Barcelona's grassroots-led urban experimentation: Deciphering the 'data commons' policy scheme

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Abstract

Smart city policy approaches have been gradually transitioning in parallel with data policy regulations. This is the case for Barcelona, which has been executing its policy framework called 'data commons' with the goal of further grassroots-led urban experimentations. This paper examines to what extent the new paradigm of 'data commons' will remain and even be reinforced, given the ongoing local elections and the volatile political and regional context of the upcoming May 2019 elections. In doing so, this paper elaborates on the steps Barcelona has been taking, given the new 'Declaration of Cities Coalition for Digital Rights' signed by Barcelona, Amsterdam, and New York. Nonetheless, as a result and continuation of previous published fieldwork research, by applying the Penta Helix framework from a social innovation perspective, this paper questions why several implementations are being consolidated while others actually show a tension between two different models: 'platform capitalism' vs 'platform co-operativism'. In regard to the former model, permanent strikes provoked by the *Elite Taxi BCN* association in August 2018 in response to the aftermath of big tech companies *Cabify* and *Uber* initially cleared to operate in Barcelona by the regional government, have demonstrated the negative side-effects of 'platform capitalism'. By contrast, *Som Energia* is a successful case study based on the latter innovative business model, 'platform co-operativism', stemming from grassroots-led urban experimentation. This paper concludes by suggesting a synthesis regarding the ongoing platform revolution at stake, in light of the need for democratic accountability.

Keywords – Barcelona; digital rights; grassroots innovation; platform co-operativism; smart cities

1. Introduction: the 'data commons' policy framework

Since the newly elected mayor, Ada Colau—representing the left-wing, green, social movement coalition called *Barcelona en Comú* (*Barcelona in Common)*—was appointed in May 2015, Barcelona has significantly shifted its smart policy agenda towards a less technocratic approach headed for citizens' digital rights, in pursuit of data and technological sovereignty (Almirall et al., 2016; Bakici et al., 2013; Calzada, 2017; Calzada & Cobo, 2015; Coletta et al., 2018; Karvonen et al., 2018; Marvin et al., 2015). This policy transition has been shaped through grassroots innovation strategies and implemented using the Digital Plan 2017–2020, called 'Barcelona Ciutat Digital: A Roadmap Toward Technological Sovereignty'. Considering the timely implementation of this new, smart, urban experimental framework called 'data commons,' this paper questions whether the ongoing transition that began in 2015 is sustainable and solid enough, given the forthcoming municipal elections that will take place in May 2019 (Blanco et al., 2019), and furthermore, the recent events revealing an structural urban contestation between the *Elite Taxi BCN* association and the big tech giants *Cabify* and *Uber*.

This struggle illuminates a conflicted and unresolved data policy debate in cities like Barcelona, while opening up a plethora of alternatives for discussion of negotiated data policy among urban stakeholders (Calzada & Cowie, 2017; Keymolen & Voorwinden, 2019). Moreover, against the backdrop of the General Data Protection Regulation (GDPR), which took effect in the European Union (EU) in May 2018, a debate has emerged in cities like Barcelona about citizens' digital rights and their relationship with data. Hence, this paper updates previous policy analysis of (i) the implications of the technopolitics of data ownership and (ii) the ongoing assessment of the Digital Plan 2017–2020 through three intertwined strategies: data ownership and technological sovereignty, grassroots innovation, and particularly, platform co-operativism (Calzada, 2018a).

Since the GDPR, the transition to data sovereignty has inevitably raised two general questions regarding how to frame this data for policy debate in implementing the transition toward (smart)-citizen-centric and data-driven

urban environments: (i) Can European cities build alternatives that put citizens back in the driver's seat as decision-makers rather than relegating them to the role of data providers? (ii) Should European cities focus on building decentralized infrastructures based on blockchain to prevent the 'surveillance capitalism' extractive data practices of large technological corporations, where these practices violate citizens' digital rights (Zuboff, 2019)?

