

# CITIES AND THE POLITICS OF GAMIFICATION

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## **Abstract**

Gamification is widely intended as the mobilisation and implementation of game elements in extra-ludic situations, including the management of social problems and issues. By mobilising virtual rewards and playful elements, mobile apps, websites, social initiatives and even urban policies are getting more and more gamified. The aim of this viewpoint paper is to stimulate a critical discussion on the potential relationships between gamification processes and cities, particularly by reflecting on the cultures of gamification and by discussing potential lines of research for urban studies.

## **Keywords**

Gamification; Games; Smart city; Civic games; Game studies; Playful cities

## 1. Introducing gamification

The keyword 'gamification' has gained huge popularity in recent years, moving from niche debates among digital gurus to wider discourses in policy making and the public sphere. In its essence, gamification concerns the mobilisation and implementation of ludic elements – or, better to say, videoludic elements – in order to manage 'serious' and 'real' issues (the expression 'serious games' is also widely used: Richter, Raban, & Rafaeli, 2015; see also Ruffino, 2014). By introducing game mechanics such as rankings, scores, badges, levels, rewards and virtual currencies in apps and websites originally distant from gaming cultures, software designers and policy makers aim at stimulating public engagement and virtuous social behaviours (see for example Deterding et al., 2011; Zuckerman and Gal-Oz, 2014). An example, among the many possible, may be useful in order to grasp the main logics behind the phenomenon.

The mobile app JouleBug<sup>1</sup> aims at encouraging sustainable living by proposing to the users a number of simple (and sometimes complex) 'green' tasks, such as turning off electric lights, setting your pc's power savings in a proper way, taking shorter showers. The users receive points by acting in proper ways, by joining the 'monthly challenges' and by socialising the virtuous behaviour through the app. It is also possible to receive bonuses and additional points by sharing 'great photos' (as defined by the app), comments, ideas and information concerning sustainable behaviours. Results are transformed into charts, virtual trophies, badges and medals, which are constantly updated and exhibited through various social media, such as Facebook and Google Plus, and by the app's public leaderboard. Users are encouraged to compete one with the other in the quest for being recognised as a 'sustainable citizen'. There are both global and local leaderboards, so that community-based initiatives are encouraged. According to the app's website, "JouleBug Challenges can work for your organization: cities, schools, businesses". By clicking on 'cities', the website states "Boost your city's sustainability engagement with JouleBug Challenges. Show you care, motivate and engage with fun competition, and make a big impact!".<sup>2</sup>

Gamification is by no means limited to environmental protection. There are a number of apps, developed by both public and private institutions, promoting educational goals (lifelong learning), healthy behaviours (walking, eating properly), political participation (community

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<sup>1</sup> <https://joulebug.com> (last accessed 31 July 2017).

<sup>2</sup> <https://joulebug.com/communities/challenges/city> (last accessed 31 July 2017).

development initiatives), crowdsourcing and crowdfunding, etc.<sup>3</sup> In order to grasp the magnitude of the phenomenon, it can be mentioned that the European Commission is investing in the area, for example by proposing initiatives such as EnerGAware (Energy Game for Awareness of energy efficiency in social housing communities), and by funding various research projects concerning gamification.

At the same time, the academic debate on gamification is rather new. The main source quoted in relation to the definition of gamification is a paper by Deterding et al. (2011) published in a conference proceeding. The paper, which is largely cited (about 3500 quotations on GoogleScholar, on 20 October 2017), defines the phenomenon as “the use of game design elements in non-game contexts” (Deterding et al., 2011, p. 1). According to the Authors, gamification comes originally from the business sector, and there is arguably a long history in the field, one that precedes the affirmation of digital technologies. For example, frequent flyer programs, originally introduced by United Airlines in the 1970s, may be considered as forms of games aimed at raising customers’ loyalty: by getting more and more ‘points’ by flying, or by using specific credit cards, it is possible to gain ‘levels’ and to have access to privileged flying experiences or to exclusive spaces in airports (see various examples in Reiners & Wood, 2015). But it is probably possible to think of historical examples disconnected from business: this may be the case of the Scout movement, which often mobilises ranks, competitions and medals in a playful way with the aim of educating young people. However, gamification has gained huge momentum in public debates only in recent years, in the framework of the affirmation of digital technologies, social media and smart urbanism (for an overview of critical debates on smart cities, see for example Hollands, 2008; Kitchin, 2015).

