Chapter 14
Conclusions Conceptualising Locational, Relational and Virtual Realities

NezHapi Dellé Odeleye and Lakshmi Priya Rajendran

Abstract The disciplines of architecture, media studies, urban design, city planning, lighting design, digital design, urban studies, and art represented here, apply a range of paradigms and methods in addressing media-related phenomena. Such diversity makes a critical synthesis both stimulating from a perspective of reflecting on some relatively unfamiliar approaches, and also challenging due to the disparate discourses they each represent. This chapter undertakes analytical summaries of contributions within the three sections, with section overviews synthesising conclusions through a number of key themes arising from the chapter findings and propositions—First, these include the multiple roles that locative media interfaces (both interactive and passive forms) seem to play in individuals' interactions with a range of places at varying scales, and their perceptions of its value. The considerations of how 'framing'—of observation, and of contents—effects either more specific or habitual adoption of these media also recurred in a number of guises. Secondly, in terms of how social-media interfaces with spatial representations, the findings and propositions advanced here, also suggest the potential benefits of gamification interventions and urban props in public spaces, and their required locational /design limitations for effectiveness. An exploration of the level of social interactions facilitated in spaces, used the medium of media screens yielding counter-intuitive results about static versus dynamic locations. The outcomes of multiple applications and platforms in a campus context, appear to be possible outliers in considering both locative and social media (within specific time frames). This was followed by critique of prevailing top-down, data-driven approaches to the 'smart city' in terms of the data neutrality, representational agency and scale problems they have engendered, highlighting the limitation of this dominant narrative. In contrasting these with emerging design counter-practices, opportunities for re-purposing ('hacking') such data platforms for a more localised, collective, inclusive, and bottom-up, 'smart-citizenship' were posed. Thirdly, continuing the focus on technology-mediated public space interventions, the dangers of

N. D. Odeleye (✉) · L. P. Rajendran
Anglia Ruskin University, Chelmsford, UK
e-mail: delle.odeleye@aru.ac.uk

L. P. Rajendran
e-mail: lakshmi.rajendran@aru.ac.uk

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big-data analyses and practices potentially reinforcing existing spatial regimes and inequalities (and creating new ones) was highlighted. In contrast, a compelling case was made for knowledge-based geopolitics 'noopolitics' as a driver of spatial networks—with migrant camps & urban informalities posited as 'counter-laboratories' of future liveability. Place as context for lifestyles was highlighted in the demonstration of how brand operators and developments they anchor, use luxury to characterise new identities in the case of Milan. And finally, if as has often been proposed, media trends are leading to us becoming 'more-than-human', the issue posed is whether our cities need to become 'more-than-urban' in order to usher-in true sustainability—And if so, how might designers help to achieve the needed forms and dynamic actions entailed? We develop concept images visualising these key themes.

Keywords Locative · Social-media · Place · Platforms · Mediation · Social interactions · Smart-cities

14.1 Introduction

The objectives of this chapter are to discuss the literature reviews, case studies, propositions and findings from chapter contributions in each of the preceding sections in turn, then to provide reflective syntheses on their key thematic outcomes—outlining 'conceptual images of these respectively. This leads onto an overview of what any commonalities between these images appear to be indicating about current-mediated realities.

14.2 Sectional Findings and Thematic Propositions

14.2.1 Section A. Placing Media: Locative Interfaces

Through their critiques of various place discourses, Fazel and Rajendran argued in Chap. 2 that media technologies are now an integral aspect of place-navigating and place-filtering assemblages. They view an ongoing process of spatial hybridisation as enhancing the communicative affordances offered by physical and virtual spaces. And they proposed that defining frames of observation are key to whether, and when, locative technologies (such as 4-square) could be either transcendental of space—or could be formative spheres for everyday practices. Media tools and practices from this perspective, thereby oscillate between *constituting* the spheres of place assemblages on one hand, and interacting with relational frames of reference to *transcend* spaces on the other hand.

This theme of how locative media not only mediate interactions, but also reshape environmental perception and social interactions continued in Saker's Chap. 3 discussion. His interpretive findings of user experiences, indicate that this media also

enables personalisation of urban place experiences—through digital 'inscription'. Earlier and more recent forms of locative media including hybrid reality games (HGR) were found to encourage users to explore new routes, better appreciate the existing and to inscribe places, or indicatively through personalisation to abstract them.[1]

In his Chap. 4 exploration of responsive light architectures, Kulkani highlighted a very different form of 'taken-for-granted' technology increasingly influencing lived experiences of the city. He notes that nocturnal urban lighting for nightscapes of the ubiquitous 'evening economy'[2] are shifting our gaze up from smartphones to the fabric of the temporal city. His focus on three layers; streetlights, feature-lighting and network of light systems, as well as 'media facades' serving as screens replicating our now familiar laptop and games screens—outdoors—are symptomatic of this trend.

Through the theatrical and cinematic concept and practice of 'mise-en-scene, which places elements for their productions, 'into/onto' the stage or visual frame, Kulkani posits urban lighting as a media interface—given its assemblages of light layers that comprise a luminous body (siphonophore) or 'multi-celled', co-dependent colony of elements (zooids)—*moving through time, but not space* highlighting in his view, the temporal dimension of such experiences.

These are epitomised in large-array external media surfaces that are becoming larger and more intensely illuminated with diminishing costs. Kulkarni presents them as potential forms of 'Total surface signage', now replacing facades with embedded responsive light-tech. He contends that their effect will be forms of '*phototropia*'—relating such productions of 'reality effects' (i.e. temporal dampening in the city, extending daylight hours)—as suppressions of attempts to withdraw from those effects—a 'ubiquitous lighting' that no one could escape. His view is that such a pervasive 'immersive experience' of advertising and ubiquitous night-time virtual/augmented reality spectacle, seeking naturalisation and fixity would ensure—in this future Foucaltian 'lawscape'—that resistance becomes futile.

Continuing this theme of light media effects in architecture, Lovett's use of moving image projections onto building surfaces in Chap. 5, could be read as a form of locative media curation[3] of the spaces they adjoine in terms of engendering enhanced activity within, and experience of, architectural space. She uses these media installations to explore alternative habitual, haptic and locational relationships with architectural interiors and exteriors as well as its transitional zones, such as openings, stairs and corridors. Her use of lighting installations as cinematic media to heighten

[1] *However Jan Gehl's studies in urban design since the 1970 s, identified a number of environmental conditions for varying intensities of use in publicly accessible spaces, which could help to contextualise Saker's findings in relation to a possible further effect of locative media on such usage*; Jan Gehl, *Life Between Buildings: Using Public Space*; (London: Island Press, 2011); Jan Gehl, *Cities for People* (Washington, london: Island press, 2010).

[2] *A key element of cities' cultural strategies Thomas A Hutton, Cities and the Cultural Economy (Routledge, 2015).*

[3] Michael Bhaskar, *Curation: The Power of Selection in a World of Excess* (London: Piatkus, 2017) examined how the practices of museum curation/'selection', now permeate a wide range of creative and media fields.

place experiences acts by representing overlooked human relations with spaces the media define or enclose in places, though unfortunately, user views and responses were not presented.

14.2.2 Section A: Thematic Reflections

Contributions in this section have explored how forms of locative media technologies, and media interfaces—adapted and used in the context of everyday life practices—have implications for individual spatial relationships within urban contexts. They have also highlighted the varied and increasing use of media technology and lighting media, as locative interfaces—deployed with relational perceptual frames or practice-formative spheres (Faizel & Rajendran); with places in the environment (Saker); with architectural spaces (Lovett); and with the city—not just in spatial terms, *but temporally as well*, through movement, and through informal and dramatic, staged events (Kulkani). This is within the context of the cultural strategies of many cities now being predicated upon the notion of the '24 h city', with a vital and vibrant evening economy considered a key criterion for enhancing urban liveability and visitor attractions.[4]

Beyond the filtering and enhanced navigation of physical spaces, the use of locative technology is emerging as a key contributor to enhanced physical and virtual mobilities, both within and beyond the familiar spaces people inhabit and other spaces they traverse. One might say in relation to locative media influences that; as place is mediated, media are emplaced, and as places make media, media makes place.[5]

As extended, and new platforms for information, communication, for mapping, navigation and making sense of urban environments, locative media are reconfiguring the relationship of users with their experience of architectural spaces, and with the structures and facades that define the public realm of the city. And in so doing, technology is increasingly foregrounding the temporal domain of movement flows and a need to better understand how it connects with our awareness of the spatial—to shape our senses of place, and engagement with localities.

One of the key implications of locative media for this perspective is for our understanding of sensory experience.[6] The notion that our embodied conscious awareness and senses (primarily visual and auditory) and ultimately, the haptic as well—are not only 'physically embodied', but also have temporalised, 'virtual extensions' or

[4]Simona Cavallini et al., "How to Design Cultural Development Strategies to Boost Local and Regional Competitiveness and Comparative Advantage: Overview of Good Practices," Commission for Social Policy, Education, Employment, Research and Culture (Brussels: European Union: European Committee of the Regions, 2018).

[5]Following on from the notion that; *"As place is sensed, senses are placed; as places make sense, senses make place" Keith H. Basso and Steven Feld, Senses of Place (Santa Fe, N.M.: School of American Research Press, 1996).*

[6]Rodaway, P. (2002). *Sensuous geographies: Body, sense and place*. London: Routledge.

complements.[7] And that these can be encouraged to operate in conditioned ways in relation to virtualised spaces—such as the way for instance, in which game designers draw upon, and enact, the principles of physical place-making in the 'real world' to make their virtual environments more experientially immersive for our imagined senses,[8] as simply indicated in our first concept image below (Fig. 14.1).

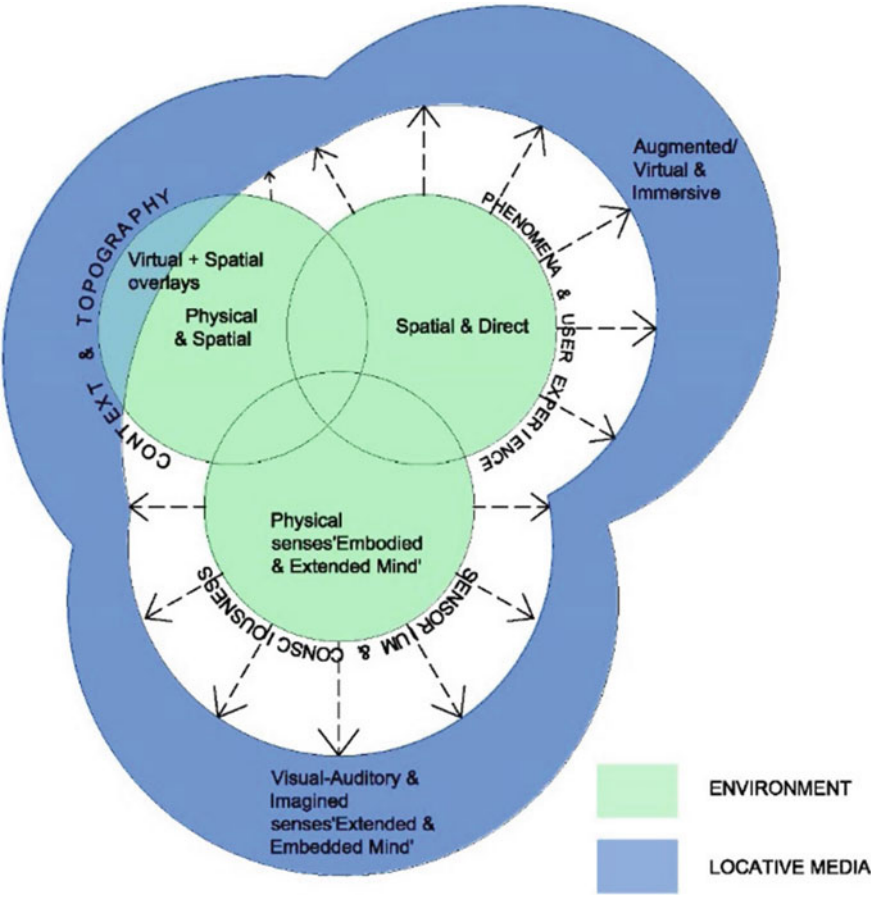

Fig. 14.1 *'Concept Image 1': Space, Perception & Locative Mediations. (n.b: green is spatial & blue, the virtual). Nezhapi Odeleye & Lakshmi Rajendran*

[7] Andy Clark and David Chalmers, "The Extended Mind," Analysis 58, 58, no. 1 (1998): 7–19, The 'extended mind' thesis posits some thought processes involve deploying external objects/structures, which become an extension of cognition, thus, the mind's operation is not confined to the brain, or body, but extends into the environment.

[8] Ricardo Álvarez and Fábio Duarte, "Spatial Design and Placemaking: Learning From Video Games," Space and Culture 21 (SAGE Publications Inc, August 1, 2018), 208–32. suggesting spatial designers could in turn learn from the participatory and story practices of game designers.

14.2.3 Section B. Spatial Representations: Social Interfaces

Moving beyond the individual towards the more social uses of media—Dyer's study (in Chap. 6)—presented findings about the range of location-based social network (LBSN) applications and platforms used to support new students, before and during their transitions to university. He used these applications in analysing the way higher education environments are experienced as socio-academic and physical spaces. The platforms ranged from Facebook (for socialising) and group chats (for peer-learning), to Twitter—the latter being seen as having greater informative and educational value.

His study reiterated new students' higher expectations of university 'as a service'—ranging from their search for value-for-money, given high UK tuition fees–to the expected availability of media-tech convenience, constant contact hours with tutors, and personalisation capabilities. This arises from the now neo-liberal, marketplace-led context of UK higher education—a context which drives the need for more students to work, rendering their physical presence on campus, 'a luxury'—with their university experience now seen in transactional terms.

Social media in this context, seemingly bridges spatial absence with virtual access to learning, facilities and inclusive peer interactions. Media-tech is thereby enmeshed in the transition to university, in access to the resources offered, and to other students. However, these media applications and platforms, also define and constrain students' space for agency (arising from cultural /racial profiling tendencies) with implications for widening HEI participation goals.

Dyer's findings thereby critically highlights the benefits and risks inherent in how experiences from such platform-mediated representations, help to shape students' individual and cohort identities within their new academic and wider cultural contexts. Consequently, such LBSM modulates their 'affordances' for learning and socialisation at university.

Hilla & Efrat's explorative Chap. 7 study of the relations between public media screens, the play opportunities they afford, within particular urban settings—and the level of social interactions facilitated, in virtual, 'third-spaces', adopted a complex interventionist approach. Their study found strong correlations between the take-up of play, level of verbal communication, and location type—with static locations (perhaps counter-intuitively) being more effective than dynamic locations. This highlights the importance of context, and has potentially very useful implications for the location and design of such urban game props in city planning interventions.

The roles played by location-based social network (LBSN) platforms in urban space design were critiqued in Cameron's Chap. 8 analyses of the trends in consumption patterns and practices facilitated by digital place-making. His exploration of technology-mediated public space interventions and discourse management, revealed themes of co-option of local narratives, given the level of public/private investment

in 'activating' redeveloped public spaces (via community-based or non-profit curators of public art, other creative installations, and/or urban event organisers)[9] to the service of global, corporate interests.

The way such mediated public spaces in the West, particularly exploit LBSNs user data to direct public space design for commercial purposes, in his view, contradicts academic discourse about the interactive, community engagement effects of LBSNs. This is problematic, given that proprietary interests regulating access to spaces are no longer just landowners, but now include media-platform and network owners deploying comparable structures and interfaces. Control over access to physical and virtual sites is maintained by a 'hidden geography' of their relationships. Cameron highlights a centralising tendency of both spatial and digital controls to ensure consumption and associated values of rents /advertising. And he argues this is evident in subtle urban design interventions mediating control of behaviour in public spaces for private, commercial interests. This has implications for how data is used to reshape urban discourse in target populations.

Cameron's contention is that urban designers need to reframe their understandings about the nature of public space and its relation to cultural production—by realising that Habermas' idealised 'public sphere[10]' is no longer bound by physical space. And it emerges instead from complex relations in conflictual sites (rather than being intrinsic to specific places). This perspective in his view, indicates that cultural production (including the media technologies facilitating this) needs to be understood as a *means* of leading and *shaping* public space, rather than being merely located *within* it.

As an assemblage of sensor networks, digital technology and interactive mobile devices and apps, the digital infrastructures underlying the 'Smart City' concept and its corporate-produced dashboards, are the focus of Chap. 9's interrogation by Paredes-Maldonado of their actual and potential urban policy influences. In particular, the big data from locative platforms, social-media feeds and transport, are the bases for his *critique of their policy and decision-making influence in urban governance.* He problematizes their assumed objective spatial representations, in terms of data neutrality, and the top-down approaches to optimisation-based, interacting 'flows' of information, energy, materials and service delivery they engender, personalisation and sustainability rhetoric notwithstanding—thus highlighting the limitations of this dominant narrative.

In contrasting the spatial representations and practices of these smart network 'meta-infrastructures'—with existing forms of collective interventions and emerging

[9] *In B. Cannon Ivers, Staging Urban Landscapes, The Activation and Curation of Flexible Public Spaces (Berlin, Basel: Birkhäuser Verlag, 2018), he and his contributors demonstrate the extent of this recent practice in urban design, using international case studies.*

[10] *Termed 'the public realm' in urban design discourse and practice* O'Sullivan, N. (2009). The concept of the public realm. *Critical Review of International Social and Political Philosophy, 12*(2), 117–131. See also *Jan Gehl, Cities for People (Washington, london: Island press, 2010) and* Kevin Lynch, Tridib Banerjee, and Michael Southworth, *City Sense and City Design: Writings & Projects of Kevin Lynch*, The MIT Press (Cambridge, Massachusetts: The MIT Press, 1995).

design counter-practices—Maldonado poses opportunities for re-purposing ('hacking') of big-data selections, organisation and interpretations from such platforms—for a re-constituted, creative, and bottom-up, 'smart-citizenship'. These and other forms of 'digital dissent', he suggests, resituate the focus of spatial actions and representations at finer-grained, citizen-level narratives in the public realm and urban commons—rather than at the coarser-grain of a city's assembled entirety.

14.2.4 Section B: Thematic Reflections

Through the explorations and studies of LBSNs in this section, a number of recurring themes emerge as being seemingly central to prevailing social interfaces with media technology. The first is their ability to focus social interactions around existing and potential opportunities within particular spaces. This ability was demonstrated in examples (such as university campuses in Dyer's study, and Hilla & Efrat's interactive screens in residential locations). It was also featured in varying dynamics across an entire urban area (Maldonado's smart city) and around issues within places of local interest (Cameron's public space interventions).

Second, both Cameron and Maldonado also analysed the deployment of such media by land-owning, corporate and state entities in shaping discourse about public spaces—by either appropriating local historical character narratives to promote market-led 'redevelopment and 'regeneration' interventions—or by framing new big-data-led, strategic mappings and narratives of an entire city to emphasise its global resource 'flows'—which by seeming to be scientific (and thus 'objective') representations, have a totalising effect on prior, more finer-grained, localised discourses. This recalls an earlier critique of digital-design tool limitations which emphasised the need for designers to make; '*… a critical distinction between lived-space and geometric space, between the experience of place and the geometric simulations which are a means to its effective transformation*'.[11]

Third, Dyer, Cameron and Maldonado's findings highlight the way in which media platforms now extend private ownerships to virtual spaces, further influencing access to the public commons through these ephemeral 'plot'/'lot'/web-'site' holdings, particularly as they highlight that individual and group profiling through LBSNs maintains or reinforces the stereotyping or marginalisation of minority groups and disenfranchised others considered as being either at odds with state or corporate interests, or as 'not belonging' in certain spaces (e.g. a university campus).

And fourth, their analyses show how activists and local communities, are also responding by adapting their traditional resistance approaches to the new opportunities provided by social interfaces in order to promote their own place-based, or 'community of interest', perspectives with LBSNs dissent practices—And how such groups are learning to deploy their own counter-mapping exercises and narratives

[11] Kim Dovey, *Framing Places: Mediating Power in Built Form*, Architext Series (London: Routledge, 1999).

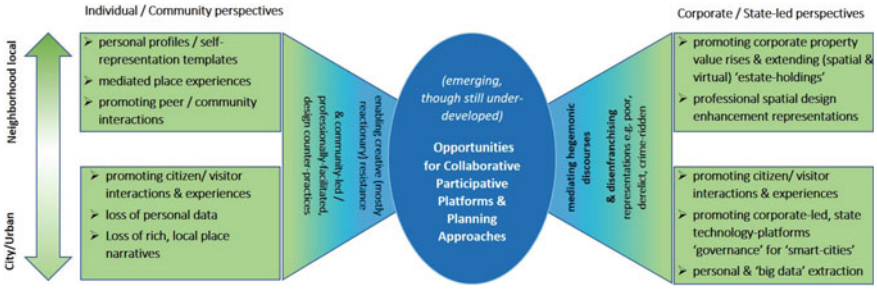

Fig. 14.2 *'Concept Image 2'-Actual & Potential Uses of LBSNs interfaces. (n.b: green is spatial & blue, virtual). Nezhapi Odeleye & Lakshmi Rajendran. (Adapted from descriptions in Dyer; Setton, Eizenberg; Cameron, & Paredes, 2019)*

in organising opposition to neo-liberal appropriations of space, labour and time, represented as optimised 'resource flows'.

Together, these themes suggest ways in which the *forms of representations* enabled by differing media interfaces and scales—those valorised by real and virtual estate owners, on one hand, and by local communities on the other—are reshaping the media-led discourses employed by extant interests—influencing individual and group identities in relation to urban space and place management, as well as social interactions. See our depiction of these themes in concept image two (Fig. 14.2).

14.2.5 Section C. Spatial Cultures: Mediated Identities

The explorations of technology-mediated, public space interventions within accelerating urbanisation processes, continued within Erikson's critical analyses in Chap. 10, of LBSNs role in facilitating the emerging nature of cities as '*big-data-mining*' sites, with ecosystems enabling digital and spatial regimes that perpetuate injustices (led by capital-based, growth imperatives). His narrative highlighted the notions and types of agency now possible, from the new knowledge and spatial practices these media technologies are generating.

A key aspect is the often taken-for-granted, but value-laden power of maps—further heightened by digital, 'real-time' mapping for instance, of crime, public health or disease in places and their peoples. Such profiling he argues, entrenches fear politics and foregrounds institutionalised, stereotypical responses to section of cities and their problematized, resident populations. By examining the role of organisations within the big-data ecosystems, and the privacy of personal data extracted through user smartphone apps, mixed with inherent bias issues in data selection, representation and decision-making algorithms, Erikson was able to probe the effect of geographical applications in data-driven mapping visualisations of neighbourhood profiling.

These he argues, highlight and marginalise, spatially-bound communities perceived by state (and related-corporate) entities, to be deviant or a threat, supporting

'negative institutionalised' oppression. Such mediated, institutionalisation of urban fear is posited by Erikson as serving[12] to promote in majority populations, anxiety and insecurity-inducing perceptions towards minorities, immigrants and people of colour. And these may serve to legitimise place-based, 'predictive policing' (a form of politically-led, premediation of future events).

There is consequently in his view, a danger of big-data analyses and practices, reinforcing existing spatial regimes, injustices and potentially creating new ones. Given their highly racialised and complex dynamics, contemporary cities now embody what Erikson refers to as; 'the urban paradox'—where on the one hand, they are spaces of top-down, militarised inequalities—and on the other hand, also locations of bottom-up resistance and subversion of dominant, capital-led, 'urban regeneration' rhetoric. However, the latter response increasingly relies on 'digital trans-urbanism'—cutting across the earlier mentioned, socio-spatial regimes, and using citizen-sourcing of LBSNs methods (separated from corporate interests) to facilitate ongoing social movements to 'reclaim public space'.

It was also proposed in Chap. 11 by Lopez-Marcos, that the geo-politics of knowledge (noopolitics) have been a significant spatial network-generator.[13] The role of increased migration challenges in her perspective, both in terms of placings and communications, has been to blur anew, an EU identity that has always been in flux. She demonstrates relations between populations in various urban refugee and migrant camp examples that embody the use of 'counter-laboratories' for urban separation and removals. Marcos' thereby aims to extend Agabien's original (2008) counter-laboratory concept in which spaces emulating enclave conditions, such as ghettos, informal districts, etc. serve as unwitting 'experimental-testbeds' of future habitability limits—in which noopolitical strategies (including biometric databases, and media propaganda/debate) foster increasing levels of precarity in the inhabitants from both formal and informal processes. She likens these counter-laboratories as being the reverse of Lefebvre's anti-hegemonic 'counterspace' (1991). Her examples of inhabitants resisting the bases of their counter-laboratories as human storage facilities (located away from urban opportunities and media attention)—also interestingly involves local activists and residents in some countries, 'hacking' or repurposing various monitoring maps, informational tools and creative projects—to humanise and offer migrants access to city spaces, facilities and social infrastructure, from which they are otherwise excluded.

Shifting to the economics and spatiality of identity production, the focus of Mario Paris' Chap. 12 study—evidences how brand operators and the developments they anchor, use luxury to characterise new identities in the city of Milan, although the

[12] *In parallel it is suggested, with a 'pre-mediation' of future events by sections of the mass/broadcast media.*

[13] *Noopolitics is thereby posed by Marcos, as strategies that encompass and produce, spatial transformations (on top of its presumed) 'soft-mediation' effects.*

meta-processes of mediation[14] and mediatisation[15] he examines are not unique to that city. By tracking the revenues, geographies and spatial practices of the three main luxury goods companies in Milan, he interrogates the multiple dimensions of the concept and how it is represented in aspirational lifestyles, through a cross-cultural field of meaning linking values and actors to a global industry of brand producers and developers. Their application of the luxury aspirational concept effects the transformation of identities in parts of the city and across a network of prestigious cities, characterised by exclusiveness and space colonisation—using high-profile media technology and events, e.g. fashion week on city screens and dramatic showrooms /experimental shops.

Mario demonstrates that through the resources they command, using key parts of the city as their canvas, luxury-led developments catalyse urban processes of segregation, gentrification and appropriation of value-laden, heritage spaces—consequently affecting not just luxury goods customers, but everyone else as well—both in terms of their daily practices, but also their image of the city. And that this is facilitated in large part, not only by the spatial representation platforms employed by built environment professionals in producing and promoting these spaces—but also by the range of locative media /location-based social networks (LBSNs) other social networks, as well as the print and broadcast media campaigns of the luxury developers and brand operators. The effect of such 'mediatisation', Paris argues, is to reduce the perception of Milan's identity, into a simplified set of iconc images, using a fragment of this identity to represent the whole system.

Finally, illustrating the notion of life imitating art, and drawing upon Theodore Sturgeon's classic 1953 speculative-fiction character,[16] Moujan's Chap. 13 proposition takes his notion of flawed multi-individual constituents nonetheless, comprising a whole, 'supra-human' ('more than-human') evolutionary-enhanced gestalt entity—and extends it up to the scale of human settlements. The cited context being our need for alternative, non-anthropocentric routes to sustainability—renewing interest in the implications of Sturgeon's 'homo-gestalt' for urban and media-tech researchers. Her analysis of its applicability in urban spaces as 'Umwelts' (surrounding worlds) emerging from complex biological, social, technical and spatial interactions—suggests a potential for urban augmentation.

What is interesting and useful about this, is that from her analysis, the Smart city paradigm rests on a blind-spot of theoretical performance which currently is, and will remain, just out of reach of actual performance and limits (the performance 'gap'). She therefore argues it is not the tech-devices, features, actors or their attributes etc.

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[14] *According to Stig Prof Hjarvard, The Mediatization of Culture and Society (London: Routledge, 2013), kindle 560-563) "Mediation describes the… act of communication by means of a type of media in a specific social context…" (cited in Ruddock, 2017, 83).*

[15] *Mediatisation theory by Hjarvard Ibid. media shapes and frames process of discourse to transform communication and society, although this is contented. See also; Andreas Hepp, Stig Hjarvard, and Knut Lundby, "Mediatization: Theorizing the Interplay between Media, Culture and Society," Media, culture & society 37, 37, no. 2 (2015): 314–24.*

[16] Theodore Sturgeon, *More Than Human* (Farrar, Straus and Giroux, 1953).

that are themselves important, but rather it is the *forces* they embody and contribute, which could synergistically generate Sturgeon's augmented entity.

A further blind-spot is posited as being the increasingly acknowledged partiality of a human-centric approach to sustainability—at the expense of non-human actors and features likely crucial for achieving true sustainable development. Consequently, Moujan contends that mere 'diversity' is inadequate, and neither technological nor human-centred stances are sufficient to achieve sustainable urban augmentation. And, the 'more-than-urban' should trigger *individuation processes* that serve to interlink multiple dimensions (bio-/tech-/spatial/historical/political) of cities.[17]

As an alternative to the prevailing perspectives of digital technologies, as merely being tools using data as information, juxtaposing them simplistically, she suggests instead—in part through a set of small interventions, using city bench installations as attractors—that we ought to perceive public spaces as '*force-fields*' for entangled relationships, where data is in tension between 'more-than-human' components—losing their individual attributes to become a whole. This process, it is proposed, triggers '*individuation*' processes, interweaving and linking multiple dimensions (spatial, biological, historic and political). And they call for urban epistemologies that recognise the sensory and experiential, including the *ways of knowing of other species.*[18]

Moujan adapts Suchman's concept of 'situated actions' as ad-hoc responses to others and to situational contingencies.[19] This concept was based on a key identified limitation of machines (i.e. their disconnection from a living milieu)—an insensitivity precluding nuanced responses, despite programmed reliability. We can either (in Suchman's view) aim to sensitise them via bigger data and AI (akin to the European navigational approach of 'following a plan')—or we can design structures and systems enabling situated actions (akin to the indigenous Trukese society's 'objective-based' method)—adaptive steering according to environmental circumstances.

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[17] [Darlan Meacham, "How Low Can You Go? Bioenactivism, Cognitive Biology and Umwelt Ontology," Humana.Mente Journal of Philosophical Studies 9, 9, no. 31 (2016): 73–95] *also draws upon protein behaviour studies of* [Jacques Monod, *On Chance and Necessity*, ed. Francisco Jose Ayala and Theodosius Dobzhansky, Studies in the Philosophy of Biology: Reduction and Related Problems (London: Macmillan Education UK, 1974), 357–75] *and* [L. Kováč, "Fundamental Principles of Cognitive Biology," 6, 2000, 51]—*as well as* [*Ladislav Kovác, "Life, Chemistry and Cognition: Conceiving Life as Knowledge Embodied in Sentient Chemical Systems Might Provide New Insights into the Nature of Cognition," EMBO Reports 7, 7, no. 6 (June 1, 2006): 562–66] in highlighting ongoing attempts (such as that by* [Ezequiel Di Paolo, "Extended Life," Topoi 28, 28, no. 1 (2009): 9–21] and [Paulo De Jesus, "From Enactive Phenomenology to Biosemiotic Enactivism," Adaptive Behavior 24, 24, no. 2 (April 1, 2016): 130–46] *to extend the applicability of 'bio-enactive' ideas across varying phylogenetic levels of biological scale—and even beyond, to include artificial systems, in more recent 'non-species-specific', 'non-bio-chauvinist' perspectives of cognition.*

[18] After Shannon Mattern, "Interfacing Urban Intelligence," Code and the City 49, 49 (2016): 60.

[19] After Lucy A. Suchman, *Plans and Situated Actions: The Problem of Human-Machine Communication* (New York, NY, USA: Cambridge University Press, 1987) cited in Moujan Chap. 13.

A key barrier to actualising this conceptual approach, she argues, is the Western social-science reliance on prose language, though the physical sciences rationality and equations-based reliance are also deemed inadequate. The key in her view, are '*forms*'—using these to embody /convey the systems of *carrier forces, tensions and multiplicities* that make sense, and *generate a dynamic construction of wholes.*[20] This would consider forms not as solutions, nor responses to aims, nor simply as aesthetics—but rather, as 'problem-reframing', and 'world-polarising' tools, revealing new insights and meanings. Thus, the prospect she offers, is the importance of setting the scene for *entanglement*, and structuring a field of dynamic, intertwinement—enabling a collective 'individuation' process that is creative.

Moujan recommends that designers of a 'more-than-urban' city, need to '*go back to simpler, iconic meanings*'[21]—as these transcend human cognition—being shared by the wider living milieu. This leads to her stated need for *non-modern ontologies,*[22] suggesting theory is not enough for realising the augmented city. Consequently the situated knowledge, situated practice, and situated actions of non-modern ontologies are posited as facilitating a reconfiguration of practice-generated knowledges (but not limited to these) enabling researchers to learn from others and from the world, as well as from texts. She argues , such openness could help realise the inter-species communication required by the 'more-than-urban' city –going beyond a tweaked urbanism, dealing with underlying *causes and not just effects* (such as empowerment, biodiversity, etc.).

14.2.6 Section C: Thematic Reflections

The themes from this section all highlight aspects of an emerging futurity, in terms of intensifying urban *processes*, mediated *spaces* and spatial *forms* all implicated in the ongoing re-negotiations of urban identities.

On *process*, all the contributors explored the extent of varying modes of urban mediatisation—from the urban data quarries of the smart city (Erikson) and informal city districts, to counter-laboratory camps within cities and/or on their periphery (Lopez-Marcos). And ranging even further, from the privileged luxury-venue-making in Milan and similarly exclusive designer-branded districts featuring events of consumptive excess (Paris)—to the theorised integrative processes needed to trigger a future 'trans-species' augmented 'trans-urbanism' (Moujan).

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[20] See Kevin Lynch, *Good City Form*, The MIT Press (Cambridge, Massachusetts: The MIT Press, 1984), *which set out his criteria for form-based theory and policy*.

[21] After Eduardo Kohn, *How Forests Think: Toward an Anthropology beyond the Human* (Univ of California Press, 2013) cited in Moujan, Chap.13.

[22] After Andrew Pickering, *The Cybernetic Brain: Sketches of Another* Future (University of Chicago Press, 2010) cited in Moujan, Ibid.

Abstract, mediated *spaces* at the global level, were conceptualised by the noopolitics examined by Lopez-Marcos, related to the emerging concept of a knowledge-based 'noosphere'—a further proposed level to that of the existing geo-/bio-spheres—and preceding a more recent 'infosphere'—theorised as a 'planet-wide mental realm' linking media with cyberspace.[23] Within this conception, the myriad communication devices (cable, satellite, internet, mobiles, print, and broadcast) which anchor the infosphere to physical reality, also cumulatively multiply the effects via their hyper-connectivity—and deploy interactive media, to extract value-enabled content from unpaid web 2.0 crowd-sourced, contributors.

In terms of *form*, we see this as defined by a set of criteria following Goethe's original morphological focus on the appearance, function and structure of organic entities.[24] The subsequent schools of morphology in linguistics, geology and other fields have specific definitions of form in their domains. within geography and the built environment disciplines of architecture, urban planning and urban design 'urban morphology' has made progress in articulating its relevance to historical, urban-structure and sociological analyses of morphogenesis—translating these from urban 'character' and 'growth'[25] analyses into more recent, prescriptive approaches to form-based, urban design-coding.[26]

Issues of mediated form arose from types of representation, infrastructural dis-/organisation (counter-laboratories), and patterns of location/distributions of exclusive developments for luxury consumption across the city (Milan). Intriguingly the constitution of a supra-urban, sustainable city form, was hypothesised as comprised of flawed human and bio-diverse individuated components. This was proposed as undergoing a process of situated, adaptive actions to induce a 'more-than-urban' wholism—And is predicated upon *form* and non-western ontological perspectives, being key to resolving mediating forces.

These propositions echo aspects of a number of theoretical concepts, despite some differences in detail—e.g. Husserl's inter-subjectivity; Latour's actor-network theory, and Foucault's bio-politics.[27] So how are mediated process, space and form dynamics seeming to influence the interactions of mainstream and minority groups, including campus students, people of colour, gendered, and local communities within

[23] After *John Arquilla and David Ronfeldt, The Emergence of Noopolitik: Toward An American Information Strategy* (RAND Corporation, 1999).

[24] Robert Bloch, "Goethe, Idealistic Morphology, and Science," American Scientist 40, 40, no. 2 (1952): 313–22. And F R Amrine, Francis J Zucker, and Harvey Wheeler, *Goethe and the Sciences: A Reappraisal*, vol. 97, 97 (Springer Science & Business Media, 2012), vol. 97.

[25] JWR Whitehand, "The Basis for an Historico-Geographical Theory of Urban Form," Transactions of the Institute of British Geographers, 1977, 400–416.

[26] Notably through New Urbanism's *Smartcode*' in the US, and its informal *'Design Code'* adaptations in the UK.

[27] After Edward Husserl, *Cartesian Meditations* (Dordrecht: Kluwer, 1988). Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory (Clarendon Lectures in Management Studies)* (Oxford University Press, USA, 2007) and Michel Foucault, "Society Must Be Defended," Picador, 2003, 242–243.

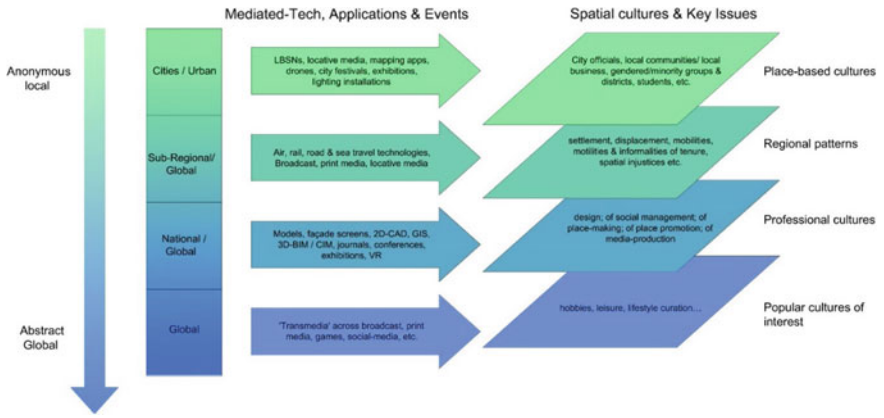

Fig. 14.3 *'Concept Image 3'—Media & Spatial-Cultures. (n.b: green is spatial & blue, virtual). Nezhapi Odeleye & Lakshmi Rajendran*

broad emerging trends? The second concept image (Fig. 14.2) had sketched a summary of neighbourhood to city-level representational discourses. However, urban cultures have also become more dynamic and fluid due to what Petcu[28] refers to as 'extra-territorialisation' ('anonymous local' and 'abstract global')—sites where identities are formed, reconstituted and evolved with no clear reference to any territorial boundaries, though variously operating within and across scales, as reflected in our third concept image below (Fig. 14.3). One may speculate about the extent to which the layers depicted might 'upscale' emerging notions of 'cognitive biology' into a 'cognitive sociology'—but more on this later.

14.3 Overview: Mediated Realities

Taken together, the three concept images help visualise a scale transition and layered coexistence—ranging from a focus on individual experiential outcomes grounded in, and extending the human sensorium (or selected parts of it) and how locative media aims to facilitate place-related 'sense-making'—towards LBSN media tools and platforms aiming to extend the capabilities of groups to 'make-sense' of their neighbourhoods /public spaces—and serving to thereby enable capabilities to interact, represent and communicate, shared local narratives of 'the public good' in their localities (in opposition to, or countering external perspectives of legitimising narratives for proposed changes)—culminating in media platforms shaping city- regional

[28]Radu Petcu, "Government Surveillance, Neoliberal Citizenship, and Social Identity," Review of Contemporary Philosophy, no. 14 (2015): 126–31. And Radu Petcu, "Order and Change in International Politics," Geopolitics, History, and International Relations 5, 5, no. 2 (2013): 82–87.

opportunities & global mobilities through representations that serve to include, control access to services &/or exclude target populations. But how might such trends influence identity in these changing places going forward? This is explored in the final Chapter.

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NezHapi Dellé Odeleye is an urbanist. She has worked as an architect, and planner. Her Ph.D. at Oxford Brookes, explored the implications for contemporary urban design, of 'spatiotemporal' knowledge-bases within the cultural design and planning of indigenous settlements. She has taught architecture, planning and urban design at Anglia Ruskin University. Further research interests include sustainable design and wellbeing in places, and the agency of urban planners.

Lakshmi Priya Rajendran is an architect and urbanist. She completed her Ph.D. in Sheffield School of Architecture and is currently a senior research fellow at Anglia Ruskin University. Her teaching and research interests deal with urban and cultural studies, critical social and digital media, spatial representation and practice, identity negotiations, and cultural encounters in contemporary cities. She is also interested in an interdisciplinary understanding of social, spatial, temporal and material practices in cities.