sup>15</sup>. Renaissance in commons faces obstacles not only because current legal frameworks are not oriented toward them but because the idea of the communal use and provisions of resources is eroded, as Stalder (2018, p. 173) observes, by prevailing sharing economy adherence to “platform capitalism” (Srnicsek, 2016). Lack of outspoken librarians' approaches by which the true tragedy of the (knowledge) commons would be seen in „the absorption of the totality of knowledge into the realm of state administration or market commodification“ (Caffentzis, 2012, p. 33) therefore prevents ecosystemic integration of Online Creation Communities<sup>16</sup> within libraries<sup>17</sup>.

Current techno-political and economic trends concerning smartification of libraries, on the other side, does not promise resistance on pressure to adopt corporative technologies that generate vast streams of data and employ forms of artificial intelligence that enable automated and autonomous actions. Fostering of Big Data and AI ethics should be welcomed but not found fundamental, since mostly focusing, as Wagner (2018) noticed, on private companies avoiding regulation. Digital ethics should be actually seen as “a substitute for stricter regulatory approaches” (Wagner, 2018), the “easy” of “soft” option that could be labelled “ethics-washing” and “ethics-shopping”<sup>18</sup>. In that respect libraries' future procedures, self-perception, and relation to citizens, yet achieving of more real and networked democracy, when it comes to ethics should notice how companies and cities facing critiques have reframed their initiatives as “citizen-centric”<sup>19</sup> (Cardullo, Kitchin, & Di Felicianantonio, 2018) while not altering the technocratic workings. Under the such circumstances its it to be expected continual “colonization with love” (Lukic, 2016) in which click-capital will smart-flourish. Are personal networked devices and always-on wireless connectivity among librarians deployed in relation to re-programming agendas of techno-political democratization?

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<sup>15</sup> Even after criticism that challenged dominance of the Hardin's tragedy-of-the-commons allegory, the most notably by Nobelist Elinor Ostrom who showed the diversity of institutions humans have created to manage its resources, librarians did not show wider interest to commoning practices. It is not to be forgotten that more than ten years ago N. Kranich, former president of the American Librarians Association, has written about legal and administrative repression of free access to the knowledge commons.

<sup>16</sup> According to Fuster Morell (2011) Online Creation Communities (OCCs) are a set of individuals that communicate, interact and collaborate mainly via a platform of participation on the Internet, on which they depend and aiming at knowledge-making and sharing. Since the cultural origin of OCCs are to be found in hacker culture, as Fuster Morell showed in her work on historical contextualization of OCCs, absence or inadequate correlation of library culture to Free Culture Movement could be a reason for which building stronger ties with digital commoning are also missing.

<sup>17</sup> Since the cultural origin of OCCs are to be found in hacker culture, as Fuster Morell showed in her work on historical contextualization of OCCs, absence or inadequate correlation of library culture to Free Culture Movement could be a reason for which building stronger ties with digital commoning are also missing.

<sup>18</sup> „Thus, is a world in which ethics-washing and ethics-shopping are seemingly becoming increasingly common, it is important to have common criteria based on which the quality of commitments made can be evaluated. If not, there is a considerable danger such frameworks become arbitrary, optional or meaningless rather than substantive, effective and rigorous ways to design technologies. When ethics are seen as an alternative to regulation or as a substitute for fundamental rights, both ethics, rights and technology suffer. “

<sup>19</sup> „Our analysis illustrates how most ‘citizen-centric’ smart city initiatives are rooted in stewardship, civic paternalism, and a neoliberal conception of citizenship that prioritizes consumption choice and individual autonomy within a framework of state and corporate defined constraints that prioritize market-led solutions to urban issues, rather than being grounded in civil, social and political rights and the common good. We conclude that significant normative work is required to rethink ‘smart citizens’ and ‘smart citizenship’ and to remake smart cities if they are to truly become ‘citizen-centric’. “

