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The digital turn in postcolonial urbanism: Smart citizenship in the making of India's 100 smart cities

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The smart city as a "digital turn" in critical urban geography has gone largely unnoticed in postcolonial urbanism. This paper seeks to address this gap by examining the emergence of new forms of postcolonial citizenship at the intersection of digital and urban publics. In particular, I investigate the production of a "smart citizen" in India's 100 smart cities challenge – a state-run inter-urban competition that seeks to transform 100 existing cities through ICT-driven urbanism. By examining the publicly available documents and online citizen consultations as well as observations of stakeholder workshops in four of the proposed smart cities, I illustrate how a global technocratic imaginary of "smart citizenship" exists alongside its vernacular translation of a "*chatur* citizen" – a politically engaged citizen rooted in multiple publics and spatialities. This takes place through three key processes – enumerations, performances and breaches. Enumerations are coercions by the state of an urban population that has so far been largely hidden from analogue technologies of governance and governmentality. Articulations are the performances of smart citizenship across digital and material domains that ironically extend historic social inequalities from the urban to the digital realm. Finally, breaches are the ruptures of the impenetrable technocratic walls around the global smart city, which provides a window into alternative and possible futures of postcolonial citizenship in India. Through these three processes, I argue that subaltern citizenship in the postcolony exists not in opposition, but across urban and digital citizenships. I conclude by offering the potential of a future postcolonial citizen who opens up entangled performances of compliance and connivance, authority and insecurity, visibility and indiscernibility across political, social, urban and digital publics.

KEYWORDS
digital citizenship, India, postcolonial urbanism, smart cities, subaltern citizen

1 | INTRODUCTION

The smart city as an emerging area of scholarship indicates a clear "digital turn" (Ash et al., 2016) in urban geography. Although the idea of "networked urbanism" (Graham & Marvin, 2001) has been around for the last decade or so, as Glasmeier and Christopherson argue "what is new about the contemporary smart city narrative is the emphasis on places

transformed by the application of technologies" (2015, p. 4). The contemporary smart city takes earlier ideas of a digital or networked city beyond mere connectivity to a new regime of speculative futures that combine big data, algorithmic governance and automated urban management (Leszczynski, 2016). Recent scholarship on smart cities has argued that it represents a techno-utopian fantasy (Datta, 2015; Watson, 2014), a mode of governmentality (Kitchin, 2015; Vanolo, 2013) driven by corporate interests that in western contexts has become a smokescreen for implementing a range of "cost containment measures and supporting the shift to pro-innovation public expenditures" (Pollio, 2016, p. 514). Often presented by state–corporate partnerships as "non-ideological, commonsensical and pragmatic", Kitchin (2015, p. 131) notes that smart cities bring together two problematic neoliberal urban visions – first that the use of ICT will drive economic growth and urban prosperity; second that the use of ICT can make urban governance more efficient, manageable, transparent and hence equitable.

It is now accepted that the processes through which smart cities are conceived, implemented and received are diverse, contextual and often contradictory. Yet scholarship on smart cities is dominated by a "one-size-fits-all" critique where broader theoretical arguments are seen to stand for and "reveal the discursive and material realities of actually existing smart city developments" (Kitchin, 2015, p. 131). As Luque-Ayala and Marvin argue, there is therefore a need to

> explore the contradictions of smart urbanism, its differential expressions across global North and South, and the potential this creates to develop more oppositional, contested forms of knowledge and subjectivity that emerge from these contexts. (2015, p. 2113)

Moreover, while there now exists rich scholarship on smart cities in the global North, research on this theme is only just emerging in the global South (Datta, 2015; Odendaal, 2011; Shin, 2017). This is surprising, given the take up of smart cities in the global South has been at a faster rate than in the West, with countries like India, China, Korea, Saudi Arabia and others being the largest "consumers" of the global smart city market (McKinsey, 2011). More importantly, while smart cities seek to transform the social, economic and political life of cities through digital technologies, it is surprising that postcolonial urban theory has largely side-stepped this "digital turn" in the global South. This is a significant gap which this paper seeks to address using the case of India's national 100 smart cities programme.

In 2014, the newly elected ruling party in India announced that they will build 100 smart cities through a national programme to "leapfrog" India towards a digital urban future. Seeking to produce the "smart city" and the "smart citizen" as two sides of this future, this programme seeks to apply a range of digital technologies from e-governance to smart utility networks to produce ubiquitously networked cities. Doing this requires a number of manoeuvres (Figure 1). First, since 80% of its citizens are currently outside the digital divide, they need to be drawn into digital space in order to produce a "user base" for the smart city services. Second, these new digital subjects have to be shown how to perform as "smart citizens" in order to contribute to the "success" of the smart city. In this context, this paper asks: How are smart citizenships envisaged in the postcolonial city? What are the transformations required in state–citizen relationships in order to produce smart citizenship? What potential does smart citizenship offer for articulating new emergent forms of subaltern citizenships across digital and urban realms of the smart city? In this paper, I argue that the production of smart citizens in the future Indian city has become synonymous with the production of a postcolonial technocratic subjectivity, which needs to be critically investigated. To do so, this paper understands postcolonial urbanism as a historiography of knowledge-power systems that produces the trajectories of urban futures in the global South and the rendering of postcolonial citizenship therein as an amorphous set of rights claims across digital and material domains of the postcolonial city. Drawing on and connecting this to the scholarship on "subaltern urbanism" (Roy, 2011a, p. 223), the paper seeks to situate the "smart citizen" within a critical postcolonial urbanism which reveals the trajectories of postcolonial subjecthood across digital, social and material "publics" of the city and across the political, social and performative transformation of citizenship in a new digital urban age.

2 | THE "DIGITAL TURN" IN POSTCOLONIAL URBANISM

Making deep genealogical connections with colonial histories of planning and governance, postcolonial urbanism has provided us with a rich critique of the rhetoric of "disorder" in colonial and postcolonial cities which produces violently exclusionary practices against subaltern groups in the name of modernity and development (Dupont, 2008; Legg, 2007; Tarlo, 2003). Postcolonial urban scholarship has critiqued the "north-centrism" (Robinson, 2003, p. 273) of urban studies, of the "geographies of theory" (Roy, 2009, p. 819) that flow from the global North to global South, and of the processes of planetary gentrification (Ghertner, 2014) and urbanisation which support and even perpetuate the exclusionary ways in which cities and citizenship in the global South are imagined and conceptualised. Recent literature on postcolonial urbanism argues for a cosmopolitan vision

of cities (Robinson, 2005) as experiments in "worlding" (Roy & Ong, 2011) and as local "mutations" (Rapoport, 2014) of global urban visions, knowledge and policies. A substantial feature of this literature has been to understand varied models of "homegrown neoliberalism" (Roy, 2011b) emerging in postcolonial cities through the new power–knowledge nexus of state–corporates–experts. This has produced "thick" descriptions of everyday life around the struggles of marginal groups living under a violence of law (Datta, 2012), threat of evictions (Bhan, 2009) or a "rule by aesthetics" (Ghertner, 2011a). While this literature has firmly established postcolonial urban theory as a body of knowledge in its own right, there has been a surprising lack of engagement with the "digital" as a simultaneously transformative space of the city.

