Poised Between Order and Conflict: What Future for the Smart City?

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Abstract. The aim of this study is to reflect on how the longstanding contradiction between order and conflict in urban contexts is now articulated in the context of smart cities. Apparently, smart cities are the best place to live in order to enjoy greater capacity for choice, self-determination, well-being and independence. But is this really the case? Are smart cities and their technological drift towards increasingly wider spaces of order and control really able to guarantee wide spaces of freedom? What role does or can conflict play? Through the analysis of various case studies (Qatar, China and Ukraine), we will try to improve our understanding of the dichotomous relationship between order and conflict both from an internal perspective within the city and from an external perspective (i.e. when attacks from outside occur). The study will proceed through a preliminary analysis of the state of the art on the smart city literature in order to grasp what are the "promises" that this model of development brings with it and the criticalities connected to its development. At a later stage, we will proceed to focus on issues related to the problems of social order and conflict both from an internal and external perspective.

Keywords: social order, social control, smart city, urban conflict, social credit system.

Riassunto. L'obiettivo di questo studio è riflettere su come l'annosa contraddizione tra ordine e conflitto nei contesti urbani sia ora articolata nel contesto delle smart city. Apparentemente, le smart city sono il posto migliore in cui vivere per godere di una maggiore capacità di scelta, autodeterminazione, benessere e indipendenza. Ma è davvero così? Le smart city e la loro deriva tecnologica verso spazi sempre più ampi di ordine e controllo sono davvero in grado di garantire ampi spazi di libertà? Che ruolo ha o può avere il conflitto? Attraverso l'analisi di diversi casi di studio (Qatar, Cina e Ucraina), cercheremo di migliorare la nostra comprensione del rapporto dicotomico tra ordine e conflitto sia da una prospettiva interna alla città sia da una prospettiva esterna (cioè quando si verificano attacchi dall'esterno). Lo studio procederà attraverso un'analisi preliminare dello stato dell'arte della letteratura sulla smart city per cogliere quali sono le "promesse" che questo modello di sviluppo porta con sé e le criticità connesse al suo sviluppo. In una fase successiva, si procederà a focalizzare l'attenzione sulle questioni legate ai problemi di ordine sociale e di conflitto sia da una prospettiva interna che esterna.

Parole chiave: ordine sociale, controllo sociale, smart city, conflitto urbano, sistema di credito sociale.

1. INTRODUCTION

'Stadtluft macht frei' ('urban air makes you free'). A saying and a custom that, as Weber (2016 [1919]) reports, had been common in the Middle Ages when serfs in feudal societies could free themselves from their position of subordination and the control of their feudal lord simply by living in the city for a year and a day. From that point on, city life has always been synonymous with freedom: freedom to seek different employment opportunities and better living conditions (Zimmermann 2004); freedom to free oneself from communal control and rediscover one's individuality (Gans 1978; Simmel 1995 [1903]); and freedom to make collective claims for the use and management of urban space (Lefebvre 1968).

Today, cities continue to be the place of change and supposed freedoms based on the possibility of living a good life and realising one's talents and abilities by exploiting one's resources. In other words, freedom is today associated with a development centred on the well-being of the individual. Well-being, in smart cities, takes on different meanings: it ranges from centring on digitality to intelligent content, from knowledge management to openness to the world, also referring to greater participation and inclusion facilitated by technology. The freedom of smart cities and urban spaces today seems to be centred more than ever on the intertwining of the most innovative technologies, economic efficiency, social-environmental sustainability and equity.

Apparently, therefore, the best place to live for greater capacity for choice, self-determination, well-being and independence seems to be the urban space. But is this really the case? Are smart cities and their technological drift towards ever wider spaces of order and control really able to guarantee wide spaces of freedom? What role does or can conflict play in all this?