Recent technological developments such as data analytics and individual profiling have raised the level of awareness (and criticism) of the increasing power asymmetries between big digital players, civil society, and governments, which leave behind important invisible actors. Rarely is it acknowledged how such technological tendencies might actually do good for citizens by innovating policymaking and improving the public sector (Mazzucato, 2015). Moreover, the increasing attention worldwide to Artificial Intelligence (AI) makes this claim crucial to ensuring high-quality data to audit new algorithms and develop new applications. Alongside the focus of this paper, it seems that there is a pressing need for city-regional and sovereign strategies at the European level, as Barcelona has implemented, to promote ethical, citizen-centric, data-driven policymaking (Gruber, 2019; Micheli et al., 2018). The Ethics Advisory Board of the European Commission (2018) defines 'digital ethics' of a certain innovation territorial ecosystem through seven intertwined values: dignity, freedom, autonomy, solidarity, equality, democracy, justice, and trust.

In this general policy context, and acknowledging a certain degree of ambition in the steps laid out by Barcelona in 2015, 'data commons' is presented as a policy scheme to negotiate the techno-politics of the smart city as a process that is contentious and dynamic amongst several stakeholders. Consequently, this paper aims to respond to the following research question: As an alternative and transitional strategic pathway, will Barcelona's grassroots-led urban experimentation through the 'data commons' policy remain after the May 2019 local elections, surrounded by a volatile and fragile political and city-regional scenario, even given the ongoing aftermath of the decision to allow *Cabify* and *Uber* to operate in Barcelona and current tensions between the two antagonistic business models of 'platform capitalism' and 'platform co-operativism'?

2. Global context: declaration of 'Cities Coalition for Digital Rights'

Barcelona's shifting discourse about smart cities is a direct reaction to a remarkable amount of data being controlled by AI tools and devices owned by multinational corporations like *Cabify* and *Uber*—as well as *Airbnb* provoking serial *tourismophobia* in the city (Calzada,

2018b). This elevates the question of how a smart city can ensure the privacy, identity, and security of its citizens while experimenting with intertwined representative and deliberative democratic public expressions. Closely following the contours of the smart city citizenship debate via the 'data commons' policy scheme, this question has prompted a counter-reaction worldwide fuelled by the interplay of certain multistakeholders, highlighting the need for an ethically transparent data-driven society that reinforces the digital rights of citizens through accountable data ethics. More recently, a wide range of manifestos, declarations, and institutional frameworks have endorsed this paradigm turn, led by Barcelona (Barcelona City Council, 2019): Access Now, Montreal Declaration Responsible AI, and even the tech giants, Telefónica and IBM. By contrast, due to a so-called lack of transparency and democratic accountability, the case study of the Sidewalk Labs in the Quayside, Toronto (Sidewalk Labs, 2018), an operation led by *Alphabet Inc.,* is at present gathering the most severe criticisms. The tech giants' ambition seems to be to control and exploit as much of the urban environment as possible, regardless of the consent of citizens. They have been investing highly in broadening and deepening their surveillance techniques, and even in building their own cars.

As a way not only of reverting *dataism* and 'surveillance capitalism'*,* but also of leading a global movement of activism campaigning in favour of technological sovereignty through the 'data commons'*,* in 2018, Barcelona undertook another step in this strategic direction: the declaration of 'Cities Coalition for Digital Rights' was signed by Barcelona, Amsterdam, and NYC (Cities Coalition for Digital Rights, 2019; www.citiesfordigitalrights.org). This event showed the global leadership of the Barcelona City Council in advocating digital rights and promoting the transparent use of data through open source digital practices (Barcelona City Council, 2019). The Declaration is rooted in the idea that digital technologies draw on a hacker ethic, working with decentralised forms of online participation and open-source devices, and committed to democratic digital rights. Therefore, the Declaration espouses five principles, signed by the three global cities in collaboration with the United Nations Human Settlements Programme (UN-Habitat):

1. Universal and equal access to the Internet and to digital literacy
2. Privacy, data protection and security
3. Transparency, accountability, and non-discrimination of data, content and algorithm
4. Participatory democracy, diversity and inclusion
5. Open and ethical digital service standards

3. Fieldwork through action research: *Cabify* and *Uber* (Platform Capitalism) *vs Som Energia* (Platform Co-operativism)?

