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Guest editorial

Introduction: absence – presence, circulation, and encountering in complex space

In common sense it is obvious: an object or a person is either here or there, and not in two places at the same time. Hard on the heels of this first self-evidence comes a second: the idea that if things are not chaotic then this is because they are contained within something larger, a whole. In which case, complex though it might be, there is indeed an order. Things are somewhere, and some are bigger than others.

The readers of *Society and Space* are part of a movement that has been undermining the self-evidence of such spatial truisms for several decades. This collection of papers is a further contribution to this effort. They vary in their approach, but they all explore two questions: first, what happens if presence and absence—or proximity and distance—are *not* opposed to one another; and, second, what happens if there is no spatial totality or shared context. Perhaps the classical Euro-American conception of the order of the universe imagines this in the form a pyramid. Everything has its place in a single cosmological container. But if this is the case then the contributors to this issue take it to be a precarious and reversible achievement. They argue that people and objects do not naturally live anywhere in particular. There is no context in which beings, things, or events naturally arrange themselves. All of which is not to deny that size and position are important, but to treat them as permanent existential questions rather than as fixed coordinates.

In abandoning the fiction of natural space, the contributors multiply concepts and metaphors as they consider flux, circulation, and the modes in which spaces and times deploy themselves. They multiply modes of ordering (Law, 1994) and as they do so oxymorons proliferate. The global is local; the local is global; presence can be absence; and the absent present. The implication is that we should be putting the oppositions implied in such pairs behind us. It is also that we should be looking at processes. How are localisations produced? How are scale effects created? How are things made absent or present? These pressing questions are made all the more urgent by the complexities which follow the proliferation of communication and transportation technologies (the focus of many of the papers in this collection).

In this introduction we do not summarise the papers or draw definitive lessons from them. This is work in progress. Instead we highlight a number of theoretical possibilities that might help to enrich the way in which we understand a world where times and spaces are in the making.

The global is local and absence is presence

Drawing on work by Chunglin Kwa (2002), John Law invites us to choose between two paradigms for complexity: 'romantic', on the one hand, and 'baroque', on the other.[1] The first assumes: that beings have fixed identities; that they are able to enter into relations with one another in ways that can be described and made explicit; that events and phenomena can be explained causally; that there is a whole that exists and orders the endless multitude of visible facts and events. In the romantic, then, distance and scale can be determined without ambiguity: we know who is big and what is small, and who is close to whom. The world is a hierarchical tree or clustering of the kind

[1] Note that the term 'romantic' as used by Kwa and Law connotes a search for explicit and precise forms of wholeness, rather than a preverbal apprehension of unity.

loved by methodologists. Nothing escapes the analytical grid if we go on for long enough. The second paradigm is quite different. Inspired by Gottfried Leibniz's monadology (but in a form in which God's need for coherence in the world is not an issue) it tells us to look down. It insists: that there is no distinction between the individual and his or her environment; that many, perhaps most, relations remain implicit; that entities are made out of a myriad of heterogeneous entities; that these in turn are made out of an infinity of other entities, and so on. So this is a Leibnizian hypothesis. It is a monadology of the kind developed with great brilliance thirty years ago by Michel Serres (1974) when he used the notions of 'interference' and 'translation' to recast theories of communication and the construction of the collective. Some of the contributors to this issue adopt a baroque understanding of space. All, however, take their distance from the romantic alternative. And as they do so they point to a variety of strategies for exploring this new continent. These are not necessarily unknown to philosophy, but many are novel in the context of social science. So what is on the list?

First, many actors are committed to a romantic clarity about size and space. This means that we need to take the existence of such clarity seriously, and ask how actors struggle to build differences in size or location. Here the much-criticised notion of 'network' is important. This is because size is not a matter of scale but of connection. The more one point is connected to others the more it is able to create asymmetries and to 'localise' those others. Tiago Moreira shows this at work in the operating theatre, as does Mimi Sheller when she distinguishes, following Harrison White (1992), between gels and networks. But, as Moreira also shows, the notion of connection is not enough. Something has to *circulate* too. There has to be movement between the points for action at a distance and mobilisation to be possible. For control, information has to move. There have to be intermediaries.[2] If one place is to be 'globalised' then it has to be linked to others.

