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Abstract

In a context where the study of communications tends to focus only on the mobility of information, to the neglect of that of people and commodities, this article explores the potential for a closer integration between the fields of communications and transport studies. Against the presumption that the emergence of virtuality means that material geographies are no longer of consequence, the role of mediated 'technologies of distance' is considered here in the broader contexts of the construction (and regulation) of a variety of physical forms of mobility and the changing modes of articulation of the virtual and material worlds.

Keywords

communications, geography, material, mobility, transport, virtual

An old dictionary I have at home defines communications broadly, as 'n. act of imparting (esp news); information given; intercourse; common door or passage or road or rail or telegraph between places' (*Concise Oxford Dictionary of Current English*, 1964). This older definition encompassed not only the symbolic realm – which is what we nowadays tend to think of first, when the question of communication arises – but also the field of transport studies. It was in this spirit that Marx and Engels defined communication broadly enough to include the movement of commodities, people, information and capital – including within their remit not only the instruments for transmitting information but also the material transportation infrastructures of their day (de la Haye, 1980). However, in

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recent years, the discipline of communication studies has come to focus exclusively on the symbolic, institutional and technological dimensions of the transmission of information. Over that same period, the analysis of the movement of people and commodities has largely been relegated to the discipline of transport studies and remains neglected by communications scholars. In this context, my argument will be in favour of a less media-centric paradigm which effectively places questions of media and communications in the broader frame of their material contexts and settings (see Morley, 2009).

Globalization and time-space compression

Happily, the contemporary focus on the globalization of culture and economic systems has begun to challenge some of the presumptions, exclusions and prioritizations which characterize narrower approaches to communications. Thus Arjun Appadurai's (1996) call for the simultaneous analysis of the contours, interactions and disjunctions of what he calls the mediascapes, ideoscapes, ethnoscapes, financescapes and technoscapes of the contemporary world has been widely cited, if little instantiated, as yet. In this setting, as he puts it 'mobile messages meet de-territorialised audiences in a mutual contextualisation of motion and mediation' (Appadurai, 1996: 5). This approach to mediated forms of communications, which is alert to the variable cross-border mobilities of both messages and audiences, evidently challenges any communications studies which fails to problematize the correspondence of culture and territory. However, this is not to say that we live in an entirely de-territorialized world and I will later explore some of the contemporary dynamics of re-territorialization.

Here we also need to focus on the factors governing the differential mobility of the people who constitute media audiences, in terms of available transport technologies, techniques for the regulation of both on- and offline territories (see Christensen et al., forthcoming), and the regulation of flows of both messages and people. As Anselm Franke says, these infrastructural 'realizations of power in space', centring on transport and communications, regulate both movement and stasis for different sections of the population. Thus:

much as highways, media networks and pipelines may connect they also divide; much as they integrate they also dis-integrate; as much as they compress time and value in space for some (the new mobile class) they devalue it for others who have to remain immobile. (Franke, 2005: 8)

Perhaps one of the most notable features of these differential mobilities is that, in an age of transnational de-regulation, the 'free flow' of goods and media products is quite at odds with the increasing regulation of flows of people, in terms of migration policies and border controls. Moreover, as Peter Adey (2006) has argued, 'if mobility is everything then it is nothing', and it will not help to render the world as a formless 'gloop' of liquidity. Thus we must distinguish the different forms, rates and modalities of relative mobility and immobility. Notwithstanding his own emphasis on the central, periodizing metaphor of liquidity, Zygmunt Bauman nonetheless distinguishes between those who he calls the 'tourists' of the postmodern world, whose credit rating makes them welcome wherever they wish to go, and the 'vagabonds' who have difficulty in getting a visa to go anywhere

at all (Bauman, 1998, 2000). Ursula Biemann's description of the position of what she calls the 'contained mobility' of one such 'vagabond' well captures this dilemma as he:

comes ashore in an off-shore place, in a container world that only 'tolerates' the trans-local state of *not* being of this place, nor of any other really – but of existing in a condition of permanent not-belonging, of juridical non-existence. He comes to signify the itinerant body, bound to string along a chain of territories, never reaching a final destination, probing the protocols of access time and again. He moves through non-civil places, waits for 'status' in off-social spaces.... What used to be a state of temporary exemption – survival in the fluid timespace of legal deferral – is slowly consolidated into the prime mode of migratory subsistence. The site of this existence is connected but segregated: it is the world system of contained mobility. (2008: 56)

The return of the material world?