In an attempt to continuously monitor and further scrutinise the current evolution of the path-dependency of Barcelona since its 2015 strategic shift, ongoing fieldwork research has been conducted in Barcelona through in-depth interviews and research and policy activities with city-regional stakeholders from September 2017 to March 2019 (Calzada, 2019). This fieldwork through *action research* has revealed the following three proactive experimental strategic initiatives: (i) cutting-edge, innovative EU-funded projects such as DECODE led by Barcelona and Amsterdam (www.decodeproject.eu), (ii) the DECIDIM grassroots-led co-operative platform (www.decidim.barcelona), and (iii) the METADECIDIM process for reflecting upon DECIDIM's operation and future development through a 'meta-lab' of open debate (www.metadecidim.barcelona).

Despite these experimental and strategic initiatives—which encapsulate the 'data commons' policy scheme—opening up an ambitious policy debate in European cities regarding how to explore alternative data regimes, the policy *praxis* is far behind the ideological discourse. How the 'data commons' policy scheme could be assembled by merging the DECODE, DECIDIM, and METADECIDIM experimental and strategic initiatives, however, remains to be seen. More recently, though, the preliminary results of the merging of DECODE-DECIDIM-METADECIDIM, based on the pilot projects in Barcelona and Amsterdam, are hybrid outcomes of technology for the signing of citizen petitions in a secure, transparent, and data-enriched manner, as well as the DECODE personal data manager.

In a broader examination, de Hoop et al. argue that the case of Barcelona shows clearly 'how digital projects can be disrupted, reconceived and reclaimed—or complemented and replaced by new digital projects—through urban politics that interact across elite and grassroots settings, and in ways that suggest more plural and hopeful possibilities' (2018, p. 3). Furthermore, Cardullo et al. (2019) similarly argue that urban agencies in smart city development increasingly underline that further hybrid, less-conventional data policy schemes are emerging, each nevertheless involving an inescapable knowledge politics. Cardullo and Kitchin agree with Hoop et al. that Barcelona has attempted to do something 'different': 'Barcelona is presently attempting to formulate and implement a different vision of a smart city and smart citizenship' (2018, p. 13).

In analysing this transitional data policy momentum, these attempts clearly overlap with the importance of including multistakeholder frameworks to counter-balance the lack of attention apparently paid to local users of the services established under the former mayor Trias (Hoop et al., 2018, p. 10). As a result, the 'data commons' policy scheme is now opening up by dynamic and contradictory initiatives between different stakeholders for redefining and redistributing power relations that in the past were fixed and taken for granted, exclusively following the private-public-partnership scheme. As such, the 'data commons' policy scheme is a way to negotiate the technopolitics of the smart city as a contentious and dynamic process amongst several stakeholders, reconfiguring socio-political and power interrelations through conflicting trade-offs as well as ownership of the data, and ultimately, of the technology itself (Ranchordás, 2019). Negotiating the smart city means fulfilling three conditions: re-subjectivation, transparency, and vulnerability (Keymolen & Voowinden, 2019, p. 16). As such, multistakeholder frameworks could be imagined as contexts in which conflicts arise and norms emerge through collective regulation of social interactions and political relationships in the city. Data infrastructure thus impacts the interplay among stakeholders and the city it builds, simply because data is never politically neutral (Calzada & Cobo, 2015). Different platforms' technopolitical architectures could then articulate the data infrastructure and associated policy schemes depending on the inner principles of those architectures, as it is the case with the 'platform capitalism' (*Cabify* and *Uber)* and 'platform co-operativism' (*Som Energia*; Pellicer-Sifres et al., 2018; https://www.somenergia.coop/*)*.

Consequently, Barcelona's policy discourse has gradually been influenced by a critical agenda (Eubanks, 2017; Lane, 2019; Morozov, 2018) while being translated into novel policy initiatives (Morozov & Bria, 2018) with diverse degrees of success. In this regard, initiatives implemented under the label 'platform co-operativism' are worth emphasising (Borkin, 2019; Fuster & Espelt, 2018; Parker et al., 2016; Scholz, 2016; Scholz & Schneider, 2017; Srnicek, 2017; Stone, 2016). This is the case for the remarkable renewable energies co-operative called *Som Energia*, which was officially founded in 2010 in Girona (Catalonia). In January 2019, the co-operative had over 54,300 members, had invested over 13 million euros in renewable energy production projects, and employed 47 people.

This ongoing research has identified a potential implementation of 'platform co-operativism' in taxis—a severe labour problem in Barcelona—providing a path for its evolution towards a more competitive, locally owned co-operative business model, an alternative to the hegemonic, disruptive, and extractive private operations such as Uber (Gramano, 2019; Wired, 2019). Thus, despite being hypothetical, this research preliminarily sheds light on the synergies for the feasibility and resilience between

both initiatives: (i) the established co-operative *Som Energia* and (ii) the potential co-operative platform for local taxis.