Yet postcolonial governance in the last decade or so has been radically transformed through a variety of programmes and initiatives for e-governance. As Hoelscher notes, urban governance in India

> since the mid-2000s has been characterized by a 'silent revolution' in the ICT and telecoms sector, intertwined with the propagation of mobile-based technology in the realm of urban policy. (2016, p. 32)

E-governance, in its provision, maintenance and accountability of municipal urban basic services and infrastructures of water, waste, energy and transport, has made ICT-driven urbanism both acceptable and commonplace in the last decade. This has not done away with the bureaucratisation of urban governance evident in form-filling, surveying and record keeping that as Gupta (2012) notes has been the hallmark of uneven and arbitrary state governmentality for the last few decades. Rather e-governance in the 2000s lay the foundations for a more ubiquitous form of technocratic governance that would expand and consolidate state rule in India's future cities. In this context, smart cities can no longer be cast solely as the mobility of global visions of urban futures, rather as the extension of state aspirations of governmentality, modernity and the control of "disorder" into a digital urban age.

To be sure, the relationship between the postcolonial city and digital technologies has been debated before. Writing over a decade ago, Graham (2000) noted that in cities of the global South there is emerging an uneven array of

> premium networked spaces: new or retrofitted transport, telecommunications, power or water infrastructures that are customized precisely to the needs of powerful users and spaces, whilst bypassing less powerful users and spaces. (2000, p. 185)

He suggested that urban development and planning in global South cities is largely driven by middle-class privilege, and therefore networked spaces are unevenly distributed and coincide with elite and middle-class access, leading to a socially and physically "splintered urbanism". Sundaram noted that this splintering "has become a significant theatre of elite engagement with claims of globalisation" (2004, p. 64) in India. This is also evident in South Africa, where Odendaal (2011) noted that digital access has been spatialised across existing investment patterns, which consolidates social and economic inequalities. The Indian smart city emerges in this moment to rewire historical–material–social inequalities in postcolonial cities through new power–knowledge networks of ubiquitous connectivity.

An examination of smart cities in India helps us reframe postcolonial urban theory and its central concerns with the genealogies of power, knowledge and politics in substantially different ways. First, behind the emergence of smart cities in the global South lurks a "rhetorics of urgency" (Datta, 2015, p. 5) to address the crises represented in the "disorders" of population explosion, uncontrolled urbanisation and climate change. Alongside a hubris of "India's Urban Awakening" (McKinsey, 2010), the smart city presents the postcolonial city as the new frontier of opportunities in the midst of crises, and digital technologies as a tool for eliminating its pre-existing disorders. Second, and in order to achieve this, digital technologies prise open territories and populations that were earlier invisible, unaccountable, unrecordable and thus ungovernable in the postcolonial bureaucratic state by extracting them into formalised and visible structures of data, governance and management. Finally, the above produce smart cities as new hybrids of power–knowledge networks that simultaneously traverse the discursive, material and digital realms of the postcolonial city. They produce new urban spatialities that are always already mediated through digital technologies and infrastructures of urban governance and encourage new technologies of visibility (Sundaram, 2004) in the postcolonial digital urban age.

Such a conceptualisation of postcolonial urbanism tests the limits of "worlding" cities (Roy & Ong, 2011) or "homegrown neoliberalism" (Roy, 2011b) or the "propriety of property" (Ghertner, 2011b) in unpacking the heterogeneous and uneven reach of algorithmic governmentality over urban territories and populations. It calls on us to expand the horizon of postcolonial governmentality beyond "regimes of dispossession" (Levien, 2013) to new regimes of digital incorporation in the smart city. Examining citizenship in the smart city means asking what postcolonial urbanism demands of the digital

urban age in order to establish new regimes of control. Seeing the city through the lens of a postcolonial "digital turn" means seeing urban space as the "test-bed" for state–corporate partnerships in governmentality, achieving what Hardt and Negri call "new and complex regimes of differentiation and homogenisation, deterritorialization and reterritorialization" (2001, p. xiii). This means understanding how smart cities as a new form of postcolonial urbanism rearrange power–knowledge networks across territories and populations beyond the material. It means understanding how postcolonial citizenship must now directly address the subaltern "other" within and across new forms of power vested in the digital.

3 | SMART CITIZEN AS POSTCOLONIAL SUBJECT

The figure of the smart citizen in India reinforces historical and contemporary paradoxes of identity and belonging. This is because the notion of citizenship is a relatively new concept in India. Under colonial rule, bodies and identities of Indians existed as "lesser" subjects, and were "scientifically" categorised along caste, religious and ethnic markers (Chatterjee, 2004) in order to assist colonial rule. Civil society and citizenship within an equal public sphere was largely absent, and any claims to citizenship by colonial subjects was primarily conceived through civil disobedience of the colonial state and ultimately freedom from it. On independence in 1947, the Indian Constitution explicitly provided universal rights to all citizens while simultaneously evoking rights to positive discrimination in social, economic and political spheres (such as education, employment, housing and so on) for those historically marginalised by caste, religious or gender ideologies. Indian citizenship is now caught between the search for a uniform civil society under the rubric of universalised rights and the demand for differentiated rights for those who have historically faced social and economic marginalisation in society (Jayal, 2013). The smart citizen – a ubiquitously connected subject, participating equally in digital space – remains poised between these two rights-based demands.

The paradoxes of Indian citizenship and its particular forms of universal and differentiated rights produces what Chatterjee notes as the differentiation between civil and political society. For Chatterjee (2004), while civil society is the realm of the privileged, it is through political society – the actually existing realm of subaltern politics – that marginal groups make moral rights claims on the basis of caste, class, religion, gender and thus transform their bare life conditions to citizenship. This distinction, however, is not supported in the case of digital space as Sundaram (2009) notes how media piracy in Delhi opened new spaces of disorder across political and civil society. Sundaram's work suggests that conventional forms of power located across civil and political society are making way for more multi-sited amorphous forms of power and subjectivity across digital and material spheres of the city. This amorphousness is crucial in smart citizenship, which can no longer be considered in the same way as subaltern citizens living in slums and informal settlements make moral rights claims through political society. While exclusion from the "paradigms of propertied citizenship" (Roy, 2003, p. 463) does not exclude access to digital space, lack of digital access often overlaps with the absence of property rights. This is paradoxical, since digital access offers the illusion of a neutral, transparent and equal digital civil society unattached to material socio-economic markers, and yet is actually deeply connected to it. As Jayal notes, this has redefined the notion of "citizenship obtained through struggle, to citizenship as a gift of the state" (2013, p. 3).