Ever since the point at which Jameson (1992), Harvey (1989) and Soja (1989) alerted us to the centrality of 'time-space compression' in the constitution of (post)modernity there has been a significant resurgence in cultural geography, though their work is now subject to serious critique by geographers who rightly point to the much longer history of the 'compression' process, well before any 'postmodern' era (see May and Thrift, 2001; Rodrigue et al., 2006). Much of this work has focused on the capacities of 'the 'teletech-nologies' of our age (Derrida and Steigler, 2002) to transcend distance. Indeed some of it presumes that we all now live in a new cyber world of 'placelessness', where material geography counts for very little as a determinant of social or cultural life (Meyrowitz, 1985; Wark, 1994, 2002).

However, a revisionist position has more recently been articulated which disputes these idealist presumptions (Hannam et al., 2006; Urry, 2008) and argues that while the new virtual dimensions of our world are of considerable consequence, material geography, far from being 'dead', still requires our close attention. Emerging critical work has begun to argue that cyberspace itself has a perfectly identifiable geography, in which its routes and locations largely replicate the structure and patterns of earlier modes of communication (see Crampton, 2003; Dodge and Kitchin, 2001; Zook, 2005). Among other things, this work usefully alerts us to issues such as the systematic variation (and manifest inequality) in internet connectivity per square kilometre in different geographical locations. Here we must also note the curious fact that these cyber-industries, which are commonly thought to be about the *de*-territorialization of communications, actually tend to cluster in very particular places – such as Shoreditch in East London, and the 'CyberSentier' district in Paris – thus demonstrating the continuing significance of physical location as a form of competitive economic advantage (see Graham and Marvin, 1988; Porter, 2004).

Internet technologies were initially deemed to be most significant for their capacity to enable deceptions and dissimulations of various sorts, liberating identity not only from place, but also from embodiment. However, we now see a growing tendency for cyber networks to draw much more explicitly on geographically based connections and on participants' actual, rather than pretended identities. Thus, for many net-users, the virtual simply becomes one dimension of personal identity, rather than some magical means of

'escaping' from it, an increasingly 'banalized' overlay of the virtual on the actual. To this extent locative media, which are highly place-sensitive (such as Facebook's own recent 'Places' application) are now widely seen as central to the future profitability of 'social media'. Likewise, in the business world, it is increasingly clear that the principal function of email is not so much to connect people across long distances but rather, to intensify communications between people who are already geographically contiguous (and often in the same building). Furthermore, processes of what are sometimes called 'deteritorialization' such the development of off-shore telephone 'call centres', still follow the geographical logic of imperial history – with major industrial countries commonly siting them in their own ex-colonies.

Material geographies thus retain significance in a variety of ways, even under changing technological conditions. It is exactly how and where such transformations are occurring to which we must attend. Once we look at matters in this more historically and geographically nuanced way, we discover that, rather than proceeding abruptly from one 'era' of communications to another, we find a number of continuities, overlaps and modes of symbiosis between old and new technologies of symbolic and material communications. In this shifting landscape of differentiated forms of virtual and actual connectivities, old ghosts from previous historical eras still haunt the byways of cyberspace, and the effectivity of even the latest technologies still depends, ultimately, on material infrastructures. Perhaps a good example of the latter would be the moment in early 2008 when the internet was disabled across much of Australasia because the undersea cable carrying it, which still runs along the route of the 19th-century telegraph line laid by the British empire, from the Mediterranean across the Indian Ocean, was damaged by a ship off Alexandria, near the mouth of the Suez canal – itself once known as the 'windpipe' of the British empire.