Together with the diffusion of gamification experiments, strategies and discussions, a number of scientific publications have started to explore different ideas and perspectives in relation to the topic. The aim of this contribution is to review some threads of the existing literature and to outline some possible research lines to be explored in urban studies. With this aim in mind, the next section tries to better frame the meanings of games and gamification. Then, section three presents key ideas on nudging and motivations in games, followed by a review of the literature on civic games and playful cities. Section five develops tentative critiques to gamification by mobilising the concept of subjectification and by reflecting on the governmentalities enacted

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<sup>3</sup> Zuckerman and Gal-Oz (2014). A number of examples may be found at <http://www.gamesforchange.org> (last accessed 31 July 2017). See also Mallon (2013) for cases in the educational sphere.

through the gamification of cities; and section six takes a different direction by discussing how gamification may also trigger forms of insurgence and counter-hegemonic practices. Finally, the concluding section presents some final remarks and potential lines of development and research.

## **2. What is gamification, and, what is a game?**

Let's start by saying that it is quite hard to try to define what a game actually is. Game studies is an interdisciplinary field of research merging perspectives from anthropology, sociology and psychology, among others. The analysis of playing and games in culture and society has been discussed in the highly influential work of Dutch historian Leyden J. Huizinga (1938). In his book *Homo ludens*, he defined play as follows:

“a free activity standing quite consciously outside ‘ordinary’ life as being ‘not serious,’ but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means” (Huizinga, 1938 [1950], p.13).

Sociologist Roger Caillois (1958), in his classic contribution entitled *Les jeux et les hommes*, expanded this definition by distinguishing between play and games, and intending the latter as activities which are formally *free, separated* in time and place, *uncertain* (the course cannot be determined), *unproductive, governed by rules* and *make-believe*, which means that they are different from the rules and logics of ordinary life. However, it is relatively easy to notice that many things, which are commonly considered as games, fall out of this conceptualisation. For example, many games and forms of gaming are not strictly ‘fun’; many ‘serious games’ imply productive activities (Pearce, 2006), and many forms of games and videogames are not governed by rules in strict sense (cf. Rodriguez, 2006). Rather than trying to set the boundaries of games and gaming practices, current games studies tend to assume constructivist perspectives and to focus on games as elements of a particular form of culture, that is game culture (Steinkuehler, 2006; Mäyrä, 2008; Shaw, 2010; for a cultural geography perspective see

Ash and Gallacher, 2011; Ash, 2015). Put it differently, the definition and the analysis of games has to go beyond the properties of the game artefact to include situated and socially constructed meanings (Ash and Gallacher, 2011; Consalvo, 2009).

The idea of games as cultural processes challenges conventional understandings of game and play. As anticipated, games used in fact to be traditionally intended as distinct and 'bounded' systems: by engaging in a game, the player accesses an alternative and ephemeral reality – usually named 'magic circle' in game studies (see for instance Consalvo, 2009) – characterised by rules, goals, logics and roles which may differ meaningfully from the ones characterising ordinary life (cf. Huizinga, 1938; Caillois, 1958; see also Bateson, 1972). The point is that gamification tends to blur the (imagined) boundaries separating game and ordinary life, and in this sense gamification has been also described as a form of 'pervasive gaming' (Mäyrä, 2008). Even more: Palmer and Petroski (2016) affirmed that gamification does not involve in any way 'playing games'; rather, it concerns embedding game thinking or game mechanics in daily activity such as shopping, exercising, or working on a pc in order to make that experience more attractive ('enjoyable', according to the Authors) or efficient. Gamification therefore aims at reaching goals which go beyond the game context. This is different from the case of other 'serious games'<sup>4</sup> and game-based learning processes – where the playful activity is supposed to have educational and informative aims, or to simulate reality (Dickey, 2015) – as gamification directly applies game elements within non-playful contexts in order to induce desired conducts, i.e. to nudge behaviours.