Smart citizenship thus emerges at the moment in the large-scale transformation of India's economy when a new individualist and consumerist identity has begun to take hold across different social groups. In the newly formed Indian republic in 1947, the "quest for citizenship ... [was] conducted in tandem with a quest for democratic modernity" (Jayal, 2013, p. 274), but in India's new urban age, the quest for a smart citizen has been given shape by a quest for technocratic urbanism. This has transformed moral rights claims to more universalised demands among subaltern groups to have a share in the economic prosperity of the free market. Following Chatterjee (2004), this move from subjecthood to citizenship is now one that makes claims on governmental authorities over services and benefit such as digital access. Thus, Jayal notes that "new forms of individuated citizenship are being enabled by electronic media and social networking, which offer unusual opportunities for expressive citizenship" (2013, p. 280) for these groups. This resonates with Sadoway and Shekhar's (2014) conceptualisation of smart citizenship as bridging the binaries of analogue and virtual modes of civic engagement which they claim with is "deep democracy" (Appadurai, 2001).

I argue that smart citizenship in India cannot be seen through this binary lens of subject/citizen, but rather as an amorphous and dialectic identity across three overlapping vectors. First, as *enumeration* through citizen consultations of a digital population that had so far been hidden from analogue technologies of measurement (such as the Census). This is a call by the state that evokes the moral imperatives of *all* citizens to engage in citizen consultations, but that paradoxically imparts subjecthood to subaltern groups. As Isin and Ruppert (2015) suggest, the digital citizen now becomes both "subject to

power" as well as "subject of power", simultaneously controlling and controlled by the structures and networks of digital technologies and information flows in the smart city.

Second, *articulation* of how to become smart citizens is key to establishing and reinforcing social and political power over both territorial and digital spaces of the city. This emerges in the performative acts of citizenship across multiple publics of the smart city – in the "digital acts" of a population participating online and making claims to the future smart city, in the corporeal performances of a population through marathons, poster, essay and poetry competitions in the public sphere, and in middle-class vigilante performances over subaltern populations.

Finally, *breaches* to particular forms of authority and power across digital and urban publics open up "opportunities, possibilities and beginnings" (Isin & Ruppert, 2015) from within the spaces of the smart city. Breaches open up the space for a "pirate modernity" (Sundaram, 2004, p. 66) where the subaltern citizen refuses to interact with the brand-driven economy of big data, open data and data governance. This, I argue, is the process of translation where the smart citizen as a ubiquitously connected subject emerges as a "*chatur* citizen" – a postcolonial subject who shares the same space with a globally recognisable smart citizen. The *chatur* citizen, as I argue in this paper, is a cultural rather than literal translation, which loses its neutrality and acquires heightened political meaning in the process. Through rhetorical confusion and reinterpretation of the "smart city", the *chatur* citizen offers hope for the vernacularisation of smart citizenship through an embodiment of situated and discursive politics across digital and subaltern publics.

4 | INVESTIGATING SMART CITIZENSHIP IN THE FUTURE SMART CITY

How does one investigate the digital turn in postcolonial cities before the arrival of the smart city in its material form? How does one investigate smart citizenship in the absence of subaltern rights to the city? How does one investigate citizenship in the future smart city? These and other questions guided our work on a UK Research Council funded development grant titled "Learning from the Utopian City". Crucial to our project were two scales of inquiry. First, a horizon scanning of publicly available smart city documents and applications. A key source was the federal Indian Ministry of Urban Development (MoUD) website, which hosts vast resources of online citizen consultations and smart city applications submitted by different urban municipalities towards the 100 smart cities challenge. A large part of the analysis in this paper is driven by a discursive analysis of the documents, applications and citizen consultations in terms of their references to and descriptions of the smart citizen.

The second scale of inquiry is related to the space of a series of four stakeholder workshops held in India from January to June 2016 in four cities bidding for the challenge – Varanasi, Chandigarh, Navi Mumbai and Nashik. The workshops brought together a range of participants (between 20 and 30) from government departments, private developers, ICT companies, NGOs, residents' welfare associations, slum dwellers' associations and so on. For the first time, these stakeholders were meeting around a table to debate the future Indian city. For the first time, stakeholders in government, third sector and subaltern groups realised that the smart city held very different meanings across the table. This to us was the defining moment of emergent citizenship, where we observed the rhetorical confusion and breach of the imagined smart city at different scales.

We made in-depth observations of the formal presentations, arguments, debates and discussions alongside video and audio recordings. In doing so, the four city workshops were taken as ethnographic sites for observing the unfolding of enumerations, articulations and breaches of smart citizenship. Our role as facilitators of the workshop directed these interactions quite specifically for the stakeholders. On the one hand, we asked all stakeholders to articulate their aspirations for the future city. On the other hand, we also requested stakeholders to articulate details of and their specific role in the future smart city (as policy-makers, planners, consultants, activists or citizen participants). We observed the blueprints of smart urbanism presented by government agencies which valorised technology as a means to control the perceived disorder of existing Indian cities. We also observed the performative citizenships of subaltern actors in the workshops where they described themselves as "dutiful subjects" by law, and made claims to wider inclusion in the economic and entrepreneurial successes of the future city. Finally, we also observed how through these discussions, a new rhetorical and paradoxical smart citizen became indigenous to the historical struggles of subaltern citizenship. Further to these workshops we contacted participants in Navi Mumbai and Nashik to discuss some of the issues highlighted in face-to-face or Skype interviews. These were unrecorded, but these discussions have contributed to the analysis of citizen consultations.

These two scales of inquiry brought out the complex nature of smart cities, citizenship and its contested translation in postcolonial contexts. These translations are both discursive and material in that these are both embedded in policy documents and embodied in everyday life struggles. Following Jazeel's (2014, p. 89) call to "dwell in the domain of representation and to trouble over the mechanics of representation at work in geographical knowledge production", my approach

complicates the distinction between discursive and material in the future city. My examination therefore aims at simultaneity rather than causality in a digital urban age – seeing the discursive representations of smart citizenship in policies, its material politics of enumeration and articulation and the "speech acts" of ordinary citizens, all as co-constitutive of transformations in postcolonial citizenship. The methodological approach then is to unpack how data, policy, representations and discourses of smart citizenship together rework the everyday struggles of ordinary citizenship. In the sections that follow, I present three simultaneous processes of smart citizenship in India – enumerations, articulations and breaches. Through these processes, I outline an emergent postcolonial subject who is simultaneously transgressive and compliant in their practices and performances of citizenship in the new smart city. I will conclude with the potential of this new postcolonial citizen in India to embody the inherent conflicts and contradictions of a digital urban age.

5 | "CITYZENS BECOME NETIZENS"

In May 2014, a new ruling party came to power in India on the basis of their promises of good governance and economic growth. The creation of 100 smart cities formed the backbone of these promises, which sought to "leapfrog" India into a digital urban age of innovation, entrepreneurialism and endless prosperity. The overlaying of a smart urbanism onto Indian cities represents India's route to "planned" cities by claiming to make governance transparent, open and accountable to citizens in the new smart city. The key feature of the smart cities agenda in India is a national competition between 100 existing cities nominated by regional states. The federal state allocated a total budget of ₹100 crore (approx. £11 million) to be equally divided across the 100 cities irrespective of their metropolitan size, demographic base and aggregate revenue. Each regional state was expected to make similar financial commitments. Each nominated city would then make a bid to receive the allocated money, as well as raise matching funds from its own revenue sources. The Indian definition of the "smart city", however, significantly played down the global imaginary of a ubiquitously connected Internet of Things (IoT) and Big Data to emphasise the importance of local situatedness. Indeed, the Smart City guidelines explicitly made the case that

> there is no universally accepted definition of a Smart City. It means different things to different people. The conceptualisation of Smart City, therefore, varies from city to city and country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. (GoI, 2015, p. 5)

Despite its locally situated rhetoric, India's smart cities challenge encompassed a neoliberal logic that made private sector involvement obligatory. From assisting in the preparation of proposals to the implementation of smart city projects, each city authority had to appoint consultants chosen exclusively from a list prepared by the federal Ministry of Urban Development (MoUD), and an external "hand-holding" agency (such as DfID, World Bank, USAID, ADB). The final deployment of smart technologies was to be tendered to international ICT companies such as IBM, Cisco, Siemens, Hewlett Packard and others who were named as potential partners. This meticulous attention to each process and stakeholder in the planning and apparent democratisation of smart cities claimed to reverse some of the current planning thinking on Indian cities, which argues that India is not able to "plan" its cities since it is itself an "informalized entity, engaging in deregulation, ambiguity and exception" (Roy, 2009, p. 76).

Crucial to the seeming democratisation and formalisation of the smart city, the guidelines highlighted the "citizen" as central to its ethos. Very early on, the draft concept note stated that the intention was

> to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. (GoI, 2015, p. 5)

Indeed, it emphasised that quality of life in smart cities would be on a par with European standards, indicating that despite its situated rhetoric, the Indian smart cities mission had set for itself the parameters of western modernity and urbanism. This was legitimised through citizen consultations. Compared with other evaluation categories in the smart cities challenge, "citizen participation" had the third highest weightage of 16% after "feasibility and cost-effectiveness of proposals" (30%) and "result orientation" (20%). Other criteria such as "smartness of proposal" (10%), "strategic plan" (10%), "vision and goals" (5%), "evidence-based city profiling and key performance indicators" (5%), and "processes followed" (4%) came much lower in the priority list. Not only that, digital presence was a key

criteria of citizen participation as evident in the assessment questions: "How much of social media, community, mobile governance have been used during citizen consultation?" and "How well does the Vision articulate the use of information and communication technologies to improve public service delivery and improve the quality of life of local citizens?" (GoI, 2016). This then was not just a digital turn in urbanism but an urbanism for and by digital technology.

In February 2016, as the first set of 20 winning cities was revealed, MoUD announced that the 100 smart cities challenge had kick-started the process of "cityzens becoming netizens" (Naidu, 2016). The Ministry reported that a total of 15.2 million citizens participated in the preparation of smart city plans at various stages. The national smart cities mission had tapped into the digital sphere to produce millions of digital citizens projected to become smart citizens in the future. Although these statistics were at a scale not achieved or attempted earlier, it still constituted a small share of the total urban populations (about 12% of the total population of the participating cities). But who were these smart citizens of the future? How were they discursively and performatively produced? What was their role in the future smart city?

5.1 | Enumeration: Fast-tracked citizens

The first indications of the production of "netizens" became apparent in the draft preceding the final smart city guidelines in 2014. The "Smart City Mission document", as it was called, went through a number of iterations from concept notes to draft guidelines to a final public document. Crucially, the "netizen" also underwent a set of transformations. The draft concept note identified the smart city as

> not only described by the level of qualification or education of the citizens but also by the quality of social interactions regarding integration and public life and the openness towards the 'outer' world. (MoUD, 2014, p. 9)

It further noted that it was important to have urban citizens in the digital sphere since online participation will lead to "Social pressure on other citizens [that] can often remove resistance and facilitate a greater degree of civic discipline" (MoUD, 2014, p. 17). These explicit links between digital participation and digital surveillance were dropped in the final Smart City mission guidelines, to describe a more active citizen.

> The Proposal development will lead to creation of a smart citizenry. The proposal will be citizen-driven from the beginning, achieved through citizen consultations, including active participation of groups of people, such as Residents Welfare Associations, Tax Payers Associations, Senior Citizens and Slum Dwellers Associations. During consultations, issues, needs and priorities of citizens and groups of people will be identified and citizen-driven solutions generated. (GoI, 2015, p. 22)

This focus on "smart citizenry" reflects the general transformation in processes of deliberative democracy which Kitchin (2015, p. 133) observes have a "discursive emphasis" on "inclusivity and citizen empowerment" without any real impacts on democratic participation. The process of enumerating this "smart citizenry" relied on what Dan Hill (2012, location 744, kindle edition) has called a "push button democracy" where online endorsement is seen to stand for democratic deliberation in the public sphere. With the announcement of the nominated 100 smart cities, overnight each city began their own "enumeration" process through which an urban population was incorporated into the logics of big data and digital governance. This enumeration occurred across digital and material publics, with municipalities summoning its urban residents to participate in online "citizen consultations" to produce what I will call here "fast-tracked digital citizens". These consultations were both online and face-to-face, virtual and analogue. Each city carried out extensive public mobilisation events (smart city walks and marathons, essay, poster and logo competitions). They conducted surveys in middle-class neighbourhoods as well as informal settlements, in government-run schools and colleges and in marginal city wards. The public were invited to meetings and workshops with local councillors and civil servants through newspaper announcements, through neighbourhood residential associations, through slum dwellers' organisations, traders' associations and so on.

One of the key platforms where these processes came together was the MoUD website, which hosted the smart city proposals and citizen consultations with over 2 million online comments received across 98 cities. Despite being a small share of the total urban population of these 100 cities, this nevertheless revealed the huge shift towards digital enumeration in urban governance. For example, by the end of 2015, Chandigarh Municipal Corporation reported that there had been about
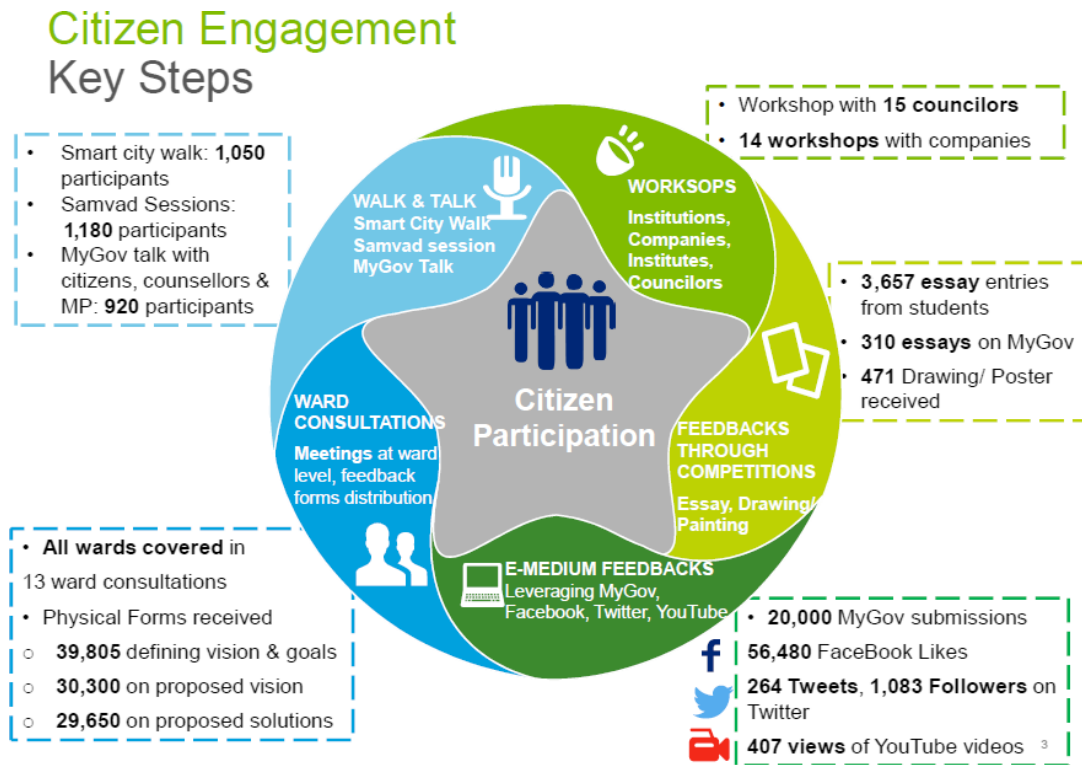
FIGURE 1 Chandigarh Smart city consultation graphic. [Colour figure can be viewed at wileyonlinelibrary.com]
Source: MoUD (2015)

20,000 MyGov submissions with over 56,000 Facebook likes, 260 tweets and 400 views of YouTube videos of their smart cities proposal. The language of consultations on the digital platforms was English, although responses were sometimes in Hindi or other regional languages. The platform to interact and input suggestions also required skills that were clearly absent among those with lower education and digital capabilities.

Capturing online citizens and enumerating the data on consultations served the MoUD in highlighting the transformation of a territorial "population" into digital citizens. This was a step before they could then be trained to become smart citizens, articulating and performing their access to digital space in various ways to serve the demands of smart cities. Enumeration promoted a reductionist version of citizenship where participation as a "category of governance" (Chatterjee, 2004, p. 69) began to stand for "democratic" urban transformation. Online citizens became what Pollio (2016, p. 528) has called a "thinkable, knowable issue of urban governance" that were the digital version of earlier analogue systems of documentation, form filling, bureaucracy and "red tape" (Gupta, 2012), which enabled the state to make its power and practices illegible (Das & Poole, 2004). This online population was the material of a digital society – fast-tracked digital subjects with a digital signature, who formed the prelude to "smart citizenry".

5.2 | Articulation: Performing smart citizenship

The citizen consultations highlighted three key processes in the making of smart citizenship. First that the state's desire to govern its territory through its digital population set the pedagogic terrain of smart citizenship which believed that citizens "need to be educated by city leaders as to the benefits IT can bring" (Hollands, 2015, p. 70). This was evident in the smart city guidelines, which underlined key duties of "smart people".

> The Smart Cities Mission requires smart people who actively participate in governance and reforms. Citizen involvement is much more than a ceremonial participation in governance. Smart people involve themselves in the definition of the Smart City, decisions on deploying Smart Solutions, implementing reforms, doing more with less and oversight during implementing and designing post-project structures in order to make the Smart City developments sustainable. (GoI, 2015, p. 18)

The introduction of "smart people" in policy reflects a shift from the ordinary citizen to the tech-savvy, entrepreneurial and judicious citizen working for and on behalf of state enterprise, innovation and growth. This production of "smart people" was central to the state's alignment with digital governance. It reflects what Vanolo notes as the desire of the state to

> speak about the citizens of smart cities, and speak in the name of them, but very little is known about citizens' real desires and aspirations. (2016, p. 12)

In this role, smart people were collaborators and endorsers of the smart city, rather than critical and active citizens. Thus, instead of testing smart cities as the site of democratic participation, smart citizens were constructed as allies of state–private sector experiments in urban governance.

Second, the smart city proposals used ICT as the filter to sieve through citizens' concerns with everyday urban problems. A large part of citizen feedback in the online consultations involved suggestions on improving urban basic services, provision of physical and social infrastructure, supply of urban basic services and so on. Yet, for example, while parts of the city (such as informal settlements) were still disconnected from urban basic services, smart city proposals often aimed at 24/7 water supply, public wifi, e-rickshaws and so on. Local planners and consultants in our workshops accepted that although urban basic services were priority themes in citizen consultations, their smart city proposals focused on those that fit within the ICT-driven prescriptive guidelines of the Smart City Mission document.

Finally, online citizen consultations extended historic social inequalities from the urban to the digital realm. It is here that new categories of exclusion emerged from the digital realm where the right to be a smart citizen was premised on the removal of those not deemed to belong to the future smart city. For example, a large part of the online citizen suggestions for Navi Mumbai focused on the importance of law enforcement to ensure a clean and "sanitised city". These comments of varied length and detail called for the elimination of open defecation, removal of hawkers and street markets, provision of green spaces, prohibiting spitting, beautification of neighbourhoods, planting trees, jogging and cycling tracks, enforcing parking provisions, traffic rules and so on. These popular middle-class demands for a "sanitised" city constructed the elimination of physical and moral "dirt" and the control of "disorder" as a route to smart urbanism. If technology was clean, it was believed that the use of technology-driven urbanism in smart cities would also clean the city symbolically and materially. These views were supported by most urban municipalities such as Chandigarh, which regularly demolished "illegal encroachments" of slums, hawkers and pavement dwellers since the announcement of the 100 smart cities challenge in order to become "slum free" (Nayaki, 2016; Sharma, 2016). This exclusionary discourse and practice drew on the logics of "propertied citizenship" (Roy, 2003, p. 463) onto the digital realm in paradoxical ways. While there were no clear guidelines on who owned the data on citizen consultations, and how that data was to be used, ownership of physical property in the city determined how inclusion and exclusion from the future city were discoursed and practised. This was strikingly evident in the implementation of a "smart cleaning" system in Chandigarh.

"Smart cleaning" *in Chandigarh* is one of the key smart applications (among several others) to be adopted in Chandigarh's smart city projects. The "problem statement" identified as the inefficiency in garbage collection, was attributed to the unauthorised absence of sweepers. In order to make this service more efficient and lead to better satisfaction of municipal services, Chandigarh municipality was advised by smart city consultants to look into the "smart cleaning" model piloted in a nearby satellite city, Mohali. The Mohali model used GIS and mobile apps connected to a citizens' reporting and management tool that tracked attendance, uniform, equipment and performance of sweepers (who were mostly from the lower castes, unorganised and without permanent contracts). One of the most controversial aspects of this tool was the ability of "citizens" to take pictures of sweepers at work, upload it on cloud-based software and hence assist the municipality in monitoring their performance in real time.

The smart cleaning model was highlighted by Chandigarh municipality as the potential of smart applications to deliver efficient and cost-effective urban services to citizens. Smart city consultants noted that this would produce the future smart citizen who used their digital presence to support and transform urban governance. Since Mohali's smart cleaning was identified as "best practice", civil servants and local councillors from Chandigarh had visited its municipality offices in early 2016 (Rohtaki, 2016) to subsequently adopt these in Chandigarh Municipality. The Chandigarh smart cleaning idea was thus sold to the social and political elite alike in imagining a sanitised city, thereby deepening the gap between the "smart citizen" and subaltern citizen. The former claimed their space in a smart urban future using their "digital acts" of vigilante governance to discipline the latter. These were the middle-classes who became citizen-consumers, demanding service efficiency and thus transposing their existing historical material-social privileges from the public sphere onto the digital sphere. It reflects what Vanolo calls "smartmentality" – a hidden ideology of the state which uses the smart city as a "powerful tool for the production of docile subjects and mechanisms of political legitimisation" (2013, p. 883). The smart cleaning system went further in

creating what Lerman calls a "new kind of voicelessness" (2013, p. 59), where subaltern actors had little or no control over their own labour, which was monitored by those who already had greater access to public goods and services.

Chandigarh's smart cleaning system blurs the distinction between participation as a "category of governance" and participation as a "practice of democracy" (Chatterjee, 2004, p. 69) in deeply problematic ways. It indicates that postcolonial citizenship in the new smart city emerges from overlapping layers of urban and digital publics around longstanding postcolonial elite anxieties over "dirt" and "disorder" (Gooptu, 2001; Kaviraj, 1997) in the city. Presented through the objective technocratic rationality of smart apps, it legitimises the surveillance of those on the margins of social power networks by the "practices of democracy" by an elite civil society further empowered by digital citizenship. The "smart citizen" thus becomes a euphemism for an elite citizenship built on class, religious and caste privilege. The subaltern citizen can now no longer make straightforward moral rights claims through political society. Rather they must now find new ways to breach the boundaries between digital and urban publics that define their exclusion from the future city.

5.3 | Breaches: The "chatur" citizen

In the face of enumeration and articulation of smart citizenship by the state, what emerges is a new form of citizenship that breaches the norms of the smart city, in order to access and belong to it under a new social contract between the state and citizen. "Breach" here refers to both a verb and a noun – the former "an act of breaking or failing to observe a law, agreement, or code of conduct" and the latter, "a gap in a wall, barrier, or defence" (Oxford English Dictionary). This breach resonates with what Isin and Ruppert (2015, p. 131) suggest as the "witnessing, hacking and commoning" of particular forms of authority and power in digital spaces, which opens up "opportunities, possibilities and beginnings" to enact new forms of citizenship across digital and material spaces. A significant aspect of breaching of smart citizenship in India drew on the ability of the subaltern citizen to "speak" in their own voice and of their own experiences in order to challenge the norms of conduct embodied by "smart people" in the policy. These "speech acts" distinguished them as postcolonial "citizens" (with their moral and legal attributes of community) from a digital "population" (their empirical form in census data, survey, policies and the numerous enumeration logics of the state) (Chatterjee, 2004). In the stories that are emerging from a diverse range of future smart cities across India, it is clear that these breaches are multifarious, multiscalar and commonplace. I present here a few examples from our workshops.

The first breach occurred at the scale and in the spaces of urban local governments. In our Nashik workshop, the Deputy Mayor (a locally elected official) said to the Commissioner (a civil servant), "those who want two rotis [bread] are given half and those don't want rotis are also given half ... You are giving us sweets, but we have diabetes". Through metaphors of hunger, indulgence and disease, he was referring to the rolling out of universal financial packages to all the 100 smart cities despite huge variations in their demographic, social, political and economic contexts. He continued,

> Smart city, smart city, everyone is talking about the smart city. But did anyone try to analyse the reality behind it? The Central Government will give 500 million (Rs), and that is their maximum limit. The State Government will provide 250 million (Rs), so a total of 750 million. Now revenues of [municipal] Corporation are about 3,000 million (Rs), which suggests 2,250 million (Rs) will be citizens' money. But the Central and the State Government will keep control on this 3,000 million.