Moreover, commons-based examples of social innovation<sup>20</sup> are underrepresented. Reading the “smart city” as a transition point for the private city (Morozov, 2017, March 16) should therefore be the starting position in opting-out the neoliberal logic of “programmable” urban management in which libraries are to be caught. If not to be found allied with post-democratic tendencies of algorithmization, libraries should not give up its remaining social capital to data-centric capitalism. In other words, if our users are truly our driving force, libraries are to re-examine the image prototype of a public lifestyle: in exchange for the data you will get a service. Issues regarding data sovereignty and data extractivism therefore ask for broader visions of digital transformations, particularly cyber-infrastructures, for interactions between authorities and citizens which could ameliorate only when critical digital infrastructure studies are applied but also connected to achievements inspired and motivated by a commons movement in maintaining hold over citizen participation, public ownership of services, and participatory governance models (Horvat, 2019)<sup>21</sup>. Since the commons are shaping new expectations about possible courses of action demands for open access to data should go far beyond attempts to redefine public institutions and civic participation „rather, its intention is to reorient the present institutions so that, instead of operating entirely on the basis of economic criteria, they also take into account democratic, ecological, and social factors (Stalder, 2018, p. 170). Stalder elaborates that it does not result in commons in the strict sense but a new public institution that would adopt and embody the values and orientations that, because of the activity of commons, have increasingly become everyday phenomena in the digital condition. Understood in terms of demands for “technological sovereignty” alternative trajectories of digital practices amplify redefining of democratic participation through interactions with citizens in a way that support the creation and growth of commons. Political networks that build upon, connect with and diverge from, the logic of commercial social networks in which users aren't able to decide on aspects such as the code, the rules of use or data policies (Calleja-Lopez, 2018)<sup>22</sup> at its core involve a new combination of economic, social, and ecological dimensions of everyday life on the basis of data-intensive participatory processes.

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<sup>20</sup> Institute for Political Ecology from Zagreb is research and educational organisation that designs alternative development models and innovative institutional frameworks for democratic political and economic transformation of society. They are mainly focused on addressing contemporary ecological changes as social phenomena that reduce or magnify social inequalities and influence power relations but also carries out transdisciplinary research and educational programs in cooperation with domestic and international institutions and organisations. Last year they published a book "Commons in South-East Europe – Case of Croatia, Bosnia and Herzegovina and Macedonia“ in which authors stated that along intention to contribute to they also intended to put this part of Europe on the landscape of international academic and political debate on the commons“. See Tomašević et al, 2018).

<sup>21</sup> In the report "Real Democracy In Your Town: Public-Civic Partnerships in Action“ Vedran Horvat (2019) elaborated alternative to the public-private partnerships which rely on investment-related interests of private investors (putting public interest in the backseat). The report presents cases of institutional innovation under the scope of „public-civic partnerships“ that rely on experimentation with demands for more public control and protection of public interest. According to Dolenc (cit. in Horvat, 2019) “public-civic partnerships emerge as attempts at ‘commoning’, remunicipalisation efforts, or as initiatives to democratise urban governance regimes that hold the transformative power to turn institutions into an empowering, civic-centred state with citizens as its partners”.

<sup>22</sup> Described in the experimental project called DECODE (EU Horizon 2020 Programme) the Digital Democracy and Data Commons pilot to be carried on in Barcelona promotes a free multitudinous (no longer mass) self-communication (by avoiding its capture at least on the level of participation) via radically participatory platform called Decidim that allows the control and intervention of its participants in all layers of its technological structure, from its internal code (its back end) to its interfaces and participant experience (front end). Decidim is a digital infrastructure for participatory democracy sponsored by the Barcelona city council and other organizations. More information at [decidim.org](http://decidim.org).

In that scope it is important to distinguish two potential models of data commons<sup>23</sup> forwarding idea of a recursive citizenship and a recursive democracy in the network society, where citizens can democratically intervene over the conditions of democracy and its exercise (Calleja-Lopez, 2018). Drawing from the cultural significance of Free Software, C. Kelty (2008) introduced the concept of a “recursive public”<sup>24</sup> which is of a particular importance in addressing issues over (recursive) data commoning<sup>25</sup>. Giving primacy to communities over corporations and states, data commoning, as Calleja-Lopez (2018) underlines, comes closer to compliance with protection from privacy intrusions which for libraries, if to be a promoter of 21st century democracy, should be treated as indispensable<sup>26</sup>. Nevertheless, smart library re-configurations in cooperation with (and inseparable) from machines will therefore ask that opportunities of horizontal participation are not merely passed to surveillance risks. Moreover, individual (and communal) users should be embraced as key agencies of revitalized social structures, effectively re-aligned with libraries' core mission to safeguard and encourage citizens participation in digital age democracy. Unfortunately, the political reality of library culture is purely connected to data-driven democratization responsibility, yet it is much closer to uncivic culture of political consumerism, maker culture boosterism<sup>27</sup>, public-private-partnerships<sup>28</sup>, and overall neoliberal values that surrounds digital technologies. Since the social is organized as techno-cultural entity (a special effect of software), as Lovink (2012, December) puts it, we are to be extremely careful that techno-solutionism is not sneaked onto libraries' agendas. Challenges of embedding library in the smart discourse therefore also invoke the idea of library as a commons if complex processes of social cooperation and innovative policy making are to be fostered. And if not, we should at least admit that the same critical lens of information literacy that we apply to books and articles now must be applied to AI (Johnson, 2018).