In this context, questions of transport and communications must be analysed in terms of how infrastructural 'networks' of different types enable (or inhibit) different modes of activity for different sections of the population. Thus, rather than an abstract 'dromology' of speed, as a generalized aspect of contemporary culture (see Virilio, 1986), we need an analysis of the stratification of access to different modes of 'connexity' (Mulgan, 1997). As against the much-trumpeted role of new technologies in allowing the transcendence of social, geographical and cultural divisions, our enquiries should also be concerned with how new divisions are often re-inscribed in technical modalities, by means of the contemporary construction of 'techno-zones' of different kinds (see Barry, 2001).

In the light of these considerations, rather than think about cyberspace in the abstract, as some unitary sphere, we might be better advised to investigate the specific ways in which the virtual is integrated with the actual in different material cultures. In this respect Danny Miller and Don Slater's (2000) study of the uses of the internet in the specific cultural context of Trinidad offers an exemplary model of how to better understand the internet as it is (differentially) integrated into the material worlds of specific places. Here, an illuminating analysis is offered by Greg Collins' (2009) analysis of the uses of mobile phones in post-collapse Somalia. Rather than treat the technology of the mobile phone itself as a *deus ex machina*, causing revolutionary changes, Collins carefully situates the technology in terms of how it is fitted into the context of the pre-existing lifestyles and cultures of both nomadic pastoralists and chain migrants. This 'contextualist'

view of the technology is similar that that of Jennifer Bryce (1987), which provided part of the basis for my own and Roger Silverstone's earlier work on the household uses of information and communication technologies (Morley and Silverstone, 1990). By demonstrating how the take-up and use of the phone is influenced by pre-existing cultural patterns, Collins offers, on a small scale, a version of Manuel Castells' own 'network logic' but (as he puts it) 'in reverse' – and stripped of any grandiose claims about the 'transformative' nature of these technologies.

The construction of connections and mobilities

As noted earlier, there is a history of communications in the Marxist tradition which recognizes that, in the transition from the local economies of feudalism to the wider spaces of the capitalist world market, communications came to play a central and constitutive role, whereby 'information [was] to capital as lubricant is to the machine' (de la Haye, 1980: 29). This tradition has been best developed in recent years by Armand Mattelart, especially in his magisterial historical survey *The Invention of Communication* (1996; see also Mattelart, 2000). He starts from the premise that contemporary media theory is bedevilled by having lost its historical roots in a tradition which originally included within its remit issues such as the cultural, economic and political role of shipping, canals, road systems and railways (see Schivelbusch, 1977). In that earlier period, communications studies was seen as part of a broader, geopolitical 'science of territory' (Ratzel, 1897, quoted in Mattelart, 1996: 209). My argument is that (Ratzel's own dubious political commitments notwithstanding) a new version of such a perspective has much to offer to an analysis of today's (material and virtual) communications and transport networks, and their role in the geopolitical dynamics of the contemporary world (see Tuathail et al., 1998).

If Marx and Engels, de la Haye and Mattelart constitute the European lineage of one approach to a materialist theory of communications, there is also a North American version of this tradition, with a rather different theoretical basis. I refer here to the work of scholars such as Harold Innis (1951), and James Carey (1989) – a tradition now reinvigorated, in the wake of Carey's death, by a new generation of scholars (see Packer and Robertson, 2006). Carey's remarkable essay (originally published in 1983) on the historical significance of the invention of the telegraph, as the moment in which symbolic communications were, for the first time separated from the limitations of physical transport has, in recent years, come to be seen as something of a potential 'keystone' for a whole new thread of historically inflected, materialist work in communications studies.¹ It has also functioned as the inspiration for other path-breaking work, such as that of Tom Standage (1998) which, in rethinking the significance of the telegraph, by the same token, necessitates the reconfiguration of contemporary debates on the internet. Indeed, it can be argued that, insofar as it was the dots and dashes of Morse code which constituted the original 'binarization' of all information, the dawn of the digital age itself should properly be back-dated to the mid 19th century.