### **3. Nudges and motivations in gaming**

The concept of nudging developed in the context of behavioural economy has been most famously discussed in the bestselling book *Nudge: Improving decisions about health, wealth and happiness*, by Thaler and Sunstein (2008). The book argues that humans are economic agents characterised by limited and bounded rationality, because, for example, they are too lazy, busy or impulsive to process all the information available, their sense of interest is subject to external influences, and they tend to show inertia or to search for simplification when facing a decision, for instance by opting for a trusted brand in the sphere of consumption (Leggett, 2014). Human

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<sup>4</sup> The conceptual distinction between 'gamification' and 'serious gaming' goes beyond the aims of this paper, and as a matter of fact the two terms are often used as synonyms. For a specific discussion, see Richter et al. (2015) and Danelli (2015).

decisions are therefore driven to a large degree by emotions or by the mobilisation of repetitive and automatic behavioural patterns. In this scenario, Thaler and Sunstein (2008) argue that behaviours may be driven by developing appropriate ‘choice architectures’, i.e. by shaping the contexts in which people make decisions. In their view, choice architectures are inevitable, as choices are always presented and framed in some forms which are partial and situated. With this perspective in mind, the two Authors use the expression *nudge* with reference to “any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any option or significantly changing their economic incentives” (Thaler & Sunstein, 2008, p. 6; cf. Leggett, 2014). Nudges do not aim at changing value systems or at providing information; rather, they encourage behaviours and decisions which are supposed to be beneficial for society and for the individual, for example acting in sustainable and healthy ways. This can be achieved through a number of tools, such as: shaping the way information is presented and simplified; changing physical environments (for example urban design may encourage the choice to move by bicycle); defining default choices (i.e. standard patterns in absence of explicit decisions; for example enrolling automatically individuals onto pension schemes in order to increase saving rates); motivating people with different kinds of immaterial rewards; and triggering processes of social imitation (which the authors ironically call ‘following the herd’).

The theory of nudging has been critically commented by a number of authors in social sciences, which questioned the efficacy of nudging, its inherently neoliberal ethos (the idea that actors have to be controlled in order to adapt to markets, and not vice-versa), as well as the risk of social manipulation and, ultimately, loss of freedom (Leggett, 2014; Mols et al., 2015; Selinger and Whyte, 2011). At the same time, nudging has acquired huge popularity both in the business sector (for example by encouraging specific consumption patterns and brands: Huotari & Hamari, 2017) and in public policies: nudging schemes have been implemented for example in USA and Europe in order to push people to pay taxes on time, to reduce the eating of junk food, or to reduce energy consumption (Jones, Pykett, & Whitehead, 2014).<sup>5</sup>

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<sup>5</sup> For various examples, see “Nudge nudge, think think. The use of behavioural economics in public policy shows promise”, *The Economist*, 24 March 2012; <http://www.economist.com/node/21551032> (last accessed 13 October 2017); N. Chater, “The nudge theory and beyond: how people can play with your mind”, *The Guardian*, 12 September 2015, <https://www.theguardian.com/theobserver/2015/sep/12/nudge-theory-mental-manipulation-wrong> (last accessed 13 October 2017).

Gamification implies the use of specific forms of nudging based on ludic elements. Specifically, the motivational power of games is mobilised in order to promote participation, persistence and achievements (Richter et al., 2015; Rigby, 2014). Nudging in gaming is mostly connected to the provision of rewards: the more explicit ones, named extrinsic rewards, relates to the game design and they include badges, trophies, awards, levels, scores, points, missions, quizzes, leaderboards, ranking and rating (Morford, Witts, Killingsworth, & Alavosius, 2014; see also debates on the so-called ‘token economy’: Raczkowski, 2014). At the same time, several intrinsic rewards are implicit in playing, such as self-worth through beating one’s own best record and mastering aspects of the game (cf. McGonigal, 2011). Finally, a third sphere refers to social rewards. Current gamification processes, particularly in the digital era and in the sphere of smart cities, overlap with social networking technologies. The player can complete and narcissistically display his/her results and virtues to others, and this documentary narcissism appears to give the user an existential confirmation and status (Berry, 2012), adding a further layer of motivations for behaving in the way expected by the software design.