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<sup>23</sup> It is important to notice differentiation among data as open access model and the recursive data model where a recursive data commons is defined as „a sociotechnical system of production, appropriation and use of a datasets under conditioned or unconditioned open access, on the basis of a normative framework (be it formal, informal or both) that defines the governance of the dataset, of the community, and of the infrastructure, in a democratic way, and that enables or promotes shared practices that generate goods under a similar model of production, appropriation and use“ (Calleja-Lopez, 2018).

<sup>24</sup> “A recursive public is a public that is vitally concerned with the material and practical maintenance and modification of the technical, legal, practical, and conceptual means of its own existence as a public; it is a collective independent of other forms of constituted power and is capable of speaking to existing forms of power through the production of actually existing alternatives.“ (Kelty, 2008, p. 3).

<sup>25</sup> “In the case of open data there is a decoupling between production (could be any actor), potential (could be accessed by anyone, although it is usually those with economic or cultural resources who can exploit it), and power (is frequently controlled by the providers only). In the case of the recursive data commons it is the community that produces, decides upon, and primarily uses (for its own reproduction and for amplifying the commons-oriented networks) the dataset.” (Calleja-Lopez, 2018).

<sup>26</sup> Inspiring on this front is the transit-organization work of the Barcelona Initiative of Technological Sovereignty (BITS) that brings activists from the movements together with academics and policy makers to reorganize the distribution of services and support within urban settings. More about Right to the City and Rebel City movements stimulating and strengthening trust between social engagement and participation. See more: Horvat, V. (2019). Real Democracy in Your Town: Public-Civic Partnership in Action. Luxembourg, Brussels: Green European Foundation. <http://ipe.hr/wp-content/uploads/2019/02/GEF-Public-Civic-partnerships-print.pdf>

<sup>27</sup> In her warnings in regard of potential instrumentalism of makerhood, Shannon Mattern (2014, July), reminds us on dangerous falsehood that contemporary pursuit of 'innovation' promotes the idea that 'making new stuff' = 'producing knowledge'.

<sup>28</sup> As Horvat (2019) contends public-private-partnerships were particularly instrumental in the overall neoliberalisation of the city, expropriation of the commons, and erosion of public functions of the city.

## IN CONCLUSION: BEING POSTDIGITAL

Who would disrupt the disruptors? Digital commoners<sup>29</sup>, platform cooperativists<sup>30</sup>, amateur librarians<sup>31</sup> or pirate philosophers<sup>32</sup>, those unwilling to be smart-locked within a proprietary platformed world, ones whose relational and hybrid tactics exist in the (grey) areas of the science and law in order to organize solidarity for the re-appropriation of means (not only of production) but social reproduction? There is no technological fix, as Lovink and Rossiter (2018) argue, “we have become deeply enamoured with the so-called 'free services' of platform capitalism and all too willing to open our data-generating selves to inspection and extraction economies” (p. 170). However, situating ourselves under this frame under a new set of terms for the language of “learning in the age of digital reason” (Jandrić, 2018) we should primarily acknowledge that “the postdigital condition is one of today’s grand challenges in science, education, arts, and various other areas of human interest” (Jandrić et al, 2018: 896). While numerous definitions are used to cope with epochal shifts describing social relations along dynamics of the Big Data attention economy librarians are not too often prone to challenge ideological constructs, “symbolic violence” of processes that generate datafied oppression. Re-organization of libraries in the age in which calling data “a new plutonium”<sup>33</sup>, not oil is much more appropriate, should therefore initiate via post-digital aesthetics since „the transition is over and the story can begin in which the hidden dream of a post-digital renaissance where the old values of humanistic inquiry would resurface and once again supply society with the moral compass and grand stories through which to conduct life (Lovink & Rossiter, 2018, p. 150).