 Since conflicts are nothing more than the most intense manifestation of antagonism between two or more social or collective actors competing for the satisfaction of their interests, it is self-evident that even in the construction projects of the new smart cities, it will be necessary not to underestimate the importance of this phenomenon. In addition to this, it is necessary to understand how smart cities are organising themselves to manage this problem which, in its extreme consequences, could give rise to internal wars (class struggle, revolution, guerrilla warfare, etc.) or international wars (when foreign interests take over).

In an attempt to answer these questions, we will first proceed to carry out a broad analysis of the state of the art in smart city literature in order to grasp what are the 'promises' that this model of development brings with it

and the critical issues connected to its development. At a later stage, we will proceed to focus on issues related to the problems of social order and conflict both from an internal and external perspective within the city.

2. THE NEBULOSITY OF THE SMART CITY AND THE PROBLEM OF SOCIAL ORDER

As mentioned by several parties and with different perspectives from time to time, even though we have been talking about smart cities since the 1980s[1], there is still no agreed definition of what should be considered a smart city or its contents. There are many nuances that the various perspectives on the study of the smart city have managed to focus on, among these are those that focus on the creation of 'smart' (Kominos 2006) and 'innovative' (Walker 2013) content; those that aim to create good living conditions while minimising the impact of human activity on the environment (Bibri 2019); those that consider cities as urban agglomerations made up of intertwined economic, political, social and infrastructural relationships (Rodriguez-Pose and Wilkie 2016).

It is impossible, therefore, to say with certainty according to which perspective a city fully falls into the "smart" category and which it does not. However, one thing is certain: that of smart cities is a social reality in a progressive transformation that is still strongly centred on information and communication technologies (ICT) for everything concerning its internal empowerment, relations with its stakeholders and relations with other public and private organisations and/or institutions.

From this perspective, Hollands' (2008) observation that the "smart" label attributed to an urban context can be interpreted from four very similar perspectives is still relevant:

a)   that of cities that consider the combination of competitiveness and technological advancement essential for success in the global economy;

b)   that of cities innovating to create urban environments conducive to the consolidation or establishment of new businesses and new centres of economic power;

c)   those cities that rely on the creative industry for the development of new forms of inter-urban cooperation, social learning, inclusion and local community development;

d)   those cities that focus on environmental and social sustainability.

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[1] On this see Hollands (2008) who traced the origin of this new idea of the city to the New Urbanism movement.

Without going into too much detail, the general outlines sketched so far help us understand how technological infrastructures, sensors, the internet of things and deep-learning algorithms are considered essential not only to the economic growth of cities but also to the achievement of their sustainable environmental and social development goals. At this point, however, a problem arises: in order to function at their best and thus become "smart", technologies constantly need to be fed with information and data of various kinds that citizens decide to grant them.

As Biri notes:

> *we are moving into an era where instrumentation, data-fication, and computation are routinely pervading the very fabric of modern cities, coupled with the [...] integration and coordination of their systems and domains. As a result, vast troves of data are generated, analysed, harnessed, and exploited to control, manage, and regulate urban life* (Bibri 2019b: 1).

To guarantee services and increase the living standards of their citizens, smart cities must constantly and increasingly resort to the optimisation of information extraction, tracking and profiling, descending an ever deeper crest towards a social order built around the concept of conformism rather than the concept of freedom. This is no small paradox if one considers that the 'promise' of the most well-known smart city projects revolves not only around the idea of well-being and simplification of daily urban life but also on the concepts of "democracy", "participation from below" and "co-creation".

The profound trust in technological solutions thus links the problem of order to a technological determinism that appears capable of solving every problem. This uses a top-down approach with regard to the initiatives implemented by administrations in collaboration with large local players and a bottom-up approach with regard to the demands coming from below in terms of security. In every sphere, in every social space and in every interstice, the ICT breakthrough seems to play an incontrovertible key role. One might consider, for instance, of the management of urban infrastructures such as roads, bridges, railway tracks, and tunnels, where control and security pass through monitoring, control, automation and optimisation in terms of IoT and big data analysis (Gubbi *et al*. 2013). Or one might consider the Smart Nation Singapore project where 94% of citizen services go through digital services and the development style is centred on a "datapolis" rather than a "participolis". In other words, Singapore centres its urban development and efficiency not so much on genuine citizen participation in governance choices as on the

extrapolation and processing of data on citizens' use of the services made available to them.

