

# Rethinking social relations: towards a different phenomenology of places

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**Abstract** So-called phenomenological approaches to the understanding of social and spatial relations usually deal with these in terms of ‘mental space’, ‘existential space’, ‘social space’ and so on. These modes of space are regarded as ‘subjective’, ‘soft’ and short on the ‘hard’ mathematical, geometric or objective properties that give spatial analysis a rigorous analytical capability. I argue here that this misrepresents and misunderstands a central principle of phenomenology and overlooks phenomenology’s potential to objectively map us in our world. In its essence phenomenology is founded on the relation of intentionality. It is not necessarily about an interior mentality at all but about a subject-object relation in the world. The model that says there is an interior subjective or imaginative realm on the one hand and an exterior objective, physical or real one on the other, between which relations must be established for human knowledge or action to be produced, is replaced by one in which a perfectly real subject at one end of an intentional relation is connected to a perfectly real object at the other. A different phenomenology of places would be about how these relations between subjects and objects are structured and intentional knowledge and action mediated in the world. It would be about the environmental relation where the notion of ‘environment’ is captured in the relations between intentional subjects and the objects of those subjects’ attention and intention. I argue that this is eventually about how we order and construct human ‘worlds’ technologically and spatially so that we may effectively inhabit and use them. These ‘worlds’ exist as whole networks of subjects and objects, in part-whole, mutually constitutive, relations with ‘worlds’. The translation of the intentional relation into geography and urbanism involves us in an historical process of the construction of metageographical structures through which subjects establish and order their knowledge of and practices in the world. Enclosures, divisions and connections made by us in the world have shaped these structures and established the geographical and urban frames of our lives. This requires us to understand the human world as an historical construction, an anthroposphere, of regions and places, as equipment for framing our knowledge of the world and our local and translocal actions in it. I start by looking critically at social relations as these are imagined today, finding their origins in an Enlightenment metaphysics which bifurcates nature into mental and corporeal realms, and suggest an alternative founded in this reassessment of phenomenology. This alter-

native centres our attention on the anthroposphere as a construction, and a topological 'structure of places', organised as a layering of places and infrastructural 'grids' into a set of normative 'levels' which have a metageographical, intelligibility-giving and practice-defining character. 'Structures of places', 'grids' and 'levels' are perfectly objective and mappable and are proposed as the foundation of a new phenomenological urban and geographical model.

## **Approaching relations anew**

The technical disciplines which map human or social relations generally formalise these as models and in terms of the spaces these models incorporate. It is this kind of mapping and these kinds of mappers I am addressing. Phenomenology has most often been associated here with a 'soft' subjectivity and with the perspective of individual experience. Phenomenological mappings are therefore often of individual and subjective 'perceptions' of an objective world. With this emphasis on the individual subject, the perspective extends also into 'individual choice' approaches where, in 'time geography' (Hägerstrand 1978), for example, structure is produced by individuals with personal 'time budgets' making individual choices about movement and other behaviours. At the same time, cognitive approaches, like that of 'mental mapping' (Lynch 1960), see the individual perceiving subject producing mental maps represented in the individual interior mind. Phenomenology has indeed shared the belief that humans are 'cognitive' subjects (Varela 1996), internally processing representations of the world, rather than being simply situated in-the-world, and although most phenomenologists after Husserl have understood the subject as being in a direct relation with a material environment, the multiplicity and variability of individual and subjective spaces has still for the most part been assumed to be an effect of the 'error-prone' nature of subjective perception and representation when faced with a definite singular objectivity. This 'Cartesian doubt' has also been behind questions about the reliability of phenomenological descriptions and interpretations (Seamon 2000). The assumption has been that the mind is a rather inexact, even faulty, computer, and the basis of this assumption is an Enlightenment model of 'mind' incorporating a division between a personal and error-prone subjectivity and perception and an objective reality and certainty.

Both the association of subjectivity with the individual and the interiority of subjective processes will be treated here as problematic. The question of the mediation of perception and intention should be treated in reality and in the world, and not collapsed, as I will outline, to one of crossing a 'gap' between subjectivity and objectivity or mind and world. The map itself also needs to be reconsidered. Normally considered in orthographic projection (in time geography with a time axis added), the map has been associated with the objective side of the subjectiv-

ity-objectivity division and has embedded problematic assumptions about the nature of our perspective on and our knowledge of the world. It has also been associated with an absolute space of cartographic or geodesic coordinates and a Euclidian geometry and distance that apply universally. The map I will propose can be represented orthographically for visualisation and analytical purposes, but will contain objects, subjects and places organised in their own humanly-constructed spaces that embed normative geographical characters and scales. The coordinate geometry and distances of the map itself are not assumed to be 'objective' in relation to these spaces and are not determining of these spaces.