In their trenchant critique of the regrettable absence of any significant historical perspective in much media theory, Graham Murdock and Michael Pickering (2009) rightly argue that, in its overwhelming emphasis on the wonders of the communications

technologies of our era, much of this work falls into what they call a form of 'cultural presentism'. Such work, given its foreshortened sense of history, tends to neglect the profound historical continuities which often still shape contemporary developments and thus to falls victim to 'the tyranny of the moment' (2009: 9). In this connection they demonstrate just how very deeply contemporary structures of international communications still rely on infrastructures such as the undersea cabling laid down in the late 19th century as the basis of international telegraphy. As they argue, the telegraph 'laid the foundations of the spatial networks' that still provide 'the essential infrastructure for organizing global commerce and security' today (2009: 1). In a similar spirit, Dwayne Winseck and Robert Pike (2008: 8) note that, far from being rendered obsolete by the advent of wireless and transcontinental telephony, the undersea cable system (in its new fibre-optic form) still provides the basis of our contemporary system of global communications.

As Jill Hills argues, the introduction of the telegraph, by allowing the transfer of information across international borders 'completely transformed the mechanisms of overseas trade and investment', leading to a major 'paradigm shift in communications' which extended the 'space of empire' and can be seen to have ushered in the first phase of what we today describe as the era of globalization (2002: 2–3). This historical work demonstrates how the construction and regulation of these systems has always been shaped by changing structures of international relations and, in particular, the shift in the balance of power between Europe and America, over the last 150 years. In setting these technological developments in the broader theoretical frame of their shaping by economic and political factors, this work thus escapes the technologically determinist emphasis on the internal narrative of technological invention. Most strikingly perhaps, Hills demonstrates some of the parallels between the previous era of globalization in the late 19th century and that ushered in by the deregulatory politics of liberal market capitalism over the last 30 years. Thus, she illuminates the extent to which patterns of international interactions in the communications and information sectors today can be seen to be foreshadowed by the period in the 19th century when there was also a 'movement towards private economic power over state sovereignty' (2002: 2–3, 4, 7), while Winseck and Pike argue that 'policies established in the 19th century continue to shape the relationship between the global media and empire in our own time' (2008: 31).

In close parallel with Hills, Winseck and Pike are concerned with the formative years of the rise of the global media system constituted by the worldwide network of submarine cables, domestic telegraph systems and global news agencies. For them, as for Hills, this period of the late 19th and early 20th century, up to the outbreak of the First World War, can be seen as the '*belle époque*' of early globalization, and they insist that 'the media of this era were more global and organized as a system than is often assumed'. As they note, today's global media system took its initial shape at this moment, as key players from the telegraph industry parlayed their domestic strengths into positions at its apex (2008: 9–10, 28, 30).

Recent years have seen the emergence of what has come to be called the 'new mobilities' paradigm, closely associated with the work of sociologists like John Urry (2002, 2008), geographers such as Tim Cresswell (2004, 2006) and cultural theorists such as Caren Kaplan (2000). This approach, echoing Appadurai (1996), is concerned with the

diverse mobilities of peoples, objects, information and wastes – and with their interdependencies (see the journal *Mobilities*, which has been published since 2006). By drawing on the influential work of Deirdre Boden and Harvey Molotch (1994) on the continuing ‘compulsions’ of physical proximity in a world of virtual contact, this paradigm also escapes the over-simplifications of approaches which would assume the unproblematic substitutability of virtual for material forms of communication.

Moreover, the best of these new perspectives, rather than romanticizing mobility or ‘nomadology’ as an unproblematic Good, recognize that one of the key issues about the new communications and transport systems at the heart of the process of globalization is the way in which they also increase the mobility of a variety of ‘Bads’ – computer viruses, diseases, drugs, weapons, etc. (see Glenny, 2009). All of this also leads us towards the need to further analyse the emerging forms of border-policing produced by these new and extended forms of mobility – whether in the form of the effective re-nationalization of banking credit systems now visible in Europe, or in relation to debates about the tighter control of ‘illegal’ immigration in many parts of the world. As Naomi Klein (2007) has argued, far from living in the ‘borderless’ world which, not so long ago, many scholars were breathlessly anticipating, ‘border security’ is now the boom industry of globalization.²

The box that changed the world? Convergence technologies and the material infrastructure of globalization