Understood as a process of demystification, primarily question of post-digital culture is therefore not whether machines can think or how far they can be like human intelligence but, as R. Capurro recently has spoken (2019), how do we enlighten the digital enlightenment that might revert into digital mythology. Establishing of a trusting relationship to libraries does not ask for a smart prefix but re-politization of its sustainability. Their wider social role will

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<sup>29</sup> See: Bollier, D. (2008). *Viral Spiral: How the Commoners Built a Digital Republic of Their Own*. New York, NY: New Press.

<sup>30</sup> Trebor Scholtz (2016, January) argued that a model of platform cooperativism is emerging from the ground, with cooperatively owned/democratically governed digital platform which might constitutes an alternative to the model of value creation embraced by the dominant sharing economy corporations.

<sup>31</sup> While to an extent academics and hackers have been interconnected throughout the history of computer development, today's presence of “shadow librarians” or „amateur librarians“ reflects radical pedagogy of political emancipation (Medak & Romic, 2016). As Mars and Medak (2015) put it, the historic crisis of the university and the public library as two modern institutions tasked with providing universal access to knowledge and education is precipitated by pushes to marketization, technological innovation and financialization in universities and libraries. It has prompted the emergence of shadow libraries as collective disobedient practices of maintenance and custodianship. More about the online knowledge economy and the role of custodians of knowledge commons (their creative undertakings, recreated as shadows), see: Karaginis, J. (Ed.) (2018). *Shadow Libraries. Access to Knowledge in Global Higher Education*. Cambridge, MA: MIT Press.

<sup>32</sup> “Drawing critically on phenomena such as the peer-to-peer file sharing and the anti-copyright piracy movements, *Pirate Philosophy* explores how we can produce not just new ways of thinking about the world, which is what theorists and philosophers have traditionally aspired to do, but new ways of actually being theorists and philosophers in this 'time of riots'” (Hall, 2016b, p. xiii-xiv).

<sup>33</sup> Jim Balsillie (2019, May 28) remarks in front of the *International Grand Committee on Big Data, Privacy and Democracy held in Ottawa are a quite disturbing:* „Fourth, technology gets its power through control of data. Data at the micro-personal level gives technology unprecedented power to influence. Data is not the new oil – it’s the new plutonium. Amazingly powerful, dangerous when it spreads, difficult to clean up and with serious consequences when improperly used. Data deployed through next generation 5G networks is transforming passive infrastructure into veritable digital nervous systems. “See: <https://business.financialpost.com/technology/jim-balsillie-data-is-not-the-new-oil-its-the-new-plutonium>

depend on closing the traditional binary between institutional and non-governmental social actors, particularly those emerging movements aiming to reclaim the public focusing on protecting public interest rather than searching for private investors to take over and commodify resources or infrastructure (Horvat, 2019). While envisioning a new possibilities of de-commodification, we should denounce a damaging pathways of instrumental public-private partnerships that expropriate resources of public value and increase the inequality gap<sup>34</sup> and align with progressive communities that put their efforts to transformation of public institutions by mobilizing civil society actors to fight against harmful environmental, social and economic consequences.

As Civallero and Plaza (2016-2017, Winter) write in their article on sustainability and degrowth, libraries should consider their consumption patterns and critically assess „the use and diffusion of particular technologies and the support they give them” (p. 35). As soon as we understand that connected gadgets bring neither smart tomorrows or robot apocalypse, in other words that “the real threat of computers isn’t that they might overtake and destroy humanity with their future power and intelligence. It’s that they might remain just as ordinary and impotent as they are today, and yet overtaking us anyway” (Bogost, 2017, September 14) then we could recall that libraries, helping humans find a new meaning, celebrates it (*fiat lux, fiat latebra*)<sup>35</sup>. Being unparallel to augmented transformation of the (digital) ecosystem dominated by top-down processes of social imagination may not traverse these newborn contradictions. Nevertheless, public-commons networking and postdigital culture, standing in front of technocratic lack of alternatives, may lead us find not only „radical gestures of slowdown and custodianship” (Medak & Mars, 2019, June 20) but also techniques through which social and political relations of techno-ecological justice could go on.

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<sup>34</sup> It was precisely the failures of public-private-partnerships, as V. Horvat (2019) points out, that led many European cities into unsustainable financial situations, debt, and expensive expenditures of public budgets which were burdened with and exhausted by PPPs.

<sup>35</sup> In inspiring essay of D. W. Krummel (1999) we could find a reminder on two imperatives libraries gave us “both lux and latebra; both the light itself, and a refuge for and even from the light”.

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