I will begin by reviewing and critiquing social relations as we most often think of them today. This will necessitate following a discussion and critique of Enlightenment metaphysics, in terms of the relations between subject and object, and mind and world, before building a proposal that our human-world relations are an objective factor of the world itself understood in terms of these relations. I will be addressing the question of an alternative to the division of existence into mind and world, firstly by reviewing phenomenology's well-known role in a critique of artificial intelligence and then by way of a reinterpretation of phenomenology in 'non-subjective' terms, and in relation to technology and equipment, that was highlighted in an hermeneutical philosophy of science. The alternative phenomenological view I will present is one that emerges first by restating the foundation of phenomenology in the intentional relation and by posing subject and object as the two objective poles of this relation, and then by situating this relation in the world and finding mediation in the way this relation is reliably enacted in the world. This reliable enaction takes place through the equipment and artefacts we surround ourselves with. I will restate this view also in terms of an urban model consisting of patterns of objects, places and network infrastructures constructed in the world. These patterns will incorporate a 'structure of places' together with the infrastructure technologies that support these.

This alternative non-mentalist, non-subjectivist<sup>1</sup> 'phenomenology of places' will problematise our conventional view of subjectivity and mind, and reveal the roles of objects, technologies and construction, and our own nature as emplaced creatures, enabled and constrained by this emplacement. In short then, I aim to rematerialise and 'complexify' social relations, bringing them back into the world. In doing this I hope at the same time to say something about technique and construction as qualities and characters of the human and the social. We should again be able to map human and social things in an objective way, but in a way which also finds subject positions and social-technical conditions and constructions back in our objective mappings.

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<sup>1</sup> Patrick Heelan, to whom I will refer later, used the word 'non-objective'. The point is that the subjective-objective dichotomy is rendered superfluous in a position which understands us as actors and constructors of a sociotechnical world rather than subjects reflecting from an interior subjectivity onto an exterior objective world.

## **Taking the world out of social relations ...**

As researchers and builders of models and theories, our intuitions are powerfully formed by the unstated philosophies and metaphysics we work with. This is not something we can circumvent; such philosophical or metaphysical ‘backgrounds’ are a condition of our working effectively in ‘communities’ of ‘like-thinkers’, but they are also a constraint on what may be possible or allowable to think in these ‘communities’. Thomas Kuhn was one of the first to highlight this social and ‘practice’ dimension to knowledge (Kuhn 1962). This means our intuitions are not always the best guide as we go forward and insights from outside the ‘community’ can reveal what is unquestioned in the ‘community’ and open new ways to progress. In what is for many the most intuitive way of modelling social relations, ties of interaction between humans as ‘social agents’, and the structural effects of these are analysed. Social network theory (Wasserman and Faust 1994; Scott 2000) takes social networks to consist of social agents and the ties between them and not much more than this. Starting from this parsimonious set up social network theorists can begin to think how individuals can come together to create enduring, functioning societies. Georg Simmel had suggested that social reality consists of interrelated clusters in which smaller groups or units are built up into larger ones which then overlap with one another (Simmel 1955;130-135). Emile Durkheim had argued that human societies are made up of interrelated individuals and that the reasons for social regularities are to be found in the structure of ‘social environments’ rather than in the individuals (Durkheim 1951). One of social network theory’s founding fathers envisioned it as a kind of physics, complete with its own social ‘atoms’ and ‘laws of social gravitation’ (Moreno 1934) and social networks provided a way of making tangible the sorts of structure Simmel and Durkheim conceived.

The basic structure created in social networks is the ‘group’ or ‘community’, so that a structural scaling is achieved and agency may transfer from the social agent to higher-order structures which may then ‘know’ and ‘act’ in their turn as sorts of super-individuals. However, the social network idea has failed to account for some of the things we might expect to learn from relations. In particular, while the theory accounts for some non-local structural effects of local ties, it has difficulties with understanding higher-order structure or globality as an active contextual dimension, or indeed any active relations beyond the direct relations of individuals or groups (Friedman 2007; Robertson 1993; Chapman 2004).<sup>2</sup> Social network theory has been criticised for its abstraction, its ‘reification’ of ‘strong ties’, and its mechanical understanding of the individual and of social accretion. How higher-order ‘communities’ are durably maintained along with their ‘moral orders’ (Latour 1992) remains an open question and I will return to this later.

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<sup>2</sup> The influence of globality, or the world, on our everyday sense of order or coherence is not captured in the aggregative social networks model – which needs the larger material frameworks I will be suggesting here to convincingly stabilise social relations.

The extent of the abstraction is evident from the fact that no material world appears as a relevant constituent or even background to these relations. Society is a ‘relational abstraction’ consisting of nothing more than the matrix of social relations. The ‘social world’ or ‘social environment’ is simply this abstraction, and we are not asked to consider how it may be possible to imagine relations at all without the mediation of a material world. A tacit assumption concerning the autonomous active nature of the subject is supported and maintained, while what is object is assumed to be either irrelevant or subject to the transparent influence or control of its active opposite. In fact the assumption is that we may abstract the social world away from its material supports as easily as we separate mental and corporeal realms. We imagine social relations inhabiting an autonomous ‘immaterial’ domain analogous to the mental, and social networks thoroughly internalise the assumption of the division of existence into active mental and passive corporeal realms and reproduce this metaphysics as a social model.