In contemporary theorizations of globalization, the question of maritime trade is a largely neglected. But if globalization is about the movement of information and people, it is also about the movement of goods, and by far the cheapest way to move goods across long distances is in containers, by ship. We may partly live in a virtual, electronic world, but the world’s harbours have never handled so much material as they do now. As Alan Sekula notes, in a time when everyone speaks of electronic instantaneity and the collapse of space, it still takes about eight days for a cargo ship to cross the Atlantic and about twelve to cross the Pacific, and these slow and massive movements still constitute the hidden bulk of global exchange. Sekula’s argument runs right against the commonly held view that ‘the computer and telecommunications are the sole engines of the third industrial revolution’. His ambition is to ‘counteract the exaggerated importance attached to ... “cyberspace” and to the corollary myth of “instantaneous” contact between distant spaces’. As he notes, the concentration on flows of information is often accompanied by erroneous beliefs and unexamined assumptions, such as the ‘quasi-anthropomorphic notion that most of the world’s cargo travels as people do, by air’. Thus, although it’s revealed as a ludicrous idea as soon as it’s spelt out, many people behave as if ‘email and air travel constitute the totality of global movement’ (Sekula, 1995: 50–1).

Within the discipline of geography itself, it is well-recognized that the striking improvements in transport speed and capacity which now enable vast quantities of material and people to be moved around the world across large distances at low cost have been among the key driving forces of the global economy. Within the field of maritime transport, the key development has been that of the ‘intermodal’ system based on the container box, which can be transferred efficiently from rail to road to ship and it is these container ships (or ‘Box Boats’) that now dominate maritime trade.

The container box itself is a totally banal object: so simple in their standardized dimensions and construction, and so ubiquitous in the contemporary world, they are almost invisible to us, precisely because we are surrounded by them. As one of the characters in William Gibson's novel *Spook Country*, puts it, although he might have vaguely 'read the names on individual boxes ... Hanjin, Cosco, Tex, K-Line, Maersk Sealand', nonetheless, he notes, one rarely thinks about them, you just 'glimpse them from free-ways sometimes, an aspect of contemporary reality so common as to remain unconsidered, unquestioned' – even though we know that 'almost everything ... travel[s] in them now' (Gibson, 2008: 294, 176). Nonetheless, it is this banal object which makes the world system of manufacture possible, for it is containers which transport the component parts of the new system of dispersed global production. To this extent, the reduction in transport costs achieved by container ships has literally created a new economic geography, in terms of what can be profitably manufactured and distributed where (Cudahy, 2006; Levinson, 2006).³

Unsurprisingly, the process of establishing what are now accepted as the industry's standards for the dimensions of the 'Box' was a long and difficult one, as initially, each shipping company had its own sized boxes. Indeed, all this involved severe difficulties and huge investment costs as every part of the transport system – ports, ships, cranes, storage facilities, trucks, trains and the operations of the shippers themselves had to be standardized. Broadening our perspective, we can usefully note the parallels here with the battles over industry 'standardization' in other technical areas of the media industries – whether in the early struggles between Betamax and VHS, in contemporary struggles over technical specifications in the computer industry and in High Definition Television, or, from a wider perspective, in the role of technical standardization in the construction of the European Single Market (see Barry, 2001).

However, one must beware the dangers of falling into technological determinism, if we focus too closely on the invention of the container box and its supposed effects on the shipping industry. In some versions of the story of containerization, there is even a classical Hero figure, a man called Malcolm McLean, who is often credited with single-handedly changing the world by means of his invention of the 'box'. Evidently that would be far too simple a story, and there is now a form of 'revisionism' emerging in the debate about containerization, just as there is in the more nuanced discussions of digitalization. In both cases, of course, what we must look to is not simply the history of technological change and invention, but rather how these matters have played out in the specific context of the deregulation of industry cross-ownership structures in both transport and communications, as governments across the world deregulated industries in which cross-platform structures of ownership would not previously have been permitted under anti-monopoly laws (Donovan and Bonney, 2006). It is only in the broader context of these changing regulatory structures that the significance of both digitalization and containerization can be fully understood – a point to which I will return in my conclusion.