3. WHAT ROLE FOR CONFLICT?

What clearly emerges here is how the integration of heterogeneous functions and areas of development so vital to the growth of smart cities translates, in fact, into a kind of urban functionalist organicism where control and order constitute the beating heart of the development strategy. The laws of mathematics and economic and technical-scientific rationality impose themselves on the logic and non-logic (Pareto 1964) of human relations to the point of marginalising all forms of dissent and possible conflict. This rationality with respect to the purpose (Weber 2014 [1922]) that is emerging in this analysis leads us back to the tension between the procedural and normative valence of action, that is, between the rational organisation of the means available and the best way to use them to achieve the purpose. In this sense, the smart city as a product of human action, on the one hand, is subjected to the rationalisation process typical of capitalist advanced societies, thanks to which it is possible to establish whether a certain result can be considered objective and coherent in relation to previously identified standards[2] , and on the other hand, it presents discordances with respect to rationality and value (which is also arationality intertwined with the previous one). In other words, it presents discordances between means, objectives and dominant values, which include inclusion, participation, democratisation and equity.

The question of the role played by values is, therefore, not a secondary issue, not only because they confront us with the difficulty of attributing a role to dissent and conflict as a healthy moment of confrontation, but also because they give meaning to smart city projects.

In this sense, the standardisation of smart city projects towards the efficientism of rational choices has to come to terms with the reality of societies crossed by conflicts of varying degrees of intensity sustained by competing interests. Conflict can therefore represent either the pathological effect of a weakening of social solidarity when anomie, following crises of social change, replaces cooperation with competition (Durkheim 1977 [1897]), or an instrument of social change capable of strengthening the integration of social groups involved in change (Coser 1956). Or, if we adopt a per-

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[2] See the various indices that have arisen to measure the degree of "smartness" of cities. These include: Ey smart city index, Human Smart City Index, Global Smart City Index, Smart City Mobility Index, Digital Cities Index.

spective closer to Dahrendorf (1963), the tendency to conflict can be considered inherent in the social system, and in particular in the power differentials and related systems of authority that the institutionalised arrangements of social life necessarily produce. Finally, precisely because it represents an attempt to free oneself from laces and ties that can hinder the choice of possible actions, conflict can be an indispensable moment in the attainment of greater 'freedom from' (negative freedom) and 'freedom to' (positive freedom) (Berlin 1969). In this sense, the tendency to exacerbate the role of the technique of scientific rationality as well as the drift towards a conformism centred on a functionalist idea of order now appears, in the light of what has been said so far, even more problematic and deserving of attention.

4. THE INTERNAL PERSPECTIVE: THE CHINESE AND UKRAINIAN CASES

From the inner-city perspective, the question of guaranteeing order is doubly linked to the question of the need for reticular and, possibly, biometric social control in order to guarantee the best possible service to users. Biometrics helps to 'break' the person into a myriad of different pieces of information, from the colour of the iris to gait, from heartbeat to sleep cycle, and intensifies the control capacity that city platforms can perform. The technological systems and ICT elements installed in cities are not the results of mere chance or simply the progress of technology but respond to two systemic needs (Monahan 2010) of the current phase of capitalism: on the one hand, the commodification of every aspect of life, including corporeality, and on the other hand, the prevention of conflicts that could challenge the status quo and current development trends.