Hence, based on in-depth interviews in Barcelona from September 2017 to March 2019 of a diverse set of stakeholders—following the Penta Helix multistakeholder framework, including private sector, public sector, academia, civic society, and (social) entrepreneurs/activists (See Figure 1; Calzada & Cowie, 2017)—about this new paradigm shaped by grassroots-led experimentation through the 'data commons' policy, opinions differed widely. Nonetheless, there was a beneficial and broad consensus regarding the direction and suitability of this transformational paradigm of the smart city paradigm into a further negotiable arena reconsidered through a technopolitical lens, and digital urbanism in the city reoriented through a policy of technological sovereignty; ambition in terms of awareness, though, seemed not to match the concrete results. However, stakeholders highlighted the novelty of using municipal institutions to spur a wide debate on digital rights and data ownership, and most of the interviewees agreed with the need for such a debate. The multistakeholder approach, as in the Penta Helix, should mean negotiating throughout the whole life cycle of a smart city implementation, entailing more involvement of citizens than current citizen-centred smart city initiatives. Without the full interplay and negotiation of the multiple parties involved, a new mindset of municipality or private parties is not sufficient. Instead, a new orchestration of an active multistakeholder democratization push is essentially needed to reassert the validity of this grassroots-led urban experimentation.
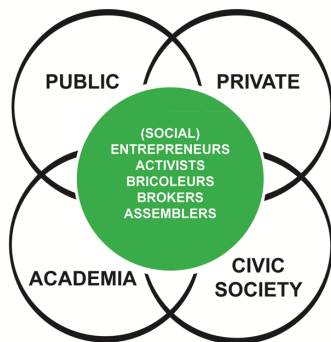

Figure 1. Penta Helix (Calzada & Cowie, 2017)

In this policy scheme, the role of social entrepreneurs and activists (the fifth helix of the Penta Helix) is clearly encouraged to develop alternative digital practices like DECODE, DECIDIM, and METADECIDIM, among many other initiatives. Grassroots-led urban experimentation has been demonstrably based on principles of openness, accessibility, collaboration, decentralization, and sharing.

In the broader contours of Barcelona's current data policy discussions, Catalonia (Calzada, 2018c) is surrounded by a vibrant political tension invigorated by debates on devolution and independence, which directly affects the extent to which Barcelona, as a European city-regional hub, may claim technological sovereignty and a particular data policy fuelled by city-regional projects led by the regional government such as *Smart Catalonia*, and more recently, by the motto and hashtag *#DigitalRevolutionaries*. Political sovereignty is not detached from technological sovereignty: both are extremely intertwined with democracy, governance, and the right to the city/to decide, on which Barcelona's future may rest. Regarding the future of the 'data commons' policy scheme in this changeable context, according to poll vote estimations, the victory may go either to the *Esquerra Republicana de Catalunya (ERC, Republican Left of Catalonia)* or by contrast, to *Barcelona en Comú,* which would revalidate the victory for another four years (Blanco et al., 2019). In either case, it is not clear yet how grassroots-led co-operative platforms will be able to effectively transform the socio-economic ecosystem by striking a balance between the power of the big tech corporations and the regionally rooted SMEs. The clearest example is the ongoing struggle between *Elite Taxi BCN* and *Cabify* and *Uber,* and the lack of (social) entrepreneurship to experiment with a co-operativised and locally/regionally rooted 'platform co-operative' for local taxi drivers. How should the new local government after May 2019 should deal with this debate (Vesnic-Alujevic, 2019)? In this paper, we suggest that examples like *Som Energia* or *Mondragon Co-operative Corporation* (www.mondragon-corporation.com) in the Basque Country could illuminate the experimental pathway towards a more democratic and data-driven fair platform environment (see Figure 2). Drawing from social innovation and technopolitical studies, this paper delves into questions regarding the 'platform revolution' (Parker et al. 2016). Whilst its analysis will not be exhaustive, this paper aims to contribute to the existing body of work with an original perspective on data policy schemes and the related platform discussion.