Corridors of power: from the Physiocrats to the new Silk Road

To focus on the positive functions of transport in constituting markets, regions and nations, is in some ways, to return (if in a new context) to the concerns of the Physiocrats

of 18th-century France (see Turgot, 1844). As Mattelart (1996) argues, they saw the overcoming of blockages to free circulation, and the institution of good transport and communication systems, as vital to the health of the economy. This is also to recognize that space is not merely the 'backdrop' against which events take place (Massey, 2005), and that the creation of new geographical facts (such as the building of canals, railways, roads or airports) is one of the most powerful, constitutive factors determining social, economic and cultural life. To this extent, questions of transport and communications can then no longer be treated as secondary issues, but must be analysed in terms of how 'networks' of different types (Castells, 2000) enable (or disable) different modes of activity. To take the case of the European railway system as one example, the plans to produce an integrated high-speed train system, linking the major capital cities in the north-east of the continent, while reinforcing their degree of connectedness will, by the same token, reinforce the relative exclusion of all outlying regions. To that extent, the effective heart of Europe will thus be re-drawn to the disadvantage of outlying regions such as the North of England, and the South of Spain and of Italy (one might also note here the emerging debate about the contradictory consequences, in this same respect, of the proposed 'HS2' Hi-Speed rail link in the UK).

Trade routes have long histories, which often have an origin in the natural boundaries established by physical geography. While such factors are more readily overcome with modern technologies, they remain more consequential than is often recognized. Thus, recent negotiations between the Indian and Chinese governments to open a direct trade link between their countries by reopening the Nathu La pass in the Himalayas, enabling goods to be traded more easily between western China and the port of Calcutta, can only be understood in the context of the longer history of the articulation of the overland trade route through Samarkand with the Arab sea routes through the Indian Ocean and the Red Sea (see Therborn, 2007). In relation to these concerns, the case of the Balkans repays close study. The region can variously be understood to function contemporaneously as a space of experimentation and/or expansion for the European Union (EU), as an outlying *banlieu* of troublesome populations, or a potential playground for its tourists (see the recent rise of Croatia as a fashionable holiday destination for affluent Europeans). It is in this context that we can perhaps best understand the EU's decision to put the construction of communications infrastructures and 'corridors' reaching through the Balkans and the Middle East as far as China, at the centre of its 'expansion' policy (Melitopoulos, 2005).

Here too, the ghosts of history haunt these initiatives. The EU's long-planned 'Corridor 8' project, designed to provide a combination of road and rail, oil and gas pipeline, electricity and telecomms networks, linking the Bulgarian Black Sea coast to the Albanian Adriatic, can readily be recognized as an attempt to recreate the European part of the Silk Road (*Via Egnatia* as it was known) down which St Peter travelled, and which connected Rome to the Middle East in earlier times (Despedov, 2005: 283). Similarly, the Baku–Tbilisi–Ceyhan (BTC) oil pipeline project, which is crucial to Western plans to control energy supplies from the Caucasus, has recently been described as part of a 'Super Silk Highway' planned ultimately to provide an integrated transport system linking Europe with Central Asia across the Black Sea, the Caucasus and the Caspian (Biemann, 2005). Again, a perspective informed by historical geopolitics reveals just what deep roots these projects have: it had been Bismarck's dream in the late 19th century to open up the Orient to Germany, by building a Berlin–Baghdad railway line.⁴