To see how this works we could revisit the foundations of our modern system of thought as this was formulated by Hume, Locke and Descartes. However, these metaphysics have already taken an interesting contemporary turn in artificial intelligence. Hume and Locke had conceived mind as a symbol-manipulating machine and AI researchers had simply applied this model as the digital computer became available to them, to build Enlightenment metaphysics into the computer, and embed, or so they thought, mind into computing machines. Underpinning AI therefore was the classic division of nature into *res extensa* – corporeal substance – and *res cogitans* – mental substance or consciousness. AI formalised relations between the poles of this division by way of a ‘representational-computational’ model. This model had ‘minded-beings’ ‘interiorising’ an immaterial representation of an ‘exterior’ material world which was then ‘processed’ in order to produce knowledge about and action in the world (Fodor 1981; Pylyshyn 1980). Perceptual ‘input’ was ‘internalised’ as manipulable symbols which could then be computed to produce ‘output’ in the form of abstract knowledge about or action in the world. In this scheme intelligent minds know about or act upon dumb matter, and mind is the active polarity while exterior reality remains acted upon. As the Heideggerian philosopher Hubert Dreyfus suggested, AI was “hard at work turning rationalist philosophy into a research programme” (Dreyfus 2007:247).

### **... and putting mind in the network**

Questions about the abstraction of social networks have, however, also given rise to elaborations of this basic idea. In the 1960s Melvin Webber warned against “some deep-seated doctrine that seeks order in simple mappable patterns” (Webber 1963:54). He suggested our communities were becoming disentangled from the constraints of the models we used (including those of strong ties, place and distance) and highlighted other associational and institutional ties formed in modern social organisations and divisions of labour. His ‘urban realms’ were groups of

people in 'community' with one another across geographical space and without being spatially delimited. He thought of these as cultural rather than territorial 'communities' sharing activities and knowledge 'without propinquity' (Webber 1963). Webber pointed at the same time to the ways new technologies were freeing the constraints of proximate face-to-face relations and creating "non-place urban realms" (Webber 1964).

Webber's social relations began to incorporate some of the new structures and constructions of modern society, but were no less 'immaterial' and abstract. Meanwhile 'space' was corporeal and becoming steadily less relevant and more threatened as embodied proximity and face-to-face relations (Boden and Molotch 1994). At the same time, a new factor, 'networks' – understood in terms of new communications technologies and high-speed mobility – was emerging. Cities were redrawn in these terms as dense clusters of no longer very relevant 'space', consisting of proximate social links, on the one hand, and 'networks', comprising 'abstract' and 'virtual' business, economic, cultural, associational and social links, on the other. The spatial disintegration or 'explosion' (Wright and Stewart 1972; Webber 1963) of the cities of the USA after the middle of the twentieth century, followed rapidly by those in Europe and other regions, was attributed to these new networks. The networks gave 'structure' to Webber's 'non-place urban realm' and 'community without propinquity' by mediating these through technological and especially 'microelectronic' networks. It was in these terms that technology entered 'social networks' as a medium through which human and social relations of 'networked individualism' (Wellman 2001) and a 'network society' (Castells 2000a) became possible.

This was hailed as no less than a revolution in social organisation and relations as, according to this view, technology established new structures of social relations and ushered in an 'Information Age' (Castells 2000a; 2004; 2000b). The networks were seen as the armature of contemporary business and industrial production and of globalisation. They were also seen as the armature of a contemporary 'network society' "whose social structure is made of networks powered by microelectronics-based information and communication technologies" (Castells 1989). This is the foundation of the distinction made today between 'spaces of places' and 'spaces of flows' (Castells 1989) in which a dynamic contemporary business and society is mediated through an electronic 'space of flows', leaving an older 'space of places' of place-bound and embodied communities in a state of stasis and decline. A 'world' of sorts has entered the 'relational abstraction' with the network technologies, but the basic metaphysics remains intact, with machines and networks facilitating active but disembodied relations in a 'virtual' electronic realm. For Webber and many others, urban society has escaped the place-bound city and "the concept of 'urbanism' and the concept of 'city' are no longer coterminous" (Webber 1996). The pressing urban problem becomes the 'mediation' between a 'virtuality' of a 'space of flows' and a 'reality' of a 'space of places'.

## **Dismantling the metaphysics of ‘virtuality’**

The contemporary division of network ‘virtuality’ and place ‘reality’ is a corollary of a system of thought that has its origin in the seventeenth century. The continuing power and persistence of this system may owe as much though to its being embedded in influential research and development programmes as it does to the innate persuasiveness of the philosophies of Hume, Locke and Descartes. These research programmes have succeeded in building this system of thought not just into popular discourse and academic literatures and debates but also into the machines and networks through which we conduct a large part of our lives. A product of this is the ‘naturalness’ of the idea of a ‘network society’ as a ‘virtual’ ‘relational abstraction’ shaped in high-tech information networks today (Castells 2000a).

The products and contents of ‘informational’ networks are seen as a weightless, frictionless ‘knowledge’ or ‘information’ (see Read 2009). This maintains knowledge as immaterial and placelessly available, and seems to negate worldly mediation. In fact the mediation between autonomous mental and corporeal domains re-emerges in this model as a mediation between a non-place, dynamic and frictionless domain of a ‘network society’ (a ‘space of flows’) and a static, conservative and threatened domain of real places (a ‘space of places’) (Castells 1989). In the ‘space of flows’ and in our relation with machines, knowledge is not intrinsically or necessarily situated but exists in a placeless ‘connected’ network realm. When this knowledge is situated, it is usually presented to us in orthographic projection. The relation of knowledge to situation is made problematic again as the knowledge of the observer from orthographic perspective is conflated with knowledge on the ground. Philip Agre has noted how we see this clearly in computer games where the knowledge of the player is conflated with the knowledge of the ‘agent’ on the screen (Agre 1997).

However AI was not simply a channel through which Enlightenment metaphysics invaded our technics and artefacts; it was also the forum for an extended and continuing debate about the hidden metaphysics of this model and the search for an alternative. In this debate, Dreyfus started by suggesting that mind and world (or social actor and environment) are not separated in the first place and don’t need to communicate across any mind-reality gap at all. For him knowledge and action should not be credited to the internally-knowing subject but rather to the situation of the subject in the world and the relation between subject and world. The key for Heidegger and for Dreyfus was that in bringing things to our knowledge or imagination, we incorporate them with our situated selves (Dasein) and begin relating to them directly. Things ‘are’ in a very important sense in the way we form a relation with them and take them into our lives and activities. Worldly things are disclosed to us in our relation to them and in the way they become something for us.

We don’t relate, in other words, across a gap between us and a world, we are simply in it. Reality here is not accessed through interior representation but is

practical, situated and there to us. Dreyfus' critique was to some extent provoked, and the argument fuelled and sustained, by a lack of progress in formalising intelligence within the prevailing paradigm. Dreyfus questioned the presumption that processes of mind involved the manipulation of abstract symbols according to sets of formal rules (Dreyfus 1965). He questioned also whether reality consists of atomic facts and things, and whether knowledge is even in principle formalisable in terms of universally applicable rules or laws. His alternative was a radical contextualism, shifting thinking away from an idealisation and internalisation of order and intelligence in mind or machine, and towards an in-the-world basis to order and reality. Cognition, understood as an individual and private, internal process, becomes redundant when the reasons for knowledge and action are situated externally and publicly in-the-world (Read 2008; Read 2013).

Dreyfus' intervention provoked some prominent AI researchers to participate in open-ended research in "psychology by reverse engineering" (Haugeland 1997). Rodney Brooks for example based his robotics on the idea that the world served as the sufficient 'representation' of itself in the domain of reality (Brooks 1997) and his machines were set off to simply learn on the go. Terry Winograd recognised that the sharing of coherent and meaningful knowledge or information depended on sharing a common context or frame of reference for that meaning. The representation-computation model had allocated meaning and significance to things through representation and language, but Winograd recognised we don't so much exchange information in communication as call to attention some aspect of the world the communicators already share (Winograd 1972). Part of that context of agreement is of course the world of everyday stuff we surround ourselves with.

Dreyfus emphasised the 'embodiment' of action and being in the world and the situatedness of knowledge. It's not us (or intelligent machines) who learn something about the world, but us and world who come together in significant conjunctures of knowledge or action and in a continuous process of relation and mutual adjustment. What Dreyfus' intervention in fact highlighted was our relations with respect to a world of things and both our and their integration with and dependence on this context or 'world' for practical 'being' or knowledge to emerge. As Don Ihde points out, this is less a matter of 'embodiment' and more a shift of the location of the 'subject' from a bodily interior to a directed relation with the world and with things (and people) in that world (Ihde 2010). From this point on the emphasis will be on the nature of that world, and in particular on its adjustment and preparedness for us and for our intentional knowledge and action.

## **Redefining object-ivity**

This suggests that material things have meaningful existences in relation to us and our activities, and beyond our mental images and language, and that being out there in the world and amongst things is what is significant for subjectivity and social organisation. Others, including philosophers like Hannah Arendt, anthro-



pologists like André Leroi-Gourhan, and sociologists like Bruno Latour, have developed this insight. Arendt sees us inhabiting a “world between things” (Arendt 1970), Leroi-Gourhan sees us making human worlds by ‘exteriorising’ a ‘curtain of objects’ (Leroi-Gourhan 1993), while Latour has argued that ‘nonhumans’ develop social relations just as much as humans do. He has suggested that humans alone do not and cannot hold our communities and societies together and that the ‘missing mass’ in our societies consists of nonhuman relations and the spatial organisation of objects and artefacts (Latour 1992). He emphasises an order ‘networked’ in arrangements of humans and nonhumans and the actions that join them up. Indeed, he argues that in these networks we find it difficult to separate the respective human, practice and technical parts and that these parts come together in ‘negotiations’ between people and things – particularly people and artefacts. With the reintegration of mind and world, we seem to arrive also at the reintegration of other polarities, like those of people and things and society and technology, and we could start thinking of these human-nonhuman arrangements as ‘sociotechnical systems’ (Hughes 1987).

These networks and systems are different to the ones we saw in ‘network societies’ in which advanced technology ends up appropriating the dynamic, creative role mind takes in the classic mind-world bifurcation. Latour’s examples of objects and technologies – like that of the door-closer – testify to an active integration of humans and nonhumans that goes far beyond microelectronics. This suggests a very different metaphysics and we can begin to get a sense of what this metaphysics means from hermeneutical phenomenologists of science like Patrick Heelan, who looked at the hands-on practice of experimental science. Heelan pointed to the way the ostensibly subjective factor of the intentional human experimenter is ‘hermeneutically shifted’ in experimental practice into the ostensibly objective equipment of experiment. The observer is, according to Heelan, not outside the experiment, making notes from his or her subjective position about what is objectively going on. Equipment is not a passive ‘container’ of the experiment. Instead the equipment is designed and is being minutely manipulated, adjusted and maintained by the observer and other operatives, so that it becomes aligned with the intentionality of the observer and ends up producing the results intended (Heelan 1977). This is also the character of Latour’s ‘negotiations’ between human and nonhuman factors: nonhuman material acts with the human actor in an ‘actor-network’ (Latour 2005). We could say that subjectivity, objectivity and practice are distributed in a closed network that has the character of the ‘world’ I will discuss later. Don Ihde calls this a ‘material’ or ‘extended’ hermeneutics – a directed ‘negotiation’ with things and processes until they end up doing what we require of them (Ihde 2009).

In this so-called ‘technoscience’ perspective acting and knowing escape the bounds of the subject as this is customarily defined, and creep out into the equipment, which is to some greater or lesser extent already prepared to do what is expected of it. Mediation here is by way of a ‘subjectivity’ escaped from the bounds of the subject and into worldly material, already prepared by engineers, builders and technicians. Mediation works through subject, object, practice in a networked

and systematised way. Instead of imagining a society mediated in high-tech electronic spaces, and then imagining this high-tech as a corollary of an immaterial 'virtual' mind, we should start from the position that human relations with the world have long been mediated technologically, with technology understood here in a broad sense. Paul Edwards alerts us to the fact that the ubiquity and low-tech nature of most of the technologies that surround us hides from us their central roles in human knowledge and action (Edwards 2003). This suggests also that if networks and technologies have always defined what our subjectivities and societies are capable of, the high-tech networks and technologies of today may be just the latest telling of the same story. A more historical take on this may show also how the networks of today are by necessity tied to processes of technological innovation and substitution which sees mules and camel trains replaced by railways and trans-continental highways, horse-borne messengers replaced by postal systems and email and electronic messaging systems, and the carvel replaced by the container ship.

A 'material hermeneutical' or 'actor-network' view would represent a substantial shift away from the dualist and mentalist position of understanding order and intelligence as subsisting in either a mental or electronic informational realm. Here the power of knowledge and action would inhere in networks of organised human and nonhuman, or social and technical, factors. It would also require a substantial shift in our methods of mapping, away from the orthographic representation as a privileged objectivity, and towards the revealing of a structure of sociotechnical networks or 'systems' through which people order their knowledge of the world.

## **Putting 'world' back into relations**

Dreyfus has proposed that reality is 'relative to us'. This 'relative to us' refers to the intentionality captured in the subject-object relation. This relation is no longer mediated between autonomous realms of mind and corporeality. Heelan has shown how the intentional relation becomes conditional on and mediated through the equipment we manipulate and through which results in the form of objects and knowledge are produced. The situations in which we know and do things are specific instances of this technically mediated intentional relation. This makes situations technically specific and multiple. They become pre-prepared in-the-world networks or spaces for acting and knowing, and artefacts in themselves. This testifies to the locally strategic nature of organised equipment and artefacts and to the spaces of knowledge, shared in communities they contribute to defining and maintaining. Not all of these will be high-tech though most of them probably were high-tech at some time in the past.

According to Heidegger, "equipment ... always is in terms of its belonging to other equipment" (Heidegger 1962: 97). There is always a totality of objects and practices, a practical and equipmental whole, in which objects and practices define each other in their relations. This 'fitting' of object or subject into a context is

called ‘involvement’ (Heidegger 1962). It is a fitting into an intelligible ‘world’ where ‘world’ refers not to the simple totality of physical objects, but to the nexus of functionality and intelligibility organised by our equipment on the one hand and practices on the other. Our environments are realised as an in-the-world relationality of meaningful objects. This is a view which emphasises the overwhelmingly artefactual nature of the world in which we know and do things (Mitcham 1995)<sup>3</sup> and then understands agency as distributed between agent and environment through the entrainment of the objects making up the environment with human activity (Clark 1997; Clark and Chalmers 1998; Hutchins 1995).

These situated collective understandings underpin the intrinsic sociality of the objects themselves that Latour insists on; the ‘objective’ world around us is a world of objects entrained with and in relation to us. Abstract distinctions between the subjective and the objective are not coherent in this view. Rather what is significant is the organised relations of objects with subjects in settings embedding knowledge and the possibilities of action. Although people connect with artefacts and equipment individually, the meanings and functions of things are commonly understood in settings and within the ‘communities of practice’ (Kuhn 1962) that use them. ‘Worlds’ of common understanding are social and normative, but it is through our individual emplacements in relation to things that our knowledge of them and their possibilities emerges. These situations are total ‘worlds’ that environ us because they are already prepared for involvement and action by being organised around subject-object relations. Involvement in them may also be restricted, however, to those who have the credentials and the skills to access, understand and use them.

Humans have managed to create multiple situations, multiple worlds, and multiple forms of life and the way they have done this is by forming multiple ‘worlds’ and spaces, technologically, within which objects, subjects and actions (things, knowledge and practices) are internally enabled and regulated.