This assertion for autonomy by the Deputy Mayor illustrates the "voice" of the city within the policy and discursive landscape of Indian smart cities. In this case, the "urban" as a political unit of governance breaches the smart city visions of the Indian state through speech acts that assert its autonomy and identity. This is in contrast with recent claims of smart city investments being a "manna from heaven" (Mukhopadhyay, 2015, p. 79) for local political elites who seemingly clamoured in their requests to the federal state for securing these projects in their cities. The concern raised by the Deputy Mayor suggests that as the geographies of smart cities are complex and uneven, so are the ways that these are received and challenged by the urban authorities. By highlighting the top–down nature of smart city policies and the resultant shrinking of democratic power of the city, the Deputy Mayor's presentation resonated with the observation made by Mukhopadhyay (2015, p. 77) of the loss of autonomy written into the smart city guidelines, which is "silent on a democratic representative local government. Indeed, the word 'mayor' does not once appear". While the citizen pays taxes to the municipality, their elected representatives had no effective decision-making role in disbursing the smart city funds. Nashik and Navi Mumbai urban authorities particularly sought to challenge and breach the different ways that smart city transformations were imposed as top-down financial transactions which privileged the power of the federal state. Local councillors there argued that acceptance of the smart city challenge would lock them into long-term path dependencies with the corporate sector.

The Deputy Mayor of Nashik's challenge to the federal smart city policies resulted in a few concessions, giving them more representative voice in smart city projects. However, despite being included within the 100 smart cities nominations, Navi Mumbai has opted out of the national programme because of irreconcilable differences with the federal state over the use and control over urban revenues in smart city projects.

The second breach occurred at the scale of everyday life, which sought to redefine the meaning and impact of being "smart" in improving subaltern livelihoods and capacity. In our workshop in Nashik, a slum dwellers' representative said,

> In general, the government is trying to create a separate city for the rich and a separate city for the poor. The prevalence of this ideology is going to be fatal for the future of Indian cities. The Smart City project should adopt a holistic approach to development. We also want Nashik to become smart. There should be an increase in a number of employment opportunities, and every child should get education.

Here the future smart city and the already existing Indian city were made to stand respectively for the city of the rich and city of the poor. In a reflection on the future of slums in smart city visions, this representative drew on an alternative characterisation of the smart city as economically and socially just. They highlighted that they were not claiming "free entitlements"; rather as citizens, they wanted a share in the economic success of the smart city. This was extended in the Navi Mumbai workshop where an undocumented worker said to the Municipal planner,

> What do you mean by smart? Does it mean, if you have money then only you can be called smart? No. We are smart because we do hard work for our living, we do not steal from anyone, and every day we struggling. Suppose today, if we get ten rupees, we think if we spend all of it today then how will our children get to eat tomorrow? That is why we are smart. Because we plan our every move. … Smart is when you plan your children's future and make do with the little money you have. I do that every day and that is why I am smart.

This definition of the smart citizen as a pragmatic and prudent financial planner was a "speech act" which sought to claim right to the future city. Significantly, the narrative above was spoken in Hindi, while "smart" was left untranslated in English. This appropriation of the definition of "smart people" prescribed in the guidelines as "doing more with less" (GoI, 2015, p. 18) into an alternative definition rooted in everyday economic struggles sought to breach the definition of smart from within. This smart citizen was very different from the active "civic-cyber" citizen of Sadoway and Shekhar (2014), who worked within the constraints of digital infrastructures. The smart citizen in our workshops often emerged in the absence of digital participation and "in the absence of a society that guarantees formal and informal security and welfare once provided by community and state policies" (Szeman, 2015, p. 474). Smartness was, as Mukhopadhyay notes, "a set of community attributes that can only be experienced by living in it [city]" (2015, p. 79). As the state sought to reorganise democratic power through its smart cities challenge, this new idiom of citizenship offers a more "knowledge intensive smart city" (Soderstrom & McFarlane, 2016, p. 312) than a city filled with the digital acts of its residents. It offers the potential to breach the technocratic wall of the future smart city to articulate alternative discursive and material imaginations of smart citizenship.

These varied understandings and definitions of the smart citizen created disagreements among stakeholders about the identity of this elusive subject as a digitally empowered or knowledge-empowered active citizen. Discussion centred around the absence of linguistic tools to contextualise and culturally embody smart citizenship in India. The Deputy Mayor of Nashik noted that while the smart citizen was presented by the state as a digitally connected, politically neutral subject, its closest cultural translation *chatur* was in fact a citizen of increased political subjectivity. In Hindi and several other regional languages, "chatur" refers to those who are clever, astute, resourceful and quick-witted. *Chatur* people are understood to be street-smart – they fulfil their tasks with efficiency, skill and insight, use circumstances to their advantage and in general display a capacity to talk their way out of difficult situations. Significantly, a *chatur* person is a politically engaged citizen rooted in multiple publics and spatialities – far removed from the consensual citizens in the service of urban governance. *Chatur* citizens make do with less by seeking out opportunities in their favour. The Deputy Mayor suggested that in India "smart" citizens should be relabelled as "intelligent", citizens since the latter does not embody the shrewd political manoeuvrability of *chatur* citizens.

I suggest that the translation of smart citizenship into the *chatur* citizen presents us with a challenge. The *chatur* citizen is the third potential breach, a discursive and material formation who provides an alternative imagination of citizenship in India, which directs us towards a far more "disordered democracy" (Sundaram, 2004, p. 64) than that envisioned in the "smart citizenry" policy speak. The *chatur* citizen offers a "breach" in the state imaginary of smart citizen precisely because

of its political ambiguity – they blur the lines between subject and citizen, digital and material, governance and governability in the future smart city. And thus, they are also unacceptable to dissenting urban political elite (who prefer the label "intelligent"). In this context, the *chatur* citizen is the "strange language found in the predominant language of urbanization" (Boucher et al., 2008, p. 989) and smart citizenship in India.

The *chatur* citizen, however, is not a completely new entity in India's political landscape. Its qualities have been observed in the postcolonial embodiment of the "men in the middle" (Sud, 2014, p. 593), who are often attributed to third-world corruption (Oldenburg, 1987). In India, these men are largely absent from policy discourse, but they play a crucial role in implementation. Variously called aggregator, aratdar, tout, broker, dalaal (Tarlo, 2003) or "pyraveekar" (Ram Reddy & Haragopal, 1985), they are intermediaries who know the art of acquiring political favours to achieve their goals. The middleman can also be seen in the "Marabout" in Senegal (Simone, 2003), a "fixer" who is equally disparaged and respected for his ability to get things done. The middleman indicates that in the context of the smart city, the *chatur* citizen is more than just fiction or conjecture. Despite its disparagement by stakeholders in the workshops, the figure of the *chatur* citizen can be seen as simultaneously material, digital and discursive – analogous to an urban hacker, or a "clever programmer" who gains access to forms of participation and demonstration within the virtual and material spaces of the future smart city, and thus ruptures the normative subjecthood of smart citizenship presented by the state. This *chatur* citizen is one who finds possibilities of "social collaboration" (Simone, 2003) across digital and material spaces to disrupt how things are done, who by, where and under what conditions in the future smart city. They open up new and entangled performances of compliance and connivance, authority and insecurity, visibility and indiscernibility across political and digital society. The *chatur* citizen is yet to come in Indian smart cities, but the discursive landscape has been cast for its emergence.

6 | CONCLUSIONS: TOWARDS A *CHATUR* CITIZEN?

The digital turn towards smart cities in postcolonial contexts has initiated a radical transformation in the understanding of what constitutes citizenship in a new urban age. In India, this is largely a process of capturing those outside of data structures within systematic processes of performative citizenship and "push-button democracy" (Hill, 2012, p. 744). The performative demands of smart citizenship suggest that it entails more than just digital access to a territorial population; rather it involves a coordinated state strategy in transforming how citizens react and respond to a state's smart city initiatives. The emergence of a *chatur* citizen in this context raises two key questions: Can there be a smart citizen outside of the structures of power embodied by digital technologies? Can there be a postcolonial citizen beyond and outside of historical structures of power and inequality? These two questions are connected in that they direct us to the very nature of what constitutes postcolonial urbanism, the digital turn and the practices of citizenship in the postcolony.

India's smart cities programme can be seen as the test-bed of a global smart citizenship. In other words, if citizens embedded in informalised structures of patronage and economy can be turned into digitally savvy smart citizens, it can be possible anywhere. Yet this transformation is a top-down vision that aims at service efficiency and compliance rather than transgressive practice. Thus its translation and vernacularisation offers possible openings to articulate another version of smart citizenship that speaks from a different space and positionality of the subaltern. It offers us a lens to examine the emergence of a new kind of postcolonial citizenship whose shapelessness and ambiguity is its enduring feature. I have argued that this is the *chatur* citizen – presumably a new postcolonial smart citizen who speaks both from within and beyond the structures of digital governance and smartmentality. The *chatur* citizen is inherently bound within the historical, social and economic power structures and it is also distinct from it. It speaks from a position of subalterneity to challenge power and yet attempts to replicate the very forms of power that it challenges through compliance and governance of the self. In so doing, the *chatur* citizen is both a complaint subject and an active citizen moving fluidly and unproblematically between these two positionalities. Their quotidian acts of governing themselves in everyday life suggests how it is possible to garner support for a large-scale top-down urbanisation project such as the 100 smart cities. Their transgressive speech acts and opportunist politics also underline the faultlines of this large-scale vision of smart urban futures.

The "digital turn" we see emerging in Indian urbanism and its future *chatur* citizen suggest a wider move towards what scholars have recently identified as decolonisation (Radcliffe, 2017). Indeed, in the context that geographical scholarship itself is now recognised as entrenched in modes of colonial power and knowledge, the decolonial imperative in urbanism is already upon us. Indian smart cities speak to the decolonial moment – articulating and delinking the knowledge in the making of smart cities and citizens from their western origins, even as they are reliant on the global knowledge networks and technologies of smart city making. They claim to delink and decentralise the production of smart cities by locating

knowledge at the scale of the city and citizen, and yet do not build in possibilities of transgression or subversion within it. The *chatur* citizen indicates a process of decolonisation from the hegemonic power of the national programme through the rhetorical subversion of smart citizenship, but it also ironically reminds us that colonial and historical power inequalities cannot be simply erased in contemporary urban transformations. Thus the emergence of a vernacular smart citizen shows that citizenship and subjecthood are not binary categories, rather they are entangled and complicated through the digital turn in postcolonial urbanism.

While decolonisation is a claim undertaken by the state and the *chatur* citizen to particular ends and with their own contradictions and faultlines, postcolonial links to historical structures of power embodied by class, caste and social privilege continue to resonate in new urban futures. Both the state and citizen claim to speak from different positions – the state as a postcolony and the *chatur* citizen as the subaltern. The key question both are engaged with – What makes a smart citizen? – is also the key question of 21st-century urbanism and imaginations of global urban futures. However, to understand how a diversity of answers to this question is emerging in the postcolony, we need to move beyond the mere delinking of colonial and western knowledge from local translations. As Jazeel reminds us

> decolonising geographical knowledge requires more. It requires us to think carefully about how to de-link the production of geographical knowledge from the hegemony of our disciplinary infrastructure. (2017, p. 336)

This understanding of decolonisation underlines an examination of the histories of structural violence over marginal and subaltern subjects which produce the landscapes of smart cities and citizenship in India today. Rethinking smart citizenship from the positionality of the subaltern urban actor puts smart cities and postcolonial cities in dialogue with each other and leads to their mutual transformation, as we see in this paper. Opening up knowledge of smart citizenship beyond policy impositions means, as Chatterjee has argued,

> using the full panoply of modern technologies of communication, switching and mixing languages and media, and making sense of as well as enriching the diverse worlds they inhabit. (2012, p. 49)

This is not merely a provincialising of the smart city as a scholarly project, rather as Radcliffe notes a "rethinking of the world *from* Indigenous places and *from* the marginalised academia in the global South" (2017, p. 329).

So far, "smart" has been the alien language of postcolonial urban theory. For some time now, the "digital turn" has also been seen as existing and operating outside postcolonial urbanism. But smart and digital technologies are now the key policy and political tools of postcolonial states to embrace and imagine new urban futures. Understanding their role in transforming state–citizen relations is key to gaining insights into the workings of postcolonial urban transformations and emergent citizenships. If the Indian state reimagines its urban future in smart cities, I have argued that we need new modes of critical inquiry, methodology and analysis of the configurations of emergent citizenships in the digital urban age to understand how the subaltern citizen is finding ways to become "chatur" in the future city. Rather than delinking geographical knowledge, this will offer us opportunities to open up the postcolonial city to scrutinise the networks of power and knowledge shaping its present histories and futures. Opening up a postcolonial citizenship engaged with both the material and digital worlds (whether materially or rhetorically) as well as with the past and possible futures, will enable more critical scholarship that engages with the key problematic of the postcolonial urban age. This paper has initiated this process of imagining the future *chatur* citizen in a digital urban age, who speak of and to the smart city from the subaltern positionality of a disconnected or analogue citizen. More critical research and scholarship is needed to fully understand the diversity of emergent citizenships in this new postcolonial urban future from critical feminist, subaltern and digital lens in Indian cities.

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