But how? There are many possible answers, but formalisms are often important. Law explores this for the equations used by aerodynamicists, and Ivan da Costa Marques shows more generally the importance of mathematical expressions in the production of sizes and inclusions. Mathematical metaphors, he argues, have replaced religious metaphors as channels to a transcendental unity. Naturalised in textbooks, they are widely distributed metaphors which may be used to characterise reality. And sometimes they are picked up and used to represent (but also to enact) the world. The consequence is that the real is treated (and experienced) as clear and single in form, endowed with particular relations including those of size and inclusion. Both da Costa Marques and Law show how mathematical formalisms in science may be picked up and circulated in the technologies of communication. They also show that this helps to circulate information and data, creating privileged places in command of many other locations. Hierarchies and differences in size result. Clusters of clusters are created, forming pyramidal structures of romantic complexity that come to have a life of their own. In his study of small-business telephony Alexandre Mallard also describes these strategies at work in a particular context. Like a number of other authors, he draws here on STS (Science, Technology, and Society) work which shows that size is not an explanatory variable but is in need of explanation—that indeed, as the common expression puts it, the global is local.

A second way of exploring the construction of relations of size and inclusion is to trace how the idea of a totality which includes or covers the parts is produced. Hierarchical trees, stylised maps, techniques for making links, measuring, or laying out grids, all of these are ways of creating representations in which the parts self-evidently come to be seen

[2] This has been explored in actor-network theory (see, for instance, Latour, 1998).

as smaller than their sum. There is no need to be exhaustive or precise. All that is needed is ways of juxtaposing and making contiguities. The creative imagination of an artist such as Escher was needed to help us visualise heterarchy. Thus a sheet of paper or a screen, for example, impose their own form of spatiality which enacts a particular logic of position and juxtaposition. Moreira nicely describes this way of creating the local and the global. He shows how actors use divisions that are already present (for instance, the walls of the operating theatre, the patient's body, and the anatomical divisions imposed by medical specialisation) to make distinct zones which form a kind of elementary structure. The issue is not so much to map the world as to cover it by producing patches which generate a unified space because they are contiguous with one another. How are such patches and contiguities made? How are totalities made which contain everything else? What are the technologies and instruments involved? These are questions for study—though Nigel Thrift's paper helps to give shape to this agenda.

So size and inclusion are effects. But so too is position or positioning. Here Kevin Hetherington's text is particularly important because it shows that positioning cannot be separated from disposal. Encumberment and expulsion—these too are processes. How can we produce an order when things and people are constantly shifting their positions? When they are constantly trying to move on, and make a place for themselves? People die, but this does not mean that they disappear. Others are born, but where should they go? Things are set aside, or thrown away, but this does not mean that they have completely disappeared. These questions are important because such flows are constantly threatening even the best-established forms of order. If things hold steady at all it is because the positions and relations of inclusion which make them up are constantly being reworked. The problem is chronic—but perhaps more visible than it has been in the past given the demographic explosion that we are living through. Human numbers are expanding at an ever-increasing rate. But so, too, is the number of nonhumans, with an avalanche of objects and artefacts tumbling from laboratories and enterprises, all claiming to be welcome. This demographic pressure means that it is quite impossible to conserve everything. Processes of elimination are vital [an issue not explored by Arjun Appadurai in *The Social Life of Things* (1986)]. So how can we produce order by managing these multiple fluxes and flows?

Hetherington shows that the answers offered by Mary Douglas (1970) and René Girard (1989) will not do. The production of absence is progressive. Separation passes through several stages. Whatever is being discarded (human or otherwise) continues to live on in a new form and maintain some kind of presence. This alchemy involves very specific practices, as is revealed by the frequently cited case of Japan. In the two-step burial the object or person is physically removed although still remaining present in some other form. Unless this is done properly then presence and absence continue to interfere with one another. In a fascinating study [reminiscent of Marcel Mauss's (1991) and Marshall Sahlins's (1972) famous analyses of gift giving in which the counter gift makes it possible for the spirit of the gift to be both present and absent], Hetherington links debt, remorse, and haunting. Ordering is achieved only if this process of ontological transmutation is done properly. And presence does not necessarily imply physical copresence. On the contrary, it may be that at certain moments it is possible only if physical separation has been achieved. Hetherington's argument is that, even in extreme cases of definitive separation (such as death), absence is possible only if there is also continued presence. Unsurprisingly this is also true for less dramatic circumstances such as the use of mobile phones described by Christian Licoppe and John Urry. We will return to this point below.