4. Concluding remarks: platforms at stake

Colau's government (Blanco et al. 2019), and particularly Barcelona's CTO Francesca Bria, managed to open a profound European debate on digital rights and to bring together a coalition of very relevant European cities (including London, Paris, Amsterdam, Milan, and Helsinki), effectively renewing part of the European discourse about smart cities around new key ideas: technological sovereignty, data commons, algorithmic disruption, open source in cities, and collaboration in software development.
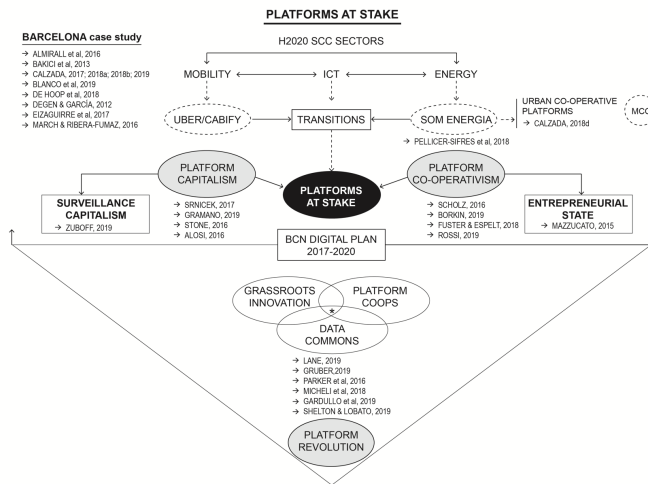
Figure 2. Platforms at stake

What is particularly remarkable is the way Barcelona is leading towards a new conception of smart cities as well as strategic priorities centred on 16 digital rights by influencing the launch of a diverse set of manifestos and declarations of digital rights and its consequences for urban data policies (Barcelona City Council, 2019). Even more impressive is how these priorities have spread through Europe and became an integral part of the European discourse for deciphering citizenship in smart cities (Calzada, 2018d).

'Smart cities' is a *fuzzy* concept that translates to each territory according to its needs and priorities, as well as the prevailing political views in power. The tension between these two opposing sides resolves with the creation of a diversity of smart city discourses and the implementation of a multiplicity of solutions, either market-based (Visnjic et al., 2016) or non-market-based (Benkler et al., 2019). Europe, until now, has somehow lacked its own voice, reproducing policy ideas and paradigms created in other regions, as has been the case with 'Open Data' or the 'City as a Platform.' This is perhaps the first time that Europe has spoken with its own voice by blending *avant-garde* research and policy formulations, and therefore is worth considering in the debates that will take place in London at the Data for Policy 2019 international conference in June 11-12 (Gruber, 2019).

However, this paper concludes by suggesting that data used for policy formulation and data policy is not neutral. Cities as Barcelona reveal this from a technopolitical standpoint: it is not just one data strategy that makes the city. As such, platforms inevitably involve designing business models. In this paper, we have raised the inner, unresolved conflict in the taxi service both for traditional taxi drivers operating for *Elite Taxi BCN* and for *precarised Uber* or *Cabify* operators in Barcelona, amidst

the broad contour of the grassroots-led urban experimentation via the 'data commons' policy scheme. In the aftermath of the local elections in May 2019, alternatives based on locally rooted 'platform co-operatives' may emerge by referencing cases such as *Som Energia.*

Hence, this paper has attempted to open up a debate on the way the 'platform metropolis' (Rossi, 2019) is evolving and on conflicting common-seeking claims involving high-tech corporations, on the one hand, and *commoditised* or *precarised* workers (in this case, ridesharing workers or taxi drivers) on the other (Alosi, 2016). Beyond critical standpoints on how to collectively resist 'platform capitalism' (Rossi, 2019, p. 13), this paper has suggested that the taxi service in Barcelona might benefit from the 'data commons' policy scheme and establish an experimental solution among stakeholders based on 'platform co-operatives' such as *Som Energia* (Senabre & Espelt, 2016; Fuster & Espelt, 2018). The taxi service conflict depicts, in conclusion, that another metropolis in Barcelona is not only possible but already exists, waiting to be experimented with and recast as a common and co-operative good for the (smart) city itself, and, ultimately, more fundamentally, for its citizens (Shelton & Lodato, 2019; Vesnic-Alujevic et al., 2019).

Acknowledgements

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