Since the point when, in his path-breaking work on migrant labour in Europe, John Berger's *The Seventh Man* (1975) paid attention to the key role of cheap car transport in the migrant experience, the specificities of migrant travel have been rather neglected. However, the Turkish film-maker Tuncel Kurtiz produced a remarkable film *E5 – Die Gastarbieterstrasse*, documenting, in vivid detail, the material labour of the epic migrant journeys often made in overburdened, unreliable old cars on the motorway running from Southern Europe's borders through Zagreb and Belgrade and on to Greece and Turkey (Kurtiz, 1978).⁵ This particular road occupies an almost mythical space in recent European history. Grandiosely known both as the International European 'E5' road, and was officially named by the Yugoslavian state as the 'Highway of Brotherhood and Unity' (unifying its different ethnic regions and groups). It was known colloquially as the 'Autoput' and as the 'Boredom Road' by the children of the generations of migrants who drove from Southern Europe to the Balkans and back, summer after summer, on their annual trip 'home'. Built as an ideological project – and a matter of national pride, as much as a practical necessity – between 1949 and 1985, it was initially financed by reparations from Germany for damage to the country's infrastructure during the Second World War, and constructed by Tito's communist youth, with the help of idealistic brigades of young volunteer helpers from overseas (Melitopoulos, 2005). The road was badly damaged by the wars which wrecked the region in the 1990s and its continuing state of disrepair today offers both a profound symbol and a very practical index of the destruction of the 'brotherhood' of ethnicities which constituted Yugoslavia.

As indicated earlier, it is crucial that we attend to the way in which old historical patterns get replayed in new technological guises. Thus, in her study of satellite and telephony systems in the Balkans, Lisa Parks (2007) notes that the new wireless footprints being established there effectively reinstate some very old political alliances, as German and Austrian companies restructure and (virtually) 're-map' in electronic form, geographical territories that once belonged to the Austro-Hapsburg empire. In a similar vein, Petrella notes the re-emergence of models of transnational/regional economic and political organization curiously similar to that of the network of Hanseatic League ports which controlled Northern European trade in the Middle Ages. Indeed, he goes so far as to suggest that we are entering a 'new Hanseatic phase of the world economy', based on 'global techno-apartheid' (Petrella, quoted in Mattelart, 1996: 305).

I would suggest that these historical parallels are of rather more than incidental interest. As Lynn Spigel (2004) has rightly argued, the more we speak of futurology, the more we need to put these matters in historical perspective. What is necessary here is both a more rigorously historical perspective and one that better addresses the articulation of virtual/symbolic and actual/physical modes of communication. Only thus will it be possible to rewrite the paradigm of communication studies so as to transcend its current, narrowly media-centric and often a-historical focus on the newest technologies for the transmission of information.

Questions of connexity

If 'connexity' is considered as a valuable form of economic and cultural capital which is very unevenly distributed, then we must address some very basic questions, such as who

has access to which levels and modes of transport and communications: who goes by foot, bicycle, car, train, ship or plane; who is allowed into a particular material or virtual space. Among the key issues here is the question of how different types of transport engender very different experiences of travel and how the relative status of any particular mode ‘rubs off’ on those who use it (see Burrell, 2008).

Thus Ivaylo Ditchchev writes that, in travelling in the Balkans ‘you enter a different country, depending on [your] means of transportation. [In some cases] there is the glorious descent by plane, with nice airports and Europeanized border officers’ (2006: 15). This, he observes, is the kind of travel experience that encourages people to think we have arrived at the ‘end of geography’. However, he adds, there are also those who make their journeys on ‘the shabby, aging trains ... in which you secure the door with your necktie against intrusions, and play cards with strangers on attaché cases’. Further down the social ladder ‘buses circulate full of “suitcase traders” asked to get off at each border, to stand in a line and open their luggage for checking’. Of course, as he notes, at the bottom of the transport hierarchy, are ‘those who cross borders on foot, led by obscure guides, at night’ (2006: 15). As he observes, only by making such distinctions can one understand how different the experience of the journey across the same border can be:

when two cars stop at the same checkpoint: one expensive and shiny, where some black-spectacled driver hands over the documents through stained glass windows, the other old and suspicious, which the customs officers will turn upside down in search of traces of crime. (Ditchchev, 2006: 15)