On the basis of the technoscience perspective, an alternative relational phenomenology of place is possible: one in which emplaced objects constitute a material organisation through which our knowledge and action are mediated *in situ*. This alternative relational view would avoid any necessity of an ‘interiority’ of imagination; subjectivity is exteriorised and captured in the perfectly real relations between subjects and objects mediated through socio-technical networks. The significance of this is that we can now talk of a human world consisting of real things (and their spaces and places) that can be mapped and analysed. These objects participate in action chains and sequences – participation implying neither a subject-centred nor an object-centred perspective on action but one where the subject-object, actor-environment relation stands at the centre of the analysis.

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<sup>3</sup> Carl Mitcham is only one of the more recent theorists who has argued that we live in a world of our own making and that the things we encounter in that world are artefacts. However, Mitcham also sees this as a something new whereas I am suggesting, along with others like Arendt and Le-roi-Gourhan, that this technical character and capacity has defined the human condition throughout history.

## Metageographies

The character of these sociotechnical ‘worlds’ may begin to be “conveyed in such expressions as ‘the world of the parent’, ‘the runner’s world’, or ‘the world of the treesitter’” (Thomson 2006: 447), but because our lives are emplaced, these ‘worlds’ will also be integrated with and constrained by structure inherent in territories and places. As we become urban citizens and neighbours, as we create national societies, and as we become a global multitude, the territorial dimensions of these communities and social identities will also be constructed. In fact all the ‘worlds’ we inhabit will be geographical in the sense that everything we do will have a situation and be emplaced. There is a structure to this geography, however, that relates to an historical formation and normative formalisation of the planet into what Lewis and Wigen have called ‘metageographies’. These are “the set of spatial structures through which people order their knowledge of the world” (Lewis and Wigen 1997: ix).

As we can by now expect, these spatial structures will relate to objects entrained with the practices and ways of life of territories and places. These territories and places would be technically structured in such a way as to support the normative practices associated with them. The techniques would mediate what the territories and places were and regulate and regularise the way they were enacted. This ‘worldly’ mediation would consist of an organised and strategic integration of technological, intentional and practice dimensions. The best way to understand this is by way of an example: we can get a sense of how these territorial spaces are formed and what they mean if we begin with Heidegger’s carpenter’s workbench and then extend our point of view outward. The workbench is a place constructed to emplace the tools and support the practice of carpentry. In this place there are a set of objects (the tools), a place or setting (the workbench), a skilled subject (the carpenter) and a practice (carpentry) which, when taken together, form a ‘world’ within which the carpenter’s attention and intentions are captured, and within which he works and produces things. Tools and other objects take their meanings from this ‘world’, and a nail and hammer are entrained; they are to-hand and can be swept up in the movement of making a chair.

In this situation the equipment and space of the workbench disappear into the background – becoming to all intents and purposes not present to the carpenter – as his attention goes to the object of the action, the chair. Things are to-hand where their practical meanings and the actions they participate in coincide. At the same time the workbench can become an object of attention itself – and become present – when the carpenter is preparing it for working. Also, the nail, displaced by a few meters, will lose its entrainment and become present as an object that needs to be picked up off the floor and re-placed to where it belongs. In a human world to-handedness works next to presentness and relies on presentness to pre-

pare and maintain places for action.<sup>4</sup> An object that is to-hand exists in what Heidegger calls a 'region'. Regions organise the things we are involved with in relation to practice. The region is a framing and referencing of objects, and a setting prepared for action. We see the region as we prepare or tidy up or otherwise get ready for action, but the character of the region is as a background to action and attention. We are capable of being involved in that 'world' as we are capable of stepping out of it in order to fix, prepare or tidy up.

But different settings and different 'worlds' also exist in relation to one another. 'Worlds' may be nested in relation to one another so that the nail is on the workbench; the workbench is in the workshop; the workshop is in the town (Heidegger 1962:79). A nail may slip from being to-hand in one 'world' to being present in another as easily as slipping off the workbench – so there is no necessary, literal boundary between these 'worlds'. A nesting of 'worlds' or settings, is as organised and prepared in their relations to one another as each setting is individually. The nesting also allows us to quickly increase possible scales and scopes of action, taking us beyond the reach of our hands and our immediate lines of sight. The carpenter uses the setting of the street grid of the town in order to connect his workshop with the post office. The postal service is organised as a region of post offices such that a letter may pass from the post office in the street grid of one town to the post office in a street grid of another – and through that street grid to the letter's recipient. The postal service maintains and uses a system of pathways and roads to interconnect the towns in the county.

The workbench and tools, the workshop and its interior spaces, the urban street grid distributing the division of labour of an urban community, are each organisations of objects, subjects and practices that work together in stable and repeatable ways. Each 'region' constitutes a 'way of life' and a 'world'. Each gives a concrete measure of a scale of working associated with its own objects. But each region limits us to doing things in one framing and at one measure or scale, while different settings are connected to one another in ways that allow them to be negotiated sequentially in chains of actions that span multiple regions. These regions are articulated so we may move outwards, and 'vertically' through 'levels', beyond the reach of hands and vision. The whole 'structure of places' is a tight fit of territorial units of different scales matched with 'communities of practice' that know how to use them. All this facilitates a flexible cross-scalar coordination of social and economic activity, ultimately across vast distances. It is through this relatively low-tech (certainly in its original forms) topology, or structure of places, rather than through contemporary high-tech communication and mobility technologies that 'space' as distance is and has always been 'annihilated' (Harvey 1989).