Technologies now play a decisive role in the prevention or repression of violence and do so with almost surgical precision. Police responses to protests have become more severe and militarised (Balko 2013). Consider the case of Occupy Wall Street in the United States or Hong Kong in China where 'gait recognition' software installed in the city's lampposts, already in use in Beijing and Shanghai, has enabled the police to identify protesters not only through facial recognition but also through their walk (Luna 2019, Montigny 2019). To evade this type of control and protect their identity the protesters demonstrated with their faces covered by a mask and/or under the shelter of an umbrella.

A similar case to that of Hong Kong occurred in Kiev, Ukraine, when in 2014 protesters, activists, journalists and anyone who was in Maidan Square during the days of the popular uprising received a message on their phone saying «Dear subscriber, you are registered as a participant in a mass disturbance»; a charge that in that precise historical phase could carry a 15-year prison sentence (Walker and Grytsenko 2014).

The tactics for controlling social order implemented through the use of the technology available to smart cities clearly demonstrate how the use of technology and platforms is now capable of preventing or bringing about the dissolution of even the most participatory and shared protests. In addition to the ability of cities to respond in time to the actions of organised groups aimed at endangering public order, we should not underestimate the deterrent effects linked to the psychology of fear of the consequences people may face by taking part in protests. The latter may in itself be sufficient to thin the ranks of activists or, on the other hand – as was the case in Ukraine – to feel compelled to rebel in an attempt to overthrow a system of capillary and totalitarian control whose possibilities of collective punishment may not be known.

A similar argument can be made regarding the tracking apps used in many countries around the world to prevent the spread of SARS-CoV-2 infection. Among the most talked about was Ehteraz, an app that became mandatory on 22 May for all residents of Qatar, which used Bluetooth and GPS on the smartphone to track citizens' movements and which caused Amnesty International to cry out for yet another violation of citizens' freedom on top of the already existing restrictions on freedom of expression and association.

Furthermore, Claudio Guarnieri, Head of Amnesty International's Security Lab reported that the app showed security flaws that endangered user privacy and the safe storage of shared data.

> *This incident should act as a warning to governments around the world rushing out contact tracing apps that are too often poorly designed and lack privacy safeguards. If technology is to play an effective role in tackling the virus, people need to have confidence that contact tracing apps will protect their privacy and other human rights* (Amnesty International 2020).

As can be seen from the cases examined, access to data has been and still is the real dividing line between the power of the state and that of the citizen. From the point of view of state power, facial recognition and other instruments of biocontrol represent the spearhead for the exercise of state power or a new, even harsher form of totalitarianism. From the point of view of the citizen, it becomes increasingly difficult to steal their data and protect their identity and freedom in an integrated

system of cameras, sensors and software such as that of smart cities.

The technology of smart cities may, therefore, contribute to making inner-city conflicts less violent and increasingly controllable, but the trade-off to be paid is the erosion of individual freedom spaces. That is, social individuals must trade their independence and self-determinationin exchange for an order centred on the precision and effectiveness of the technology.

Emblematic in this respect is the experience of the Social Credit System (SCS) in China. As of 2018, more than 40 different SCS experiments have been implemented by local governments in different provinces of China to create black lists and white lists of citizens and organisations deserving or not deserving of public services. The Orwellian logic of this social experiment born in 2007 at the instigation of the Chinese State Council, author of the *Guiding Opinions Concerning the Construction of a Social Credit System*, is based on four areas of intervention: honesty in government affairs, commercial integrity, social integrity and judicial credibility. These measures are inspired by a Daoist idea of order understood as the immovability of the status quo, «which prevents disorder related to human willfulness» (Cheng 2000: 105), and aims to improve Chinese society by sifting through a large amount of information of various kinds (including payments, behaviour, travel, sanctions) to assess the reputation (i.e. social credit) of individuals, companies and local governments. Although the government has hinted that the project will be expanded with the collaboration of citizens/users, in fact, it is seeking to implement a mechanism for monitoring individuals and legal entities to which reward and sanction measures are linked as a result of the assessment itself. The possibility for local city governments to develop their own SCS models has also triggered the reconfiguration of the meanings of "social order", "reliability" and "credit" in urban social practices. An example of this is Suining.

Suining, a county-level city in Jiangsu, was the first city to construct a quantified SCS for natural persons. In 2010, Suining released a system called 'mass credit' (dazhong xinyong), which granted each resident a credit score. Misconduct such as jaywalking would result in a score deduction. Suining's mass credit system soon faced a huge backlash from the domestic media, which argued that the government should not score their citizens in general and worried that such practices were abuses of the government's power. Some even denounced Suining's SCS as a system for rigid social control akin to the 'Good Citizenship Certificate' (liangminzheng) issued by Japanese colonisers during China's occupation (Liu 2019: 25).

Moreover, as Liu (2019: 29) further reports, we should remember that there are various types and levels of SCS in China. That is, it is not simply a matter of a sprawling government control system (which occurs mainly in terms of SCS linked to the financial credit system), but also of local SCS linked to the relevant urban and social context.

From what has been said so far, it is clear how the city is beginning to be more and more superimposed on the smart people, with all the problems of the case both in terms of the digital divide and in terms of space for action. The smart people that emerge from the cases examined can indeed enjoy the diversions and moments of high-level entertainment offered to them by cultural, educational and wellness-building institutions through gamification and the playfulness of everyday life, but they are also increasingly treated as mere users of the services offered by urban contexts from which they are expected to share data on their tastes, choices, political orientations, physical appearance, state of health, etc. In this view, the citizen is only useful as long as they participate in the feeding of the system through the sharing of data, and indeed, the prevailing feeling is that «often it does not even seem necessary to involve civil society, because planners and technology gurus seem to already know a priori what citizens want and how to provide it to them, in full line with the approach taken in the tradition of modernist planning» (Vanolo 2017: 14). In the words of Dahrendorf (1989), the denial of the "open society" and citizenship as an expression of an 'active' attitude towards the administration of the city in favour of a citizen who is 'passive' towards the management of the authority and a mere beneficiary of services elaborated for their benefit is thus taking shape.

The promise of freedom commonly associated with the imaginary of the intelligent city where everything is 'democratised' and where the citizen can 'personalise' their experience with the public administration seems to be increasingly giving way to the need to maintain the stability of the social order, even at the expense of the oppression of dissent and those 'latent' conflicts that are capable of producing change along lines within society (Dahrendorf 1989).

5. THE EXTERNAL PROSPECTIVE: THE PROBLEM OF DEFENCE IN CASE OF URBAN CONFLICT

Alongside the contradictions just highlighted in terms of order and conflictuality, another extremely relevant aspect emerges that can be observed through the lens of military sociology: the question of defence man-

agement in the event of urban conflicts brought about by external attack.

As noted by Kovalsky, Ross and Lindsay (2020), smart cities pose new and unprecedented challenges. Ecosystem integration designed to increase energy efficiency, decrease traffic, improve people's quality of life and democratise city governance is now becoming an element of vulnerability just as it is for any network infrastructure. These relate to the possibility of bugs in cloud infrastructures, hacker attacks and potential tampering with ground infrastructures or remote robotics activation, which could allow third parties to actively intervene in the territory of a city without being physically present there. These are vulnerabilities that are possible precisely because of the ecosystemic nature of smart cities and the fact that those providing city services are an incredibly large number of stakeholders with competing and sometimes conflicting interests.

Order, therefore, presents itself as one of the variables most necessary for the perfect functioning of the urban system, but also as one of the elements most at risk in the event of a conflict. Any urban military defence operations that become necessary will also have to take into account all these difficulties if they are to maintain control of the city.

Complex military operations begin with understanding the operational environment. The process by which the US military does this is the Joint Intelligence Preparation of the Operational Environment (JIPOE). The complexity of digital ecosystems, their profound impact on city dwellers, and the potential opportunities and vulnerabilities they present to military commanders should be considered during that process (Kowalsky Ross Lindsay 2020: 136).

The rapid urbanisation of peripheral areas and the adoption of technologies to enhance the "smartness" of cities by the mere fact that they are linked to data processing and are conceived in an integrated and eco-system-based manner could entail numerous risks of order management in the event of an external attack. The same technologies that make a city smart could in the future be exploited by state and non-state adversaries (Joint Chiefs of Staff 2014) to obtain information or sabotage any defence strategies.

Although the Joint Intelligence Preparation of the Operating Environment (JIPOE) still represents one of the most up-to-date analytical processes in the military field, identifying standard procedures for military operations in complex and constantly changing urban contexts is extremely difficult, if not impossible. In fact, the standardisation of procedures also presupposes a standardisation of the city model under consideration

and this, for smart cities, is a very complex undertaking. Although smart cities in general refer to a system of measurement and development that revolves mostly around the elements identified by Giffinger *et al.* (2007), namely smart people, smart economy, smart environment, smart living, smart governance, and smart mobility, in practice smart cities are all different from one another as each of them has chosen to develop the elements mentioned above to a different degree. So, we will have smart cities such as London which are implementing a lot of digitisation, sensorisitics and green mobility, Amsterdam which is focusing on energy transition and the reallocation of green spaces to reduce CO2 emissions, or Paris which aspires to become the first European city with an average mobility per citizen of 15 minutes.

In general, therefore, the balance between acceptable levels of conflict and order appears to be more problematic than ever and all unbalanced towards the quest for security that is firmly rooted in surveillance.

6. CONCLUSIONS

In conclusion, what emerges from this analysis is that freedom, democratisation, participation and conflict are aspects of the smart city that are undergoing a constant and inexorable erosion that is necessary for the very survival of the "smart" city project.

Says Lyon, in an interview with Il Messaggero:

in the society of control, surveillance is widespread and takes place through technological devices – cameras on every street corner, facial recognition software, body-scanning machines, but also databases where sensitive data on our health, our DNA, are stored – and vis-à-vis relationships where everyone is controller of the other and at the same time controlled by the other. That is, we live in a world where surveillance does not have a single control center, but is distributed (Lyon interviewed by Benedetto Vecchi 2014).

It is precisely the drift towards the much needed order, security and surveillance in the city that denies with increasing degrees of efficiency the possibility of people to express dissent, to refuse to conform to standards and to resort to varying degrees of conflict to produce a change in the *status quo*. Although all of these aspects now seem commonsensical and generally desirable for the well-being of citizens, the timeliness and efficiency of services, and confidence in innovation, what is not obvious but fearsome is that the guarantee of social control that smart cities can guarantee can foster totali-

tarian drifts that are very difficult to counter precisely because of the mechanisms outlined above.

One of the greatest risks of this drift towards control of cities that admits no contradiction is that it results in the reduction of the complexity of social instances and the classification of social actors according to the distinction between "good" and "bad", A-list citizens allowed to be on the "white list" and B-list citizens relegated to being on the "black list". The "good guys" are those who comply with the rules and contribute to the consolidation of the system while the "bad guys" are the deviants, those who commit crimes, or who simply do not pay taxes. Thus, a further problem for smart cities that is emerging is the consolidation of new forms of exclusion and inequality based on social control and stigma (Harvey 1973, 1992; Vanolo 2018) with obvious effects on the enjoyment and exercise of the right to freedom.

The flip side of the coin of smart city projects, therefore, lies in the fact that there are no grey zones or interstitial places where unfiltered, unregulated interaction from above can easily occur. The city offers a comforting, almost maternal embrace that induces blind faith in technological solutionism and sets aside any reservations and mistrust. In short, the engaged citizen gives way to a more disengaged, indolent and, if we embrace McGuire's (2018) thesis, even stupid citizen.

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