#### **4. Civic gaming, planning and playful cities**

Given the power of games to nudge appropriate behaviours, a growing literature is emerging in relation to the use of gamification – and games more in general<sup>6</sup> – in civic planning (Lastowka and Steinkuehler, 2014). Specifically, the core idea is that game mechanics may be exploited in order to support collaboration, participation and deliberation in planning.

Lerner (2014), in his key-book *Making Democracy Fun*, suggests that democratic engagement is most likely to occur when democracy is designed in a playful way. By proposing a number of examples and case studies, Lerner argues that well-designed games may encourage democratic processes because they invite participation, require decision-making and foster compromise; they can encourage people to cooperate, even in a competitive framework, and they reward participation. Playing usually does not require technocratic knowledge (which is surely needed in game design), allowing wide inclusion. Lerner does not suggest to turn planning into a game,

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<sup>6</sup> It may be useful to stress that this paper focuses on the application of game logics in non-ludic contexts (which is *gamification* in strict sense, as defined at the beginning of the paper), and not on games in general. It has to be mentioned, in fact, that there is a wide literature on urban planning videogames, simulations, and role-play-games, often intended as learning tools, being the videogame *Sim City* the most popular example. For a review of key ideas in the literature, see for example Devisch et al. (2016) and Bereitschaft (2016).

but rather to include playful elements in planning systems, so that one can inform the other: game mechanics have to be integrated as parts of larger political processes, and they have to bridge play and political decisions (Gordon et al., 2017; Lerner, 2014). Of course, civic games have to be designed carefully and properly in order to nudge proper participation, and civic gamification has meaningful limits: games may not address every urban, social and political issue, and the engagement in gaming tends to diminish with time among most users (cf. Lastowka and Steinkuehler, 2014; O'Donnell, 2014). Still, important results have been obtained in the sphere of planning, as analysed in a number of research projects and experiences. Many urban government innovation labs, such as Mexico City's *Laboratorio Para La Ciudad*, Dublin's *The Studio*, Boston and Philadelphia's *Offices of New Urban Mechanics*, Copenhagen's *MindLab*, San Francisco's *Office of Civic Innovation* and Singapore's *Human Experience Lab*, have introduced civic gaming elements. For example, Lerner (2014) and Gordon et al. (2017) have analysed the case of the mobilisation of gaming elements in participatory budgeting; Devisch, Poplin, and Sofronie (2016) have analysed two civic games concerning the planning of public spaces (a marketplace in Hamburg and a university campus in Hasselt, Belgium); the independent research group *The Mobile City*, founded by de Waal and de Lange, has produced a number of investigations on the relationship between digital media technologies and urban life, also in relation to gamification (see particularly their research project *The Hackable City*, which investigates the opportunities of digital media technologies for the empowerment of citizens in democratic city-making<sup>7</sup>: Ampatzidou et al., 2015; see also Schouten et al., 2017). Gordon and Baldwin-Philippi (2014) have analysed the online platform *Community PlanIt*, developed by Engagement Lab at Emerson College, Boston, which aims at fostering civic participation in planning processes. According to the project website, "Community PlanIt not only facilitates trust-building between citizens and organizations, but is itself a powerful data collection tool that allows users to meaningfully analyse community input and truly engage the public in the planning process".<sup>8</sup> The platform has been already implemented in various US cities, such as Detroit (with the name *Detroit 24/7*), Philadelphia (*Philadelphia 2035*) and Boston (*Climate Smart Boston*).

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<sup>7</sup> This may be the case of the game *Rezone*, aimed at developing a temporary playful urban intervention for a vacant factory at the edge of the city centre of Den Bosch: <https://rezonegame.wordpress.com/> (last accessed 16 October 2017).

<sup>8</sup> <https://elab.emerson.edu/projects/civic-media/community-planit> (last accessed 31 July 2017). The project is extensively analysed in Gordon and Baldwin-Philippi (2014).



Finally, it has to be mentioned that digital technologies and smart city innovations have been used in order to develop so-called *gameful* or *playful cities*, intended by Alfrink (2014) as spaces engendering or allowing a spirit of gaming and playing. There are, in fact, a number of ways urban spaces are used as playgrounds: obvious examples may include children's games and urban sports such as skateboarding or parkour. Digital technologies may allow new sets of possibilities for heterogeneous experimentation with urban playfulness (Alfrink, 2014; Nijholt, 2017). There are at least three different kinds of overlapping phenomena described in the literature. First, urban spaces are used as playgrounds in so-called 'pervasive games', most famously videogames based on augmented reality technologies, being *Pokemon Go!* a well-known example (see Potts, Jacka, & Yee, 2017). It has however to be mentioned that products such as *Pokemon Go!* or *Ingress* are 'videogames' in strict sense, and hence they do not fall in the category of gamification as defined at the beginning of this paper. Secondly, the literature has stressed how various non-ludic apps have become gamified with time, as their mechanics reveals to be playful, for example by turning urban spaces into playgrounds to be explored: this may be the case of *Foursquare* (as discussed by Alfrink, 2014; Glas, 2015; Lammes, 2015). Third, playful elements based on digital technologies have been implemented in cities in order to allow new and stimulating experiences of the urban space (as it will be further discussed in Section 6). This is particularly the case of the *Playable City* project: as documented in the website,<sup>9</sup> a number of cities all over the world – Sao Paulo, Recife, Lagos, Oxford, Bristol, Seoul and Tokyo, and the list is growing with time – are developing playful projects and ideas aiming at re-using city infrastructure and taking advantage of smart city technologies to create connections between people and the urban space (Cowley, Joss, & Dayot, 2017). Gaming elements in strict sense are often marginal or even absent (there are not explicit rules, magic circles and other typical defining elements of games discussed in Section 2), but still these experiments emphasise the role of play and fun at the intersection between digital technologies and urban space. An example, among the many possible, is the *Urbanimals* project developed in Bristol: the images of different virtual animals (rabbit, kangaroo, dolphin, beetle) are projected on walls or pavements in city streets.<sup>10</sup> Through systems of sensors, the animals interact with people and with the urban landscape, and each animal is characterised by different attitudes and behaviours: pedestrians may be unexpectedly confronted with curious virtual animals,

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<sup>9</sup> <https://www.playablecity.com/> (last accessed 17 October 2017).

<sup>10</sup> <https://urbanimals.eu> (last accessed 19 October 2017).

ultimately pushing people to engage in playful ways with urban spaces (Cowley et al., 2017; Nijholt, 2017).

## **5. Critical perspectives: producing and educating gamers (and urban citizens)**

It is quite curious to notice that in the literature more strictly connected to software design, gamification is intended as a design pattern for so-called 'persuasive systems' (cf. Bogost, 2014; Zuckerman and Gal-Oz, 2014). As anticipated, the idea that game mechanics and game rewards (coupled with social rewards) could be leveraged in order to nudge people to behave in a proper, civic manner is obviously problematic for social sciences and urban studies. For example, it may be easy to think that gamification involves subtle forms of Foucauldian governmentalisation, that is, the subjectification of 'good' and 'bad' citizens/users by the distinction of appropriate and inappropriate behaviours (see Vanolo, 2014, on the relationships between smart urbanism and governmentality; see Brand, 2007 on the case of environmentalism and the subjectification of 'green' citizens). Gamification, in fact, provides various kinds of rewards for opportune behaviours, while inopportune behaviours are stigmatised. The computational technology of measurements, charts, points, virtual trophies and leaderboards assigns a position to each user, transforming them into assessable and enumerable units, which as a result operate as a computing technology, or, as a form of biopolitics (cf. Ash, 2015). Specifically, it is plausible to assume that there is much neoliberal culture mobilised through the exasperated mechanics of performance and competition triggered through gamification: the awarding of competitive points, badges, honours and positional goods implies the construction of a hierarchical social structure within the group of users (Berry, 2012; Rey, 2014). Gamification simplifies the complexity of reality and everyday life by setting well-defined rules and by allowing to constantly quantify the performances of the users through status bars, progress bars and other representational tools taken from videogame culture: in a subtle way, we are asked to measure our own productivity, health and well-being, with the implicit imperative to perform and to govern ourselves in relation to health care, education, sustainability, workplace productivity. In exchange for the provision of personal data and quantified performances, the user is rewarded with a sense of participation. By using fitness apps such as *FitBit* or *Nike+*, people provide a number of data about locations, steps, mobility, etc., data which are later combined,

aggregated, elaborated and visually<sup>11</sup> represented in playful ways, allowing both companies to profile potential clients for business purposes (and hence to monitor them), and users to have a better knowledge of themselves and their performances (Huotari and Hamari, 2017; Ruffino, 2014; Withson, 2014). To quote a very different example, consider the proliferation of apps aiming at helping homeless people.<sup>12</sup> Some of these apps have mapping systems, so that it is possible to ‘find’ homeless, ‘help’ them by buying them useful stuff, ‘donate’ money and to socialise the generosity performed through the app (i.e. to compete, rank and display performances through social media).<sup>13</sup>

With these perspectives in mind, processes of civic gamification discussed in the previous section of the article may be also framed as exercises in the production of ‘good’ urban citizens. In a web page connected to European Smart Cities and Communities Program, ‘civic gamification’ is celebrated as a way for the “updating of citizenry status”, allowing the development of “citycentric urban communities – full of thinkers and doers moving in a game – like scheme of rewards and prizes to be played and mapped in urban contexts – becomes crucial for policy makers”.<sup>14</sup> However, as it will be discussed in the next session, subjectification processes in gamification are not always as linear and predictable as they may look at first sight.

## 6. Subversive gaming

Gamification has not just to do with surveillance and discipline, and the relationship between games, playfulness and the city is far more complex than outlined in the previous pages. As anticipated, cities are in fact important playgrounds for many different subjects which develop very different playful practices, which may have important social, cultural and political meanings. A classic historical and theoretical reference in the field is the Situationist International artistic and political movement (1957–1972), which aimed at destabilising and criticising advanced capitalism and its related cultures by mobilising ‘diverse’ everyday

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<sup>11</sup> The visual dimension is surely crucial in gamification processes. This perspective is not explored in this paper, but it is worth observing that gamification may imply forms of aestheticization and hence de-politicisation of social issues. For a parallel discussion on urban dashboards see Kitchin et al. (2015); see also Crang and Graham (2007) for a reflection on digital visibilities.

<sup>12</sup> Examples of these apps include *StreetChange*, *WeShelter*, *Homeless Plus*, *Homeless Reach*, etc.

<sup>13</sup> It would be interesting to investigate the kind of responsibility and generosity ‘at distance’ performed through the app (cf. Barnett & Land, 2007): arguably, responsibility is partly shifted to a visual and ‘simulated’ level.

<sup>14</sup> <https://eu-smartcities.eu/blog/if-urban-life-game-smart-cities-are-playgrounds-gamification-and-civic-rewards-strategies> (last accessed 31 July 2017).

experiences, blending play, spontaneity and critical thinking (Andreotti, 2000; Sadler, 1998). The famous strategies of *détournements* proposed by Debord have been described as a phenomenon of “losing oneself in the game”, and Debord himself argued that ludic actions (and the invention of ‘new games’) may have a transformative potential on society (Internationale Situationniste, 1958; Schleiner, 2013). Needless to say, the kind of games proposed by Situationists do not consist of ‘magic circles’ separated from ordinary life; on the contrary, they aim at merging with the city, subverting everyday roles, conventional wisdoms and hegemonic power structures. Putting it differently, Situationists emphasised the revolutionary and insurgently potential of gaming.

Despite the Situationist movement officially ended in 1972, there are several examples of artistic practices and political strategies based on urban playfulness: from street art to flash mobs, from zombie walks to pride parades, including examples of playful experimentations with digital technologies (as discussed in Section 4 of this article). Although it is hard to intend these phenomena as games, they surely mobilise ludic elements in the ordinary space of cities in order to transform them, even for the short and ephemeral time of the event. In this sense, they tend to blur the conceptual boundaries separating gaming from the real city, ultimately testifying some form of gamification. But there is more: it is quite simplistic to think of gaming in terms of submission to the rules of a game, as in Huizinga’s classic conception. In the videogame sphere, for example, there are a number of ways in which players can subvert rules or play in unexpected manners, for example by hacking games, finding glitches, using videogame engines in order to realise cinematic productions (the so-called *machinima*), practicing virtual tourism, experimenting alternative behaviours and identities, or providing fake data in order to mystify data and results.<sup>15</sup> There are a number of insurgent and creative ways of engaging with gaming, and of course gamification is not immune from this (Olaison and Taalas, 2014; Woodcock and Johnson, 2017). Put it differently: the idea that gaming may allow the engineering of behaviours by providing ‘rewards’ is quite naïve in sociological terms.