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<sup>4</sup> Heidegger used the terms *zuhanden* and *vorhanden* for these different conditions of objects as being respectively engaged with the subject as part of the action, and present to attention as an obstruction or in the course of preparation or maintenance of settings for action (Heidegger 1962:135-148).

‘Communities of practice’ already know how to locate themselves and do things in the appropriate networks. Newcomers learn these things and join communities of rush-hour commuters or tourist shoppers or creative-region entrepreneurs. This is not by reference to a set of cartographic or geodetic coordinates but by a topological frame of referencing of ‘objects’ and places alongside, inside or outside specific settings. These alongsides, insides and outsides relate to the networks and not to territorial boundings. They are organised in networked meta-geographical ‘levels’ and scalar types. The nail is on the workbench in alongside relations with the hammer and chisel; the bench is in the workshop in alongside relations with the office and wood store. The workshop is in the town in an alongside relations to home, the post office and the inn the carpenter visits. Rather than dealing with universals of space and scale we are dealing with particular, located, scaled and delimited organisational networks, and the equipment and know-how to enable intentions and actions.

At the urban level the street grid is normally considered to be a medium for accessibility between objects already defined. What we see in the account I have just given is something different: the grid is the pre-condition for the definition of the objects concerned. In a ‘space of flows’, the nodes are ontologically transparent objects that define places and provide the datum; here the grid itself is the datum, specifying scale, producing the nodes and defining the elements of the town.<sup>5</sup> It is by being framed in the grid that the carpenter, baker and blacksmith are identified and defined as constituents of an urban ‘world’ – as urban parts of an urban whole. At the same time, other ‘grids’ at different ‘levels’ and scales identify tools as parts of a workbench, furniture and stores as parts of a workshop, and a network of towns as parts of a postal region. The network positively organises rather than passively connecting and its space is not a surface across which flows are traced, rather it is a topology and networked ‘world’ of meaningful relations that underwrites effective places and practices.

## **An alternative phenomenology of places**

Metageographical structures construct scale alongside place. So all places come integral with their scales as a direct corollary of the structure of places we understand collectively and objectively. We could start by imagining networks of small things and places, medium sized things and places, large and extra large things and places (Prytherch 2007). However, it’s not the sizes of the things but the scopes of the wholes they are part of that defines the scales of metageographies. These scopes, and the metageographies themselves, are normative and historically

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<sup>5</sup> What the ‘flat ontologies’ of Latour and others like Marston et al. (2005) miss with their networks freely connecting heterogeneous subjects and objects across scale levels, is the dependency of the objects (and subjects) themselves on scaled networks of objects (and subjects) for their definition as existent things.

constructed. They are cities, regions, nations, and centres, suburbs and neighbourhoods, but expressed not as objects in isolation but in networks of parts that make up wholes. We think of them as autonomous things that have always been there, but they are historically constructed and naturalised rather than natural. We use these both to access and to order our activities in networks and also to relate to other places through their part-whole relationships with other networks at other scales and scopes. The best studied examples of such networks are world-city networks (Friedmann 1986, 1995; Beaverstock et al. 1999). Here 'world' and 'city' are co-constitutive and interdependent, whole and part, mutually constructed in the network. 'World' is itself a metageographical construction comprising a network of cities and 'city' derives its meaning from its relations in the network.

These are not the only part-whole structures defining territorial entities; a smaller-scaled but formally analogous 'city-neighbourhood' network is a regular feature of European industrial cities. Here again, part and whole ('neighbourhood' and 'city') are mutually constructed in the network (see Read forthcoming). At smaller scales still, streets or houses, would be the parts making up the whole of the neighbourhood, while rooms are the parts making up the house. These structures have been imagined as bounded territories, and some have borders that are zealously defined and guarded, but all of them are constructed and given practical reality for their users in the networks through which they are enacted and used. Worlds, empires and trading leagues are historical constructions, formed in networks of cities; counties and principalities have appropriated and organised territories at smaller scales as networks of towns; nation states are a relatively recent invention and construction intended to stabilise shifting political authorities and allegiances, again constructed and organised around a network of urban centres; inner city neighbourhoods were constructed as parts of the industrial city, and out-of-town centres and suburbs were invented and constructed as parts of the post-industrial metropolitan city-region.

The neighbourhood is in the city and the city in the metropolitan region, nation and world and these places exist in 'vertically' structured nested relations with one another while neighbourhoods and cities relate 'horizontally' with other neighbourhoods and cities. Each one of these metageographies is a network in itself and each is part of a larger-scaled network and contains smaller-scaled networks. This is topologically a stacking of layers so that each of these metageographies exists in organised relations with others. But this is a 'layering' of different network spaces rather than of territorial units bounded in a universal space and in 'Russian doll' relations with each other. There are no necessary boundaries between the layers and one may slip out of the part and into the whole as easily as passing from a neighbourhood back street into a city main street. At the same time it is not possible to confuse the street with the neighbourhood or the neighbourhood with the city, or the city with the world for that matter, because the part-whole structure is at the same time a knowledge structure and a structure constructed and realised in the world. It is one of those 'concrete abstractions' that exist simultaneously in knowledge and reality and give the lie to the Enlightenment 'bifurcation' of nature.

An alternative phenomenology of places would deal with regions and places as sociotechnical networks which include emplaced objects, the technical 'grids' that connect them and the 'communities of practices' who know and use them. It would deal at the same time with the ways technical 'grids', networks of places, communities and practices are articulated with one another over scale differences. A different phenomenology of places would focus on places in networked 'regions' and the ways they support practice and object 'worlds' as sociotechnical systems. We live environed by such 'worlds' and systems. Karin Knorr-Cetina has in a research project which has spanned two decades investigated the networks and cultures of global financial trading. A 'world' is created in a high-tech construction involving optical cables and satellite links, along with a lot of expensive computing hardware and software, to present the objects of the global financial market real-time to traders wherever they have access to a terminal (Knorr-Cetina and Bruegger, 2002). Financial traders do and see things in a technical system that goes far beyond technics to be acutely tuned to their individual perceptions and conceptions, and to a culture and practice of trading that spans the globe. Intention and meaning have been 'shifted' into equipment and into what Knorr-Cetina calls 'synthetic situations' (Knorr-Cetina 2009) in offices and on trading floors. There is a 'world' created in this sociotechnics that seems to 'annihilate' space and time. This 'annihilation' is, I have argued before (Read 2009), nothing more than a highly designed and maintained effect of the technics, and this 'world' doesn't exist in isolation; it is linked to other spaces so that the 'world' of global trading may be exited and the trader can use the office, or can exit the building to use the street network to find the metro and go home. Each of these 'steps' in a chain of activities is a transition from one situation, setting and 'world' into another. The space of global trading requires both access and security through portals with the spaces of offices, buildings, streets, public transportation systems, and so on, and each of these portals will be as technically and socially designed and effective as the spaces themselves.

The network of global trading is undoubtedly a powerful technology, but whether technologies like these imply anything about a society any more fundamentally 'new' than mercantile or industrial societies were is a matter for debate. Particular 'worlds', even contemporary global ones, may be less influential on their own than they are in their topological relations with other 'worlds'. They may define their power more in the ways access is regulated through portals with other networks than through their own particular technical and social operations and scopes. The contemporary distinction between 'spaces of flows' and 'spaces of places' falls away as global networks become articulated with other very everyday networks and places.

One of the functions of movement infrastructures like road, rail, metro and airline systems will be to define places and coordinate metageographies in their scales and scopes. For a London Underground user, London is the famous underground map realised. The infrastructure is invested with a diagrammatic topology and realises a specific place-structure. This structure founds a 'world' through a particular technics and culture of travel by underground, which includes access,



ticketing, information and security procedures. But it connects also to significant places that serve as portals to more global spaces, and responds to an overground network, a pre-existing structure of places to which the underground adds structure and emphasis.

It connects to the street grids of the neighbourhoods centred by underground stations, and it regulates profoundly the ways these different metageographies and cultures are articulated with each other. The equipment here may not be as high-tech as in Knorr-Cetina's example, but is no inconsiderable matter. Beside the transportation systems themselves and their signalling, scheduling and other support systems, there are public facilities, shops, offices and housing built in a systematic relation to transportation systems, business and industry to which employees, suppliers and clients need to be connected, and all manner of other technical and support systems, including street and line maintenance, energy, water and drainage systems, stairs and lifts, street and passenger signage that need to be incorporated. All of this is maintained in a high state of efficiency and order, reflecting the strategic role of this regulating and regularising infrastructure.

Cities, regions, nations, worlds and their parts are articulated, consolidated and stabilised in airline, underground, road, rail and other technical movement grids, but what is real is not just the material but also the coherence-giving, sense-making structures of part, whole and scale. The effect is that today the whole is locked into synoptics territorial users understand, with well-known places made visible and present locally and trans-locally. London is indivisibly and several times over, percept, concept, technique, object, network, culture and practice, a patch of integrated and strategic territorial order historically constructed and realised. The structures that make it up differ from and precede the cartographic map. They order the world according to a different order of precepts than the distances, geometries and boundings of the map. These constructions have their own remarkable levels of stability and persistence as place-structures, and as coordinated diversities of cultures and practices. Different individuals and different cultures and practices share, before all else, these structures of places as common knowledge. Taken together, these structures are a practical objectivity which informs every movement and every action – as well as every further intervention – in our human world.

This reassessment of phenomenology centres our attention on the historical construction of our anthroposphere, which includes a topological 'structure of places' organised by a layering of infrastructural 'grids' into a set of normative 'levels' which have a metageographical, intelligibility-giving and 'community of practice' defining, character. 'Structure of places', 'grids' and 'levels' are perfectly objective and mappable and are proposed as the foundation of a different phenomenological urban and geographical model. Further contributions will set out these structures in real examples in order to assess their potential as an urban and geographical model.

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