The local is not in the local; presence is not reducible to copresence

So the local is an achievement in which a place is localised by other places and accepts 'localisation' itself. But this means that no place is closed off. A monadology, as Law and Moreira remind us, insists that each location is distributed in others. By now this is more or less received wisdom—and certainly it is not new philosophically. Recently, one of us, Michel Callon, was sorting through his old school exercise books. These included the maxims the teacher used to start each day. One of these read: "Invisible but present beside the ploughman is the blacksmith who made his ploughshare." Obviously the field and the farm were the context for the ploughman's life, but the adage tells us that he shared his life with many other people and things. He was part of a community, a virtual community, and perhaps even a cybercommunity (Urry, 2004) extending into other places and other times. And the cornerstone of this set of relations, this virtual community? The ploughshare, transported from one place to another.

The importance of technologies for folding together places, actors, or actants separated by time and space is obvious (Deleuze, 1993). Technologies and material arrangements distribute action and actors. The local is never local. A site is a place where something happens and actions unfold because it mobilises distant actants that are both absent and present. The drawing in the school exercise book illustrates this strange ontology. The blacksmith is walking beside the ploughman, his hand resting affectionately on his shoulder, but his silhouette is surrounded by a blue halo, just like a guardian angel. The papers below illustrate how the context for places is made by links to other places and times. And the argument applied to technologies of communication is particularly interesting because it raises questions about the notion of embeddedness.

We know the genealogy of this term. It started with Karl Polanyi (1957), and was reworked by Mark Granovetter (1985). These authors treat the relations between actors as a kind of structural web. What is important is not the positions, sizes, or contexts that hold things together, but relations between people. Other kinds of relations, economic, technical, and political, are said to flow through this web. This is the theory of embeddedness, and it is useful because it insists that relations come before entities or their qualities and positions. At the same time it is limited. For instance, communication technologies multiply mediated relations, but they do so unpredictably. The links between ploughman and blacksmith are improbable in the extreme, and if we want to trace these we have to pass through the ploughshare and the plough to the endless intermediaries involved in their invention, manufacture, transport, and the business of putting them to work and keeping them going. Mallard's text below illustrates the limits of social embeddedness perfectly, in part because it has to do with economic activity where the theory started out. Networks of social relations are no doubt important for small enterprises. But how are *new* relations made? If we want to answer this question we have to start thinking about technologies. We have to think about telephone directories, telephone lines, mobile phones, not to mention the billing and call-logging systems for telephone canvassing. These are the kinds of technologies that link distant actors, that make them present to one another, and that move them through time and space.[3] These are the kinds of technologies that distribute actors, even those who stay at home, through time and space.

The new technologies of communication multiply such distributions and links between different spatiotemporal contexts. For instance, in this collection Michael Bull talks of the way people close themselves off by listening to their Walkmans,

[3] In French 'canvassing' translates as *démarcharge*. The linguistic root here is *marcher*, to walk. So 'démarcharge' also translates into English as 'to approach'.

thereby uncoupling themselves from their immediate environments (see Sheller, 2004, on uncoupling). With the Walkman the user is able to focus on his or her desires and aesthetic projects. But although this separates the user from others who are copresent, he or she is also being linked to the musicians, to the singers, and to everyone else who has listened to the music. It is often claimed that using a Walkman is like a form of autism, but this is not right. Being disconnected from physical context is the price to be paid for the links with other spatiotemporal contexts and people. The Walkman is like the fable of the blacksmith and the ploughman. Like the ploughshare, it produces translocation. And the same is true for mobile phone users. They are elsewhere rather than here, living in the future rather than the present.