The same point, about the differentiation of access, applies in relation to the much-discussed question of ‘speed’ as a crucial aspect of contemporary culture. Here we might note that if the rich middle classes of São Paulo increasingly travel by helicopter, to and from the pads on the rooftops of their apartment buildings, their maids must often travel 4–5 hours each way by bus, to and from the outlying *favelas* where they live (see Cwerner, 2006; Scudamore, 2010).⁶ In all these discussions of ‘speed’, the often overlooked question concerns its obverse: waiting – which is of course, often the fate of the poor, or those who lack the qualifications which give access to the relevant ‘fast-track’ or priority lane. Thus, it may take up to a year for illegal migrants to get from China to Canada by ship, as they must sometimes spend weeks waiting, at various strategic points on their journey, in order to evade customs and border controls. This is also the issue raised by Doreen Massey’s well-known example of a working-class woman waiting at a bus stop for an infrequent service to her nearest supermarket: as Massey (1994) puts it, the question is: where’s the Time-Space compression in her life? To this extent, one might argue that the amount of ‘waiting’ which a person is forced to engage in is, increasingly, both a good index (and a determinant) of their social status (see Schultz-Dornburg, 2007). This is well exemplified in Sebastian Ureta’s (2008) analysis of the intertwining of low mobility and social exclusion among the urban poor in Chile and in Fiona Raje’s account of ‘journeys foregone, suppressed or not undertaken’ in the UK, on account of a variety of barriers to mobility (2007: 52).

Habitation, representation and transportation: 'a game of echoes ...'

Nick Couldry and Anna McCarthy have rightly argued that 'as electronic media increasingly saturate our everyday spaces with images of other places ... (imagined or real) ... it is ever more difficult to tell a story of social space without also telling a story of media – and vice-versa'. To this extent, our analyses need to be able to give an account both of 'the kinds of spaces created by media' and of the 'effects that existing spatial arrangements have on media forms'. Thus, the emerging picture is not simply that of 'the collapse of place' but rather, of 'the more subtle integration of other places and agents into the flow of our everyday practices' (Couldry and McCarthy, 2004: 8).

The central issue here is how to grasp the integration and articulation of symbolic and material spaces and modes of communication. Nestor García Canclini captures this well in his account of the mediated life of the contemporary city, when he says that:

Since ... even the accidents that happened the previous day in our city reach us through the media, these ... media become the dominant constituents of the 'public' meaning of the city.... More than an absolute substitution of urban life by the audiovisual media, I perceive a game of echoes. The commercial advertising and political slogans that we see on television are also those we encounter in the streets, and vice-versa; the ones are echoed in the others ... (Canclini, 1989: 210–12)

Conversely, we can note the opposite process, where the social exclusion of those (often racialized) 'Others' who are physically confined to marginal social spaces (ghettos, *banlieues*) is 'echoed' by their marginalization within, or exclusion from, the spaces of mediated representation (see Hargreaves, 1995).

Here we encounter a simultaneously material and mediated version of what Elizabeth Noelle-Neumann (1984) has called a 'spiral of silence', in which certain elements – and some categories of people – are extruded from our social world, both materially and symbolically – and the crucial question here is how these two dimensions are articulated.

I have argued elsewhere (Morley, 2000) for the significance of the parallels between the control of virtual and physical space. Thus we must pay attention to the correspondences between structures of prime/marginal time in the realm of broadcasting and structures of prime/marginal 'real estate' in the property market. The question of which categories of persons are allowed to 'inhabit' which (virtual or actual) spaces is a critical one, and it is only by addressing these questions of the articulation of the virtual and actual dimensions of communications that we can avoid too narrow a media-centric focus in our work. Many years ago now, Kevin Robins and I insisted on the need to address the 'spaces of identity' constituted by the newly emerging 'electronic landscapes' of the global media (Morley and Robins, 1995). However, it would be quite wrong to mistake the emergence of 'virtual worlds' for the death of material geography itself.

It is for these reasons that, in my own work on media audiences, I have increasingly come to focus on how media practices are materially inscribed in particular patterns of domesticity, architecture and, in the case of the populations I have studied, of sedentary lifestyles (Morley, 2000). Conversely, the work of Asu Aksoy and Kevin Robins on migrant audiences addresses their media consumption patterns in the broader context of

their involvement in a range of both virtual and material mobilities (Aksoy and Robins, 2000). In both cases, what is at issue is the articulation of virtual and actual worlds – involving the movement of media and information, the mobility (or sedentarism) of the people who constitute their audiences and the physical architectures of the settings within which they live and move. If, for migrants, their physical uprooting is often articulