# Chapter 4
# Beyond the Network Effect: Towards an Alternative Understanding of Global Urban Organizations

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**Abstract** Global organizations providing network relations for cities are bourgeoning. Organizations such as Metropolis, UN-Habitat, ICLEI – Local Governments for Sustainability, the Global Compact Cities Programme, and the C40, as well as City-to-City arrangements, have become increasingly important to managing urban networking and global urban governance. The growing literature on global urban networking tends to assume that networking is bringing positive outcomes for urban development and that increased connectivity is making a significant difference to enhancing political engagement in itself. In practice, there is considerable interchange happening, and globally accessible websites and global newsletters outlining the latest and best practices are omnipresent. However, to what extent networked relations provide direct guidance for governance, let alone change existing paradigms, remains unclear. This chapter explores the added value of networked relations, asking more specifically how different forms of networking and various forms of knowledge exchange are acknowledged in efficaciously enhancing work in urban sustainability.

**Keywords** Global urban networks • Policy mobilities • Knowledge • Urban sustainability • Embodied exchange

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## 4.1 Introduction

Having covered many urban governance theories and practices in the previous chapters, this chapter explores the role of networked relations in responding to urban sustainability questions. Increased attention to the role of various networks in urban governance reflects changes in governance thinking and practices over the past two decades (see Chaps. 2 and 4). A key shift has been towards treating networks as the preferred mode to realize better governance (see Chap. 3). Such network arrangements consist of a "complex set of relationships between different public bodies, private, voluntary and community organisations" (Blanco 2013: 278). Networks operate at the city level, but increasingly also between cities and across multiple scales. Globalization facilitates networks between globally active cities as part of a "world city network making process in which the balance between inter-state and supra-state plus trans-state activities is appreciably tilting away from the former" (Taylor 2005: 705). Overlapping and intersecting flows of ideas, knowledge, people, money, transactions and goods not only link major cities and major city-regions, but increasingly also small towns and remote villages (see Sect. 5.3.2). These flows and networks are extended and intensified with expanding global circuits of power: contemporary forms of networking and globalization are developing together.

Networks are expected to be efficient and effective forms of governance, and networking is therefore presented as the essential basis of successful political engagement (see Chap. 3, Rhodes 2007; Sørensen and Torfing 2007; Klijn and Koppenjan 2012; Lecy et al. 2014). More broadly, 'networking' has become the dominant term for social relations in our time. We are supposedly networking all the time, and not just through the social media platforms such as About.me, Academia, Facebook, LinkedIn, Mylife, Twitter and Sina Welbo. Whenever more than two people engage in an *event* – once called 'getting together' or 'discussing work' – the explanatory concepts immediately evoked are 'networking' and 'networks'. Similarly, wherever complex webs of mediated or public interchange develop they are almost always called 'networks'.

Networked relations have become the basis of theories of all facets of social life, ranging from human-object engagement (Latour 1993) to global information exchange (Castells 1996) and international urban governance (Blanco 2013). Specifically, theories of networking and information-based interchange have gained significance in the early twenty-first century, just as theories of power and difference did in the late twentieth century. If in the 1990s we had 'the Foucault effect' (Burchell et al. 1991) – that is, the theoretical projection that power is everywhere – we now have 'the network effect': the assumption that networking is everything.

In responding to the network effect, the present chapter sets out to understand how (global) urban networks operate. After discussing the origin and rise of the network concept (see Sect. 4.2), it explores three questions to frame the discussion. First, how do networks and networking relate to different ways of engaging socially (see Sect. 4.3)? Second, how does the nature of social engagement relate to different forms of knowledge (see Sect. 4.4)? Third, linking the first two questions, how do different forms of social engagement (including networking as one form of social engagement

**Box 4.1: Engaged Theory**
Engaged theory moves between high theory and grounded discussions of critical issues in the world. It seeks to bring generalized arguments to bear on local/global situations, recognizing both common (sometimes global) patterns of practice and meaning and the particularity of any one situation or locale. In doing so, the approach is sensitive to the standpoint from which it makes its arguments: from empirical analysis to more abstracted analyses of social formations, and back again. It is theory engaged in the world. It is theory that makes explicit both its political arguments about the world and about theory (see for example, James 2006).

among many) and the different forms of knowledge relate to the issue of more effective global urban governance (see Sect. 4.5)? We answer these questions using an engaged theory approach (Box 4.1), which (1) distinguishes different forms of networking that differ both in the degree of interaction and in the form of integration (see Sect. 4.3), and (2) proposes a new taxonomy of knowledge, distinguishing between sensory experience (feeling), practical consciousness (pragmatics), reflective consciousness (reflection) and reflexive consciousness (reflexivity) (see Sect. 4.4).

We draw from practical and theoretical work produced by urban networks such as the World Association of Major Metropolises (referred to as Metropolis), the Cities Climate Leadership Group (C40), ICLEI – Local Governments for Sustainability (further abbreviated as ICLEI), the United Nations (UN) Global Compact Cities Programme, city-to-city arrangements and UN-Habitat initiatives (Verrest et al. 2013; James et al. 2015) (see Table 4.1). We thereby acknowledge the cross-cutting contingency of networks:

> The complexity of the networks and the partnering processes, make outcomes unpredictable. However, when they work, they provide incentives for citizen investment, as stakeholders in monitoring the long-term sustainability of public services (Baud and Dhanalakshmi 2007: 146).

## 4.2 The Rise of the Network Concept and Urban Network Governance

A simple indication of the power of the network concept is provided by an N-Gram[1] search of five million books (Oxford English Dictionary Online 2015). The search shows that while the concept was only occasionally used prior to the 1920s, it has bourgeoned since the 1990s. By comparing the term network with other words for sociality such as web, social relations or interchange, its prominence is brought into

[1] An N-gram is a statistical method to reflect the incidences (*N*) of a word or short sentence in texts. The Google NGramviewer allows for N-grams based on the corpus of Google Books.

**Table 4.1** Examples of global city networks

| Network | Aim | Source[a] |
|---|---|---|
| C40 Cities Climate Leadership Group (C40) | Cities working together to address climate change, with topical networks where "city representatives connect with one another on topics of common interest" (C40 n.d.) | www.c40.org/networks |
| Metropolis | Platform of 130 cities with more than 1 million inhabitants where members "explore issues and concerns common to all big cities and metropolitan regions" | www.metropolis.org/mission |
| UN Global Compact Cities Programme | Focuses on "collaboration between all levels of government, business and civil society in order to enhance sustainability, resilience, diversity and adaptation within cities and in the face of complex urban challenges" | www.citiesprogramme.com |
| ICLEI – Local Governments for Sustainability | Network of more than 1,000 local governments that aims "to build and serve a worldwide movement of local governments to achieve tangible improvements in global sustainability" | http://www.iclei.org/resources/publications/iclei-case-studies.html |
| Participatory Slum Upgrading Programme (PSUP) | UN-Habitat initiative aiming at "contributing to the improvement of the living conditions of the urban poor" | http://unhabitat.org/initiatives-programmes/participatory-slum-upgrading/ |
| World Urban Forum (WUF) | UN-Habitat initiative aiming at "examining the most pressing issues facing the world today in the area of human settlements" | http://wuf7.unhabitat.org |
| Global Network on Safer Cities | UN-Habitat initiative aiming at "equipping local authorities and urban stakeholders to deliver safety" | http://unhabitat.org/urban-initiatives/ |
| Global Land Tool Network | UN-Habitat initiative aiming at "contributing to poverty alleviation and the MDGs through land reform, improved land managements, and security of tenure" | http://mirror.unhabitat.org/bp/bp.list.aspx |

[a]All web pages accessed on 25 March 2015

relief (see Fig. 4.1). Even concepts such as web and globalization are eclipsed by the growing use of the network concept. The meaning of the concept shifted from woven fabric and organic plant and animal tissue in the mid-sixteenth century, via topographical and infrastructure systems in the nineteenth century, to "a chain or system of interconnected immaterial things" in the twentieth century (Oxford English Dictionary Online 2015).

While the term began its long life as an organic and then structural metaphor based on a material thing – a woven net – it has become abstracted as a system of interconnections. As such, the term came to be used to subsume, firstly, the connected objects and then, much more recently, our relations with other people. In short, despite the complex etymology of the concept, human relations have been increasingly made over in terms of 'networks'. This development seems to be blinding us to the issue that social relations, including governance relations, are layered in tensions between more embodied integrative relations and more abstracted relations (explained below).

Not only conceptually but also in practice, networks and networking have become important phenomena. For example, given that cities are both causes of, and will be impacted by climate change, networking helps them to find common solutions (see Box 4.2). City-based networks have become part and parcel of governance practices as specific, bounded and intentional arenas for urban change (le Galès 2001; Bulkeley 2005; Klijn and Skelcher 2007). For example, in 2002, the year in which United Nations Human Settlements Programme (UN-Habitat) was elevated to a fully-fledged United Nations programme, it made city-to-city (C2C) cooperation the theme for World Habitat Day (UN-Habitat 2002). By doing so, it confirmed the importance of a new concept (C2C) that for a time had been emerging with significant status.

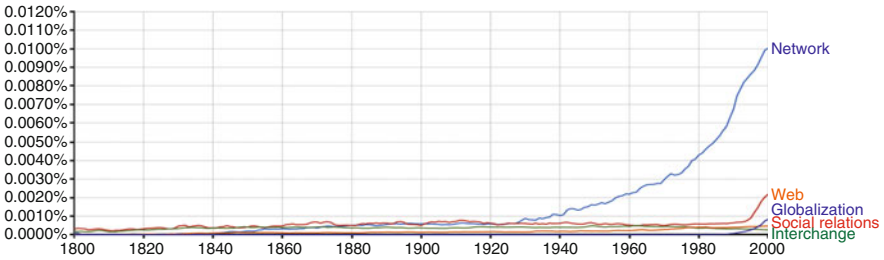


**Fig. 4.1** Comparative use of the network concept, 1800–2000, N-Gram (https://books.google.com/ngrams)

**Box 4.2: Cities and Climate Change**

Cities as concentrations of production and consumption activities and very high densities of people are both sources of a high proportion of global greenhouse gas emissions as well as concentrations of vulnerability to the possible impacts of climate change. A recent OECD report shows that especially port cities will be among the worst hit in relation to climate change. These impacts include rising sea levels, changes in precipitation levels, water scarcity, air, water and solid waste pollution, which may affect the lives and livelihoods of residents as well as their infrastructure. This makes it important to focus climate policy at a city level. The current slow-down in global negotiations on climate change has also reinforced the importance of taking action at subnational levels.

(continued)

**Box 4.2:** (continued)

The Intergovernmental Panel on Climate Change argues that cities have inter-dependent systems that can be used to develop adaptation strategies within a multi-level governance setting; if done cleverly this can also lead to mitigation co-benefits. Cities are of a scale that is both sufficiently dense to allow for change in their development strategies as well as small enough to be laboratories of experimentation. They are better able to develop disaster risk management and to ensure that these use ecosystem-based approaches.

City-level networks since the end of the 1980s have been building coalitions to deal with environmental challenges including that of climate change. ICLEI Local Governments for Sustainability has over 1,000 members who are trying to share best practices and learn from each other in promoting sustainable development. In particular, the C40 Cities Climate Leadership Group has membership from megacities worldwide and helps to reduce their emissions of greenhouse gases and address their climate risks.

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From 1982 to 2004, the number of sustainability-related city networks rose from 8 to 49 (Keiner and Kim 2007). Global urban networks consist of private, public, and civil actors, assembled around specific issues. Well-known examples are listed in Table 4.1.

Several factors contributed to the rise of global urban networks and influenced cities to engage in them. First, urban networks began to function as core agencies countering the global forces of environmental change, such as in the case of C40 that aims to respond to climate change. Second, urban networks have become stronger with the enhancement of the independent capacities of local municipalities. Metropolis and UN-Habitat network activities depend on the relative autonomy of cities to engage beyond the nation-state. Third, urban networks have been extended as a result of the information technology revolution, which enables cities to connect with remote partners (see Chaps. 8 and 9). Fourth, networks not only respond to globalization but also have themselves become more globalized. Metropolis, for example, acts and presents itself as a global network (Metropolis 2008) – even while it also continues to be a classical international organization with its headquarters in Barcelona and its politics organized around strong national and regional foci. Fifth, engaging in (globally) networked organizations provides cities with a certain status associated with being at the centre of a strong network. Finally, networking may provide financial and political opportunities (Betsill and Bulkeley 2004; Bulkeley 2006; Gordon 2013).

## 4.3 How Does Networking Relate to Different Ways of Engaging Socially?

Engagement is a core characteristic of networks. It emerges from events in which people relate to each other, whether as strangers, acquaintances, or friends, whether in face-to-face interactions or in technologically mediated events. All these processes are understood as contributing to the formation of networked relations. Networks have been classified based on geographical scope, size, budget, membership, and organizational structure (see Keiner and Kim 2007 for various network typologies). However, all these classifications focus on these dimensions as if they are a function of degree and number.

Arguably, the overriding problem with the network effect is that it reduces social life to a single modality that can be counted and mapped: namely, abstracted interchange. Interchange is defined here to cover the many kinds of events in which people come into inter-relation – whether as strangers, acquaintances, or friends; whether in face-to-face interactions or through technologically mediated systems. All these processes are understood in the network literature as contributing to the formation of networked relations. It does not matter whether a relationship is ontologically integrated by embodied ties of reciprocal mutuality or lifted out into disembodied circuits of communication. They are all networks, characterized in Fuhse's analogy (2015) by on-off switches. Networks, he says, tend to be reduced to two accentuated modalities: they are 'on' (interactions are occurring) or they are 'off' (there are no interactions).

Indicatively, Bruno Latour (2014) has made networking an ontological basis of the human condition. His Actor Network Theory (ANT) sees objects (human and non-human) as part of multiple networks, and explains events and interactions as if networking is the basis of all active engagement. It is also indicative that another writer, for whom in an earlier classic text 'the network' did not exist as a category of explanation (Castells 1977), later describes it as the emergent framework of contemporary society (Castells 1996). Latour and Castells have sophisticated descriptions of the social world, but they locate these descriptions in reductionist theories that are so enthralled by networks as abstract systems that complex layered social relations are reduced to the flat metaphor of lines of interchange across two-dimensional spaces (Sharp 1997; Cooper 2008). Everything is reduced to network relations.

While ANT is problematic, the network concept remains useful if its current use is recognized for what it is: namely, as a description of a very particular set of differently abstracted relations within a still wider set of many possible human relations. Here 'abstracted' is used to describe the material process of drawing away from the relational consequences of embodied co-presence. This abstraction can take many forms, from treating the other as an object, through to mediating the presence of others spatially through technologies of communication. Under the dominance of contemporary political life, people acting through more abstracted connections to others tend to instrumentalize other continuing forms of social

relations (Sharp 1997; Cooper 2008). In more familiar terms, this means that networking tends to use relationships as means to other ends. These ends might include exerting influence, gaining information or increasing productivity. Put more positively, networking is important to inter-urban governance, but only as one modality of the many possible ways in which people relate socially to one another.

This section argues that making sense of the different ways of engaging socially and being able to understand the nature of urban global networks requires a deeper analysis of the different forms of the interchange. Interchange is thus used here to include both *interactions* (the way in which network theory would understand them) and as building *integrative relations* (a focus of engaged theory). This analysis turns on a distinction between *interaction* as any connection between persons, face-to-face or more abstractly mediated by technologies and *integration*, the social form of those relations. Defining geographical scope, size, budget, membership and organizational structure poses empirical questions of interactions. How many? How extended? How intense? Defining the nature of integrative relations poses qualitative questions of social form.

What is the dominant form taken by the relations? How do these forms intersect in any single pattern of interactions? Four forms of networked relations are identified here (Fig. 4.2). They are *forms* rather than 'ideal types' of networked relations

| Forms of networked relations | As patterns of interaction | As forms of integration |
|---|---|---|
| Embodied relations | Between persons relating to each other in face-to-face events | Enabling the development of embodied mutuality, trust, and reciprocity, carried in the practical meaning of the relationship beyond times of immediate interaction |
| Object-extended relations | Between persons engaging in object-relating systems and/or using objects as mediating actants | Based on objects being part of systems of ongoing exchange and/or given contextual meaning that carries over time and space |
| Agency-extended relations | Between persons acting in their capacity as agents of an institution: for example, as representative of a municipality or state | Involving persons acting primarily as institutional agents |
| Disembodied relations | Between persons where their relations are mediated by systems that facilitate interchange at a distance: for example, web-based interchange | Emphasizing the dominance and constitutive framing of the process of interchange by technologies and techniques of mediation |

Increasing abstraction of social relations ↓

**Fig. 4.2** Different forms of networked relations

in the sense that in any particular network or event these forms intersect and entangle with each other. They can only be separated out analytically.

First, *embodied* networked relations are connections that bring persons and groups together from near and dispersed localities through embodied interactions. To the extent that these persons meet as close associates, not just as representatives of an institution, this encompasses the direct relations that individual mayors, administrators and urban practitioners sometimes forge in meeting each other at different forums. Embodied networking refers to relations of reciprocal mutuality that are based on direct relations between persons carried across time, and despite discontinuities. We further distinguish the embodied networking between relative strangers, the embodied networking of intermittent colleagues and the patterned acts of friends and colleagues meeting each other in global urban forums. We do not consider the latter as networking, but as *personal or communal ties*.

The emphasis here in describing embodied networked relations is on person-to-person relations rather than institutionalized connections. Such networked relations can amount to no more than patterns of *interaction* or they can forge *integrative relations*. That is, on the one hand, despite being based on face-to-face contacts, embodied networked relations can be just as instrumental and abstract as any other form of networking. On the other hand, despite the events being separated by many months, these patterns of interaction may be the basis of long-term relations. For example, thousands of people may turn up to the bi-annual UN-Habitat World Urban Forum, most of them unfamiliar to each other, all seeking to forge networks, but at those meetings other kinds of relations are developed. These relations, threaded through the networking of strangers and colleagues, tend to be extraordinarily resilient with personal ties being renewed in an ongoing way.

Embodied relations, formed in the first instance through networking, may go beyond just a series of face-to-face interactions and evolve into integrative relations of ongoing mutuality and collegial interdependency. The Metropolis platform illustrates this process. Metropolis has organized regular meetings attended by colleagues and associates for over three decades. Its various fora of mayors, tri-annual conferences and annual meetings are, however, not just networking occasions. They equally provide settings for colleagues, many of whom know each other well and interact beyond the events, to work closely together for a common purpose. In other words, Metropolis depends on relations of collegiality and even long-term friendship that go beyond just networking. Relations that started as networking with status orientation have become interwoven in contradictory and complex ways into the fabric of Metropolis' governance.

These more integrated embodied relations that emphasize non-instrumentalized relations between particular known others, often form as an unnoticed level of networking. It is true that in the world of urban networks, such relations tend to be subordinated to the more abstract forms of networks described below, but it is important not to underestimate their continuing resilience and productivity, even as those more abstracted networked relations swirl over and around them (McCann 2011). An example of such integrative embodied network relations are the City-to-City (C2C) partnerships described in Box 4.3.

**Box 4.3: City-to-City Partnerships through Diasporas: An Example of Integrative Embodied Relations**

One example of networks between cities concerns the integrated embodied relations between local government officials in migrant-source and destination countries based on long-established diasporic ties. Many of these partnerships were established around the year 2000 and focus on strengthening local governance processes on both sides. They offer specific learning opportunities about social cohesion and diversity for municipalities in destination countries as they have been looking for ways to strengthen social cohesion within their own municipalities and learn from issues related to cultural diversity. Van Ewijk (2013) describes Dutch-Moroccan and Dutch-Turkish municipal partnerships in which a wide variety of actors, including waste management experts, policemen and teachers, exchange knowledge. Despite the existing transnational linkages and the possibility to communicate via computers and phones, face-to-face exchanges appear to be crucial as many professionals do not have access to computers or they just do not use the internet as a communication highway. Moreover, face-to-face contacts are essential to establish trust and friendship, which help to establish good partnerships and to exchange tacit knowledge related to practical work experiences (van Ewijk and Baud 2009). Migrants have played a role as translators and also helped to overcome cultural differences in knowledge-exchange processes. Furthermore, they have initiated several exchanges and provide specific knowledge and networks.

In addition to exchanging knowledge on project level, these partnerships have a broader aim of combating prejudices and building bridges; both between the source and destination migrant countries and between formal institutions and the diasporas in migrant destination countries. This appears to be particularly relevant as a large share of the migrants are Muslims, and tensions connected to religion have remained paramount ever since 9/11 (van Ewijk 2013). The linkages between migrant source and destination countries thus contribute to countering a specific negative force related to globalization: tensions related to cultural diversity (Gordon 2013).

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Second, *object-extended* networked relations link objects into patterned relationships. For example, the gifts given to key participants at urban conferences become ongoing carriers of those relations. The most prevalent system today is the network of consumer commodities, largely supplanting even those most ubiquitous objects of communication and interchange: coins, notes and stamps. While these kinds of networks are critically important to broader processes of globalization, and although such objects as promissory notes played an important role in the Medieval and Renaissance urban networks, object-extended relations are today less relevant to inter-urban networking than other forms. Nevertheless, urban networking is full of

the exchange of objects – culturally chosen objects given as mementos of city-to-city visits; objects distributed to mark involvement in conferences; and sculptures distributed to associate the brand name of a sponsor with a particular event. Many such objects lose their intended meaning, but amongst the many pens, plaques and plates, there is the occasional object that carries deep integrative import. It is precisely these kinds of objects that signify an integrative relation rather than just being a material thing moving in fluid 'networks of things'.

Third, *agency-extended networked relations* are connections between representatives of institutions such as corporations, municipalities and states – that is, through persons acting in their capacity as institutionalized agents. As a form of networking, this mode gives rise to the perceived status of organizations involved in networks, particularly as hosting or acting as a secretariat to networks. Think for example about the Royal Melbourne Institute of Technology (RMIT University), which hosts the secretariat of the Global Compact Cities Programme; the partnering of the Arup company with C40 in various projects (C40 n.d.); and the hosting of ICLEI branches by the city of Bonn, Melbourne, Belo Horizonte and Seoul (ICLEI n.d., a). The institutionalization of networks as organizations, exemplified by the Global Compact Cities Programme, the C40 or ICLEI, is crucial to their success. However, without it being necessarily recognized as dependent on other forms, this mode of networking today relies upon both face-to-face networks and more disembodied networks.

Fourth, *disembodied networked relations* draw connections between immaterial things and processes including images, electronic texts and encoded capital. As a globalizing system of interconnections, this is the only relatively new phenomenon in networking, but it has taken on an overriding force due to the intersection of electronic communications and other technologies of interchange, techno-science and late-capitalism. As Chaps. 2, 8 and 9 describe, the mediated circulation of policy documents and global attention for cloud-based and big data systems are illustrations of this form of networked relations. Disembodied networking then refers to the multitude of interactions through the burgeoning webs of information flow. At this level, websites, email-delivered newsletters and twitter have become *de rigueur*. Through email, persons may be still using the technologies to carry various integrative relations, including an embodied or agency-extended kind, but the emphasis here is on the abstracted interchange rather than the forging of particularistic integrative relationships.

*Disembodied networked relations* have gained extraordinary momentum over the past few decades. C40 networks, for example, establish communication in networks through "virtual exchange and in-person gatherings" (C40 n.d.); Metropolis has developed Facebook and Twitter online communities (Metropolis n.d.); and in ICLEI subscription to a mailing list is one of the core strategies to get involved in the network (ICLEI n.d., a). An extreme example of an approach focusing on disembodied relations is the smart cities approach. Despite the fact that the smart cities concept should imply more than ICT (see Chap. 9), the smart cities' public and policy literature emphasizes the overriding importance of high-technology systems for developing more livable and sustainable cities. As such it carries forward the narrow understandings of networking and digital communication. IBM, followed

by other companies such as Siemens, Phillips and Cisco, was a frontrunner, going back to 2009 with its 'Smarter Planet' campaign (Dirks and Keeling 2009; Dirks et al. 2009). It is certainly not face-to-face integrative relations that are being emphasized. Hitachi, for example, the Japanese technology conglomerate, writes on its website that:

> In order to realize a smart city, it is important to use IT to connect a variety of everyday living services to public infrastructures, such as electric power, railways, and water. To this end, a communication network is necessary to establish all sorts of connections, including human to human, human to machine, machine to machine (Hitachi 2015).

In the same way that embodied and abstract forms of networked relations can be distinguished, we distinguish the interactional dimension of networking from the deeper relations of integration that can sometimes develop through networking. Just as in the theories of networking, the integrational dimension of urban networks has largely been overlooked in most discussions of global cities (e.g. Sassen 2001; Taylor 2005). Similarly, in the promotional folders of businesses, networks are treated as just extensions of relations over various reaches of space and time, whether they are persons, transport nodes or communications systems. In the words of IBM, "Today's cities, home to more than half the world's population, can be seen as complex networks of components: citizens, businesses, transport, communications, water, energy, city services and other systems" (Dirks et al. 2009: 1). Here, relations between people are just another *component* of the city. The different relations between strangers, colleagues, friends, daughters and intimate others are all gathered together under the portmanteau concept of 'citizen'. Citizens become just another component, abstracted in the same way as transport systems. They are both complex, and they are both systems.

Critical discussions on smart cities (c.f. Hajer and Dassen 2014; Bulkeley and Castán Broto 2013) go some way to redressing this flattening of social relations. They stress the importance of understanding and implementing smart technologies in the context of urban metabolism (see Chaps. 5 and 9) and local governance configurations, and hence the importance of including other forms of interaction than technologically mediated communications. However, they have little to say about the forms of integration.

Hence, both the personal ties and embodied networking that brings together intermittent associates are important to strengthen urban movements. Speaking empirically, personal ties continue to inform almost all aspects of organizational life, even if disembodied networking clearly predominates in terms of numbers of interactions. The UN Global Compact Cities Programme provides a telling example here. The nature of the organization – small and based in Melbourne away from the centre of United Nations' activities in such cities as New York and Nairobi – means that it is dependent for its unexpected influence on both extremes of the disembodied/embodied nexus. Consequentially, it is a vulnerable organization that risks being reduced to a website of named city members who have little relation to each other – but could be carried into the future by an energetic series of personal ties based on the extensive personal engagement in its 90 engaged cities.

## 4.4 How Does the Nature of Social Engagement Relate to Different Forms of Knowledge?

The second question concerns the kinds of knowledge that are being produced, exchanged and disseminated through the various forms of social engagement in networking, emphasized by van Ewijk and Baud (2009: 220):

> When discussing the possibilities for knowledge exchange and mutuality in C2C networks, we have to recognize what types of knowledge exist as well as the models within which different types of knowledge are produced and disseminated.

Just as we need nuanced distinctions to understand the layered nature of urban networking, we need to distinguish between the different modalities of knowledge that arise in these circumstances. van Ewijk and Baud distinguish tacit, embedded and codified/generalized knowledge (2009; see also Chap. 8). Tacit knowledge, they argue, is generally treated as less consequential than codified knowledge and "knowledge production systems consist of the constant interaction and translation between the three different types of knowledge" (van Ewijk and Baud 2009: 220).

Building this further, we set out an alternative taxonomy of forms of knowledge, based on 'knowledge circles', where these different forms of knowledge overlay each other and intersect in contradictory ways. The urban sustainability field of practice privileges reflective consciousness, evidenced in empirical analysis, blueprint designing, precinct planning and network building. In all the networks examined in this chapter, we see this reflective knowledge emphasis. A good example of this is the Participatory Slum Upgrading Programme (PSUP) initiated by UN-Habitat based on analysis and discussion in networks, which is a blue-printed approach for slum upgrading (Verrest et al. 2013). Another example is the C40 approach to urban change, which established seven network themes based on existing data. Cities relevant for a theme were brought together in a network. A combination of data, research and peer-to-peer knowledge exchange is considered relevant to address an issue (C40 n.d.).

However, reflective codified knowledge fits into a larger whole of theories. Among the many different ways of knowing, the engaged theory approach (see Box 4.1) distinguishes four forms: sensory experience (feeling); practical consciousness (pragmatics); reflective consciousness (reflection); and reflexive consciousness (reflexivity) (James 2006; Circles of Sustainability 2014).

The first form of knowing is *sensory experience*: feeling things. This is the phenomenal sense that something exists in relation to us, or has an impact on us. The concept of 'affect' (i.e. the experience of feeling or emotion) attests to this kind of consciousness, as does 'sense data' (i.e. unanalysed experiences). Sensory embodied experience is felt, but not necessarily reflected upon. How we feel about our cities and homes is critical to how we act upon them. It is surprising how often these slip unnoticed into planning and urban design approaches as well as into practices in global urban networks. There is often the implicit acknowledgement of feelings of excitement, dynamism or insecurity attached to particular cities acting as a base for understanding the urban feel and for developing plans and programmes. However,

the city-specific and individual-specific character of this knowledge impedes a smooth transfer of urban policies and urban experiences in urban networks.

The second form of knowing is *practical consciousness*: knowing practically or pragmatically how to do things; knowing how to go on. Practical consciousness is basic to human action in the world. Often we just know how to do things without reading instruction manuals. This way of knowing comes from long-term practical experience, producing tacit knowledge. This knowledge form plays a minor role in the urban networking literature, though it is key to making networks in the first place and contributes massively to their success. The exchange of this kind of knowledge takes place predominantly through face-to-face networking and collegial exchange (van Ewijk 2013).

The third knowledge form in our taxonomy is *reflective consciousness*. This is the modality in which people reflect upon their felt experience and practical knowledge and develop a codified understanding of the world. It is rooted in ordinary philosophy, and it is what thoughtful urban practitioners often do when they get a chance to step back from a project – thinking about what has been done, what is to be done and how could it be done better. It is the basis of good interpretation and it is necessary to good urban design and project management. This is the dominant form of knowledge tapped into in networks during conferences and gatherings, and appears throughout the more strategic documentation of all successful urban networks. Examples include UN-Habitat's Safer City Programme or its PSUP.

The fourth form is *reflexive consciousness*, or knowledge that comes in interrogating the nature of knowing while seeking to understand the world. Reflexivity requires reflection on the constitutive conditions of being here or doing things. Reflexivity goes beyond reflecting upon techniques, processes and practices. It involves standing back from and reinterpreting those techniques and practices in the light of the nature of thinking and acting that underlies those practices. This process of interrogating the conditions of our practice is tenuous, recursive and always partial. However, it is this kind of knowing, linked to integrative relations of mutual trust that are beneficial not only to creating urban change but also to creating and sustaining good networks.

Knowledge circles, or hermeneutic circles as they are known in philosophy, treat these ways of knowing as deeply connected to each other. Each non-mutually exclusive category contributes to remaking our cities. In any given situation, these forms of knowing intersect with each other in circles of changing hermeneutic possibilities (Circles of Sustainability 2014). These alternative ways of knowing shape the workings of global urban networks. Unlike the usual hierarchical lists of forms of knowledge – data, information, knowledge and wisdom – knowledge circles set up no hierarchy of knowledge importance. As such, with the current trend to emphasize the importance of (big) data for urban development, it is important to realize that data are just sets of codified information. There is no doubt that big data can be extraordinarily useful, but only if it is drawn into a broader epistemological framework (see Chap. 9). Similarly, urban development practitioners emphasize training and capacity development for local governance, but teaching techniques and processes, independently of larger circles of interpretation, leaves both the teaching and learning thin and unsustainable.

Communicating best practices is also an important form of knowledge exchange in urban networks. UN-Habitat, for example, supports a 'best practice' database showcasing 4,000 cases that address economic, ecological, political and cultural problems (UN-Habitat n.d.). An example of best practices on sustainable cities is the Oursus initiative (see Box 4.4). However, they need to be embedded in more reflexive and reflective bodies of knowledge as well as locally based sensory knowing in order not to omit local relevance (Verrest et al. 2013). The critique links with the understanding brought forward in the ordinary cities approach by Robinson (2006), which emphasizes the importance of local historical pathways and governance, social-economic, spatial and cultural characteristics in development patterns and transformational processes (see Chap. 2). As such the ICLEI case study approach is interesting as it addresses for each case the local context and the "project replication potential" (ICLEI n.d. a, b).

**Box 4.4: Our Sustainable Cities (Oursus)**

The International Geographical Union (IGU), the world's leading organization for geographers, brings together human and physical geographers of various sub-disciplines including regional planning and economic, political, urban, cultural and political environmental geography (Dietz 1996). The IGU was late, though, to embrace the sustainable cities concept coined in the early 1990s, first by activists like Walter, Arkin and Crenshaw (Walter et al. 1992) and scholars like Stren et al. (1992), based on a colloquium held in Toronto in 1990. Later the concept was popularized by urban planners like Campbell (1996) and geographers like Satterthwaite (1999). This was followed by an avalanche of publications, of which Haughton's and Hunter's *Sustainable Cities* (2004) became the most cited book.

The IGU is a truly global organization, with a remarkable presence of East Asian members. It is in China that a team of urban sustainability thinkers with a link to the University of Amsterdam in the Netherlands decided to build a website that would stimulate worldwide exchange of information about the various aspects of sustainable or 'green' cities. The website (www.oursus.org) stands for 'our sustainable cities'. The site was built around seven domains (transport, energy and buildings, climate/atmosphere, flora and fauna, water, waste and efficiency and lifestyles) and four approaches: 'experiences', where everyone could add urban sustainability experiences (or the lack of it); 'products and cases', where producers and others could add examples of sustainable products and approaches; 'challenges', where agencies, many of them NGOs or citizen groups, could point at deficiencies and criticize unsustainable products and practices; and finally 'campaigns', where people can mobilize others to improve their cities and making them more sustainable. There is a Chinese-language site, with a lot of activities on it and an English one, with 30 participating cities. City showcases will be presented at the IGU congress in Beijing in 2016.

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## 4.5 How Do the Different Forms of Social Engagement and Knowledge Relate to the Issue of 'Good' Urban Governance?

Our final question – how do the different forms of social engagement within networking and the different forms of knowledge relate to the issue of 'good' urban governance? – raises a normative issue. It is too often assumed that 'good' governance equates to highly networked governance and that urban networking is the answer to responding to the complexity of global-to-local challenges (see Chap. 3).

Exploring plans, websites and reports of the various networks, it becomes clear that information sharing is important in addressing major global-local issues such as climate change (see Box 4.2), and that the potential to connect leaders, share and acquire knowledge is a core value of networks. City networks are thought to foster peer-learning and exchange of best practices (Bulkeley 2006) and as such help to put a local handle to international policies and goals. Policy learning and developing better urban policies is expected to be a core benefit of the networks (McCann and Ward 2012). Moreover, city networks connecting leaders (e.g. the Compact of Mayors) are better able to promote strategic sustainability policy (e.g. greenhouse gas reductions) (C40 2014).

However, a few studies examine how this acquired knowledge contributes to building policy (Bulkeley 2006) and, to the extent discussed, show mixed results. Some evidence suggests that networks can have considerable impact on policy formulation and implementation (Bulkeley et al. 2003). For example, Turkish and Moroccan governments involved in City-to-City networks with Dutch municipal governments strengthened local governance through these partnerships (van Ewijk 2013). Bouteligier (2013), however, indicates that few of the many best practices disseminated through networks are actually being taken up. Furthermore, the success of mobilities of the same policy differs between regions and between small local governments and global cities (Toly 2008). Moving from commitment to action still remains a challenge for many local governments and the local context matters a lot. Finally, the influence of local urban governments on realizing sustainability goals is limited. Policy and politics outside the urban arena, as well as the ways in which ecological, economic, political and cultural processes across different levels and systems of governance interact are influential as well (in Bulkeley et al. 2010).

Aside from the limited work on the benefits of networks for sustainable cities or better urban governance, in particular, there is a lack of inside knowledge about *how* successes or failures of policy learning are achieved. Keiner and Kim (2007) and McCann (2011), for example, indicate the importance of virtual cooperation, personal and face-to-face contacts through seminars and conferences, but they do not discuss the importance of different relationships and integration that need to develop during these exchanges. There is, however, recognition that this needs to be redressed. McCann (2011: 107) argues that a proper understanding of policy mobilities "must take seriously the role that apparently banal activities of individual

policy-transfer agents play in the travels of policy models and must also engage in fine-grained qualitative studies of how policies are carried from place to place, learned in specific settings, and changed as they move". Hence, we call for attention to forms of interchange and relations, and to different and multiple types of knowledge being created and distributed within and beyond networks, in order to understand the role of urban networks and giving empirical and ontological meaning beyond the network effect.

## 4.6 Conclusions

This chapter addressed the rise of urban networks, their functioning through understanding diversity in terms of social engagement and mobilization of knowledge, and how they address (sustainable) urban development. We introduced the concept of network effect to describe the idea that networks seem to be everything and do everything. We criticized the network effect for reducing social relations to a single modality: abstracted interchange. When the concept and practice of networking is applied to urban governance in its current dominant usage, it tends to thin out the meaning of political engagement.

Globalizing urban networks can be understood as epistemic communities, transnational advocacy networks or as part of an emerging global civil society (Betsill and Bulkeley 2006: 147). In fact, globalizing urban networks can be seen as simultaneously all of these things. Networks can be good and useful (Bouteligier 2013) as spaces of innovation offering new possibilities for good governance. However, those designations, including the concept of epistemic community, remain fairly flat. The definition does not specify the different knowledge forms through which they might interrogate the current situation, nor does it recognize the different forms of networking. Without a reflexive interrogation of the forms of network, the possibilities of integrated relations of mutuality and co-operation, bringing together different forms of knowledge, networking is likely to instrumentalize social relations and flatten knowledge systems. Information sharing, for example, is undoubtedly important, but it does not change processes of governance for the better if instrumentalization of both relations and knowledge has become the predominant rationale. That does not lead to better governance, but rather more of the same through other means.

We argue that it is not the level of networking that makes it good, but rather the reflexive sensitivity of practitioners to bringing together different forms of social engagement and different ways of knowing and learning. Neglecting the implicit existence of various types of knowledge in networks and the lack of explicit exclusion of various types of knowledge in networks hampers the possible relevance of urban networks in creating better cities. If we are going to remake our world in positive ways we need to use all our ways of relating and knowing.

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