Similar process are at work in the cases discussed by Urry and Sheller—though these are somewhat more radical. Urry is right: the hybridisation of transport and communication is a vitally important phenomenon. Individual time–space sites transport themselves to other places and times—to other sites with the same ability to transport themselves. This, then, is very far from embeddedness in the economic-sociology version of the term. Instead of an infrastructure of social networks and knots, everything is in movement. Relations of presence and absence are being dynamically reconfigured. There are many new questions to be explored about the character of coordination. Perhaps, for instance, we are passing from a society of embeddedness to one of the encounter.

Encountering

Places that mobilise other places. Places that distribute themselves into other places. Relations that do not follow networks of fixed positions. So the question is: are structures eroding? Are we not moving into a world of chaos? For at least when the positions and sizes of social relations were fixed we lived in a form of order which held anarchy and confusion at bay. So how, then, should we think about this baroque world? How is it that any landmarks get established at all?

Arguably social science is not particularly well equipped to handle this question. Yes, it says technology is important, but the tools and the metaphors that it has for thinking about this are a bit limited. Technological determinism—either utopian or dystopian—is a constant risk. Vocabularies for thinking the social and the technical together without reifying either one or the other are a bit thin on the ground. Though there are alternative traditions, perhaps those that work best come in one variant or another from semiotics, where relations are seen as simultaneous social and technical effects.[4] This, at any rate, is the approach adopted implicitly or explicitly by a number of authors in this collection as they wrestle with the character of sociotechnical coordination. And together they suggest two possibilities for thinking about that coordination: *encountering* and *anticipation*.

Thus Thrift's paper reveals that the history of addressing and making sense of relative positions is a rich resource. Timetables, diaries, postal addresses, barcodes, and microchips are some of the techniques that make it possible to track and coordinate people and objects. Thrift's argument is that if there have been radical changes then this is where they are to be found: in the *track-and-trace model*. FedEx is a striking case. Its practices of translocation would be unthinkable without enriched and transformed technologies of encountering. But if this is so then it is wrong to talk of a 'network society'. The problem here is that, despite the best efforts of its

[4] The most obvious semiotically inspired approaches include: feminist technoscience studies (see, for instance, Haraway, 1997), so-called actor-network theory (for example, Latour, 1998), the tradition deriving from Michel Foucault's work on governmentality (see, for example, Barry, 2001), and certain versions of geographical retheorising (see, for instance, Thrift, 1996).

proponents, talk of networks tends to fix things and imply predictable trajectories. An alternative and less structural metaphor is needed. Perhaps it would be better to talk of 'encountering societies'. Here Urry's profound reflection on the notions of presence, absence, and interaction points the way. Does presence imply face-to-face interaction? Does it imply two physical bodies that are able to see and touch one another? Perhaps, but perhaps not. For what is startling about the track-and-trace model is not that such relations disappear (obviously they do not) but that geographical propinquity cannot be separated from quite different forms of presence—which we would normally call absence. Urry is right to suggest that copresence and the sociotechnical infrastructure that makes it possible are underanalysed. And Donald MacKenzie's contribution on the 'outcry' speaks to this. Using a basic definition of sociability (imitation), he shows that use of the telephone or other systems of information does not reduce imitation. Instead it tends to increase it despite the fact that imitation would seem to be a paradigmatically face-to-face phenomenon.

So the argument is that if forms of presence pass through absence then we need to attend both to physical copresence and to technologies of transport and communication. This means the SMSs (short-message services) that correspond to what Licoppe calls 'connected presence' are part of a world of track and trace. Anyone can be connected to anyone else, at any time or place. At the same time they are ways of making present: 'I'm close to you and I'm thinking of you'. And, yet again, they are also techniques for preparing the ground for physical copresence. Perhaps, then, we should be saying that a meeting is 5% copresence and 95% track and trace. But Thrift shows us that anticipation has at least as much to do with technology as it has with habitus (Bourdieu, 1990), and Mallard illustrates one way in which this encountering works in commercial relations.[5] Like that of Thrift, his paper shows that the telephone may be understood as the pursuit, by other means, of all the earlier methods for organising encounters (the catalogue, the shop window, the diary). Perhaps, then, we should say that this sociotechnical infrastructure for organising encountering is a kind of unconscious. This would make it like Pierre Bourdieu's habitus, except that it is distributed not simply into bodies but also into barcodes, sims, telephones, and GPS (global positioning systems).

The argument is that social life is sequenced just like the internal calculations of a computer. As we type into a PC we depend on its clock and the way it sequences its activities. The symbols have to arrive at the right place and the right time if the words are to be put together properly. But we do not have to know about this when we are typing. The ordering, the sequencing, and the composing of distributed activities are like a form of collective unconscious. They do not determine what happens, but they make relations and events possible. At the same time, as Thrift suggests, the sociotechnologies of encountering may also act as constraints. Getting lost and switching off are difficult. The need, then, is not simply a matter of escaping encountering and its unconscious, but also of shifting towards other modes of ordering where notions such as position, juxtaposition, relation, and place start to lose their meaning.

[5] Until recently, economic theory has tended to assume that the relations between supply and demand have been explained (perhaps in the form of an intersection of two curves). But it told us nothing about particular instances of supply and demand and how these were given shape and brought together. It told us nothing about how they iterated themselves towards coordination, about the sociotechnical arrangements that made this possible, or how the market became predictable. For preliminary studies see Callon (1998).

Other modes of ordering

The papers brought together in this issue also show that there are other ways of ordering the world. It is often not always necessary to establish positions or inclusions, or to play upon the antinomies of presence/absence or local/global. Thus Sheller's paper works upon and deepens the notion of gel created by White (1992) as an alternative to network. Here, as in the notion of fluid proposed by Annemarie Mol and John Law (1994), links are not fixed. Instead positions and meanings are multiple and open. Less important than the linking insisted on by networks are processes of decoupling and modifying relations and positions—while keeping the possibility of reconnection open. Mol and Law showed this at work for anaemia, but it seems to be ubiquitous in mobile communications where (to take Urry's striking example) the motorcar is being transformed into something like a cyber car. The cyber car avoids rigid positions, endlessly coupling and decoupling. Here beings do not belong to places, and relations are constantly being reworked. But neither is this chaos. The crystal is only a single form of organisation. Smoke, gel, fluid, these are ordered too. Thus Moreira, writing about the operating room, talks about the existence of multiple modes of ordering: region and network, but also fluid and fire. He also argues that there are constant interferences between these different forms of spatiality as they necessarily overflow into one another. This means that actors live simultaneously in each of these different interfering worlds: gel and network, fluid and fire. Copresence is both a location and a relation. And da Costa Marques, writing about formalisms, arrives at similar conclusions. As we have seen, mathematical expressions order the real exhaustively in the face of ever-increasing complexity. But mathematics also produces a plurality of possible orders. When unity becomes systematic this engenders multiplicity. This, then, is the moment when the opposition between romantic complexity and its baroque cousin loses its importance. The romantic simply becomes a particular case of a form of complexity that can only be called baroque. Thrift's discussion of the game Zelda gives us a sense of this baroque complexity. There are no rules, but the game is programmed. It cannot be simply described, but it works. If you play then you have to accept that you will lose, and in losing you explore the rules and you learn to play.

Agency

Overall, then, the lesson from these studies is that spaces and orders are open. Relations that imply size and distance are only two of the possibilities, and as Moreira shows even they depend on other principles. Thus in a world where actors try to anticipate encounterings, or lose themselves to other modes of ordering, agency is being reconfigured. But how can we define agency in a world where circulation has become more important than fixed positions? In a world in which identities, relations, and many forms of ordering do not fit a logic of geographical—or network—spatiality?

Recently Lucy Suchman has talked of the *amplified body*. What is implied here? The answer is that technologies such as cell phones are not best thought of as extensions to the body. Instead they are organs, integrated *into* the body. The argument is general. Capacities for calculation, connection, the fabrication of relations and of fitting together have all come from outside but have then been integrated into the body. They have become wearable, and what is worn, as Suchman notes, is intertwined with the person who wears it. Senses are enhanced. This suggests that the character of agency is on the move: that it is radically reconfigured in a process of prosthetic incorporation. Licoppe's paper shows how calculative agency is being remade. With technological differentiation, users can choose between fixed or mobile phones, between e-mail, fax, SMS, or talk. Providers can trace and visualise the connections being made and adjust their charges. All of this creates a new space for strategic

calculation—and the tools to calculate within it. Supply and demand both become increasingly calculable. MacKenzie's contribution also illustrates this process at work. He shows that economists' theories relayed through information and communication technologies end up helping to create a *homo economicus* close to that described in those theories.

So agency shifts by incorporating tools that originally come from outside. But the advertising that comes with the new technologies is similarly being incorporated. One example among a thousand is a television advertisement in which we see the face of an executive who is telling his boss: "I doubt whether I can work on that file, I'm submerged at the moment". In the next shot he is framed differently. We thought he was in his office, but he is actually on a sailing boat—and it is a wave that is doing the submerging. Is this manipulation? Is it information? Perhaps, but, more actively, it is also a matter of enriching the agency and the subjectivity of the viewer. It is telling us in a very concrete way what a conversation on a mobile phone can say and do. Circulating in public space, advertisements add yet another layer to interiority and objectivity.

Agency and subjectivity are not just about calculation and interpretation. They may also have to do with emotion. Circulation and displacement are also crucial here. For instance, Licoppe shows how mobile phones extend relations of presence. All these SMSs, these messages that say nothing? 'I'm thinking about you', 'I am with you', 'I did this', and 'what are you doing', 'what you thinking about?' Well, perhaps they say nothing, but by virtue of their circulation perhaps they are also saying everything. Perhaps they are creating love, altruistic love. Perhaps they are the materials to hand for making agape present (Boltanski, 1990)—attending to another person to the exclusion of everything else. If so, then all these messages about nothing are ways of making materials for extending and enriching subjectivities. And the same applies to the artistic emotions analysed by Bull. Such emotions, as Émile Gomart and Antoine Hennion (1999) have shown, combine passion and passivity. Bracketing off and unplugging are necessary for the creation of virtual communities. So the Walkman is like a drug. Its user is made passive in his or her immediate context. But that passivity (the passivity of addiction?) goes along with links and interdependences with other places and times. The person listening to a Walkman is transported somewhere else by artistic emotion—and is unplugged from the here and now. Passion, emotion, to be affected, all have to do with travel, with circulation. The language gives it away. To be moved, to be transported, the trip, these are metaphors for displacement. As, too, is addiction, a word that comes from the Latin *ad-ducere*, to lead away.

Hetherington presses this logic to its ultimate conclusion when he talks about the agency of the absent. To understand this agency we have to treat it as the outcome of a process in which distance is created; in which displacement is controlled; in which something is kept present whilst also being lost. But it takes time to change the ontological status of whatever is being disposed of, and these successive transformations mean that absence is necessarily endowed with its own agency. Here is an example, a family custom. When an old person dies, a parent cuts down a tree and gives a section of the trunk, a log, to each of the surviving children and grandchildren. This log makes the absent present, but in a different form: this is the first burial and the first ontological transformation. The log can be moved, but in the end it too disappears: this is the second burial. Perhaps no one notices that it has disappeared, been lost or burned. But its fate is not predetermined. Rather it is in the hands of those who receive it. Its absent presence varies in form as time goes on and it passes from hand to hand. In this Aristotelian cosmos each thing must find its place and each place must receive what was destined for it. But in a world where substances become

corrupted and transform themselves into one another there is no displacement without force. And what is the force that kills the branch in the end? It is the agency of the absent. For it disappears when the log no longer moves. This is what we call mourning. Whether agency is calculative, interpretive, cognitive, whether it makes passivity, whether it allows the agent to be overwhelmed by emotions or by the absence of that which has disappeared, whatever its form, it is always associated with what Latour calls circulating entities. The technologies of information have this huge advantage: they make this visible.

The papers that follow confirm the promise of the approach. But they are only a beginning. Most of the work remains to be done.

Michel Callon, John Law

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