Finally, there are several examples of gamification experiments with an explicitly counter-hegemonic perspective (cf. Farman, 2014). In *CCTV Treasure Hunt*, participants have to scout English cities in order to photograph CCTV cameras. The data generated by users are mapped in order to make the cities’ surveillance apparatus visible.<sup>16</sup> A more radical version of the game,

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<sup>15</sup> See the many artistic provocations and discussions proposed by COLL.EO: <http://colleo.org> (last accessed 31 July 2017).

<sup>16</sup> <https://cctvtreasurehunt.wordpress.com> (last accessed 2 August 2017).

named *Camover*, requires the physical destroying of the cameras detected in Berlin.<sup>17</sup> Or, to quote a very different example, the Molleindustria collective (subtitle: Radical games against the tyranny of entertainment) proposes a number of ludic experiments challenging conventional thinking about capitalism, urbanism and games.<sup>18</sup> Among their products, *Nova Alea* is defined as “an abstract game on the forces that shape our cities”: it is basically a fascinating visual experiment concerning the role of financial capital and speculative behaviours in the development of cities. And a final example may refer to *Homozapping*, a provocative experiment in-between art and game developed by Arsgames, aiming at the subversion of conventional understandings of sexuality and ultimately opposing the cultures of heteronormativity.<sup>19</sup>

## 7. Potential lines of investigation

The short review of ideas, debates and examples presented in this article aims at stimulating further reflections and lines of investigation on gamification in urban studies. It does not aim at presenting gamification as a purely negative phenomenon, nor it wants to celebrate gamification as a cheap potential panacea for a number of urban problems and issues. The perspective is rather to try to engage in serious reflections on the powerful and pervasive logics mobilised by gamification, in order to develop critical understandings of the phenomenon, which seems to develop side by side with other powerful discourses and ideologies, such as those connected to smart city projects and to the production of ‘digital citizens’ (cf. Isin & Ruppert, 2015). The idea of building a meaningful research agenda goes beyond the scope of this essay, but nonetheless it is possible to map some tentative directions for future researches.

First, in line with perspectives developed in game studies, it may be fruitful to analyse the cultures of gamification. As argued in the previous pages, there seems to be much neoliberal ethos in the logics of competition, individualism, rewards and responsabilisation of the self, but as discussed in the paper, there are many cases apparently going in a different direction. And, of course, there are many different ways of experiencing the same piece of gamified software. Situated empirical analyses are definitely needed. Particularly, on a general level, it may be fruitful to reflect on the ideologies embedded and reproduced through gamification culture, at the discourses surrounding gamification, at the contending interests and agendas embedded in

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<sup>17</sup> <https://camover.noblogs.org> (last accessed 2 August 2017).

<sup>18</sup> <http://molleindustria.org> (last accessed 2 August 2017).

<sup>19</sup> <http://playlab.arsgames.net/homozapping> (last accessed 2 August 2017).

gamification processes, and at the incalculating skills that can serve, but also subvert, established norms (cf. Dyer-Witheford and de Peuter, 2009; Zackariasson, 2014). Surely, there is the risk that gamification may contribute in reproducing an ideology that Morozov (2013) named 'solutionism', that is the more or less explicit idea that the right app, the right system of feedbacks and rewards, and the right software code may allow to nudge behaviours and to fix problems without a radical rethinking of the system, including actually existing cities (cf. March & Ribera-Fumaz, 2016). This is arguably a new version of the classic modernist ideology. The implications for planning are quite relevant: empirical analysis may surely cast light on the cultures and logics of political engagement, participation and community building which are produced and reproduced through the practices of civic gaming (cf. Devisch et al., 2016).

Secondly, there are a number of political issues at play. It might be obvious to mention questions of surveillance, privacy and biopolitics, but still they are crucial. Digital games are made up of algorithms which leverage a variety of data sources to develop interactions in effective ways; in this sense, games constantly surveil users (O'Donnell, 2014). Game mechanics and game designers take advantage of different forms of data gathering and analytics about the behaviours of users (Whitson & Simon, 2014). This surely raises important questions and fears: are we sure that mapping homeless people with charity and/or playful aims will not turn into something different in the future? What do we know about the social responsibilities of companies getting these kinds of data? What kinds of freedom and empowerment are produced and reproduced when participation and virtuous behaviours are obtained through codified games providing ephemeral individualistic rewards? Potential lines of investigation may include the analysis of the proliferation of fears and concerns over gamification and surveillance, the development of tools and strategies in order to protect anonymity in gaming, the development of rules and legal systems aiming at regulating the use of data in the sphere of gaming.

Third, in-between the cultural and the political sphere, it is necessary to reflect on the subjectification and framing processes triggered through persuasive games. Gamification promotes specific (Foucauldian) 'orders of the discourse' by quantifying behaviours and social positions. A ranking, a progress bar, or a virtual trophy is by definition a disciplinary dispositive allowing the distinction between what is considered good and appropriate and what it is not, and between what is considered a problem or an issue and what it is not (see Ilcan and Phillips, 2010; Kitchin et al., 2015; Vanolo, 2014). Moreover, videoludic technologies have served over the last decades as ubiquitous everyday incubators for advanced forms of production,

consumption and communication. Gaming blurs the lines between work and play, production and consumption, voluntary activity and precarious exploitation, ultimately acting as a form of biopower (cf. Dyer-Witheford & de Peuter, 2009). The analysis of the multiple subjectivities, positionalities and spatialities developed through gamification processes is a promising field of research for urban scholars.

Fourth, political economy may have a lot to say on gamification. On the one hand, it is possible to develop analysis of various forms of capital circulation triggered by the gaming and the mobile-app industries; the way these industries are organised through specific forms of division of labour (including geographical divisions); how private companies exploit gaming and gamification; and how the production and consumption of civic games blurs private and public perspectives. On the other hand, it may be possible to reflect, on a more general level, on the specific logics of gamification within the framework of the current phase of so-called 'cognitive capitalism' (Boutang, 2008). As discussed in this paper, gamification allows a reconfiguration of ideas of work, consumption, cognitive production, participation and engagement which may be definitely in line with ongoing transformations of capitalism, which relies more and more on the mobilisation, commodification, accumulation and exploitation of various forms of cognitive activities. With this critical perspective in mind, it may be meaningful to analyse how gamification allows to lure workers into exploitative conditions by mobilising interest (the motivational mechanisms offered by game elements) instead of economic coercion (cf. Rey, 2014).

Last but not least, it has to be fully explored how digital gamification is changing our experience of the urban space. The possibilities offered for example by augmented reality, pervasive gaming, digital public art or urban hacking games seem to be as immense as unexplored (Graham, Zook, & Boulton, 2013). It is becoming more and more clear that 'virtual realities', intended as 'magic circles' allowing digital users to have completely different and parallel experiences of reality are not the main trend in gamification. Rather, the tendency with many digital games, gamification, and digital technologies in general is to 'augment', to hybridise and to blur with ordinary and 'real' urban, everyday bodies, objects and spaces: technological artefacts, codes and games influence spatial experiences and interactions in ways that contribute to the production of places (cf. Crang and Graham, 2007; Graham et al., 2013). This phenomenon is probably mutating traditional understandings of many urban concepts (for example sense of place, image of the city, urban citizenship, etc.) and it troubles traditional

methodologies for knowing the urban (what does it mean to be an urban flâneur in the digital era?). Personally, I do not think we really need to develop new conceptual apparatuses or new vocabularies, but surely it may be worth to consider how phenomena such as gamification are challenging our theoretical and methodological grounds, as well as city practices, and what urban studies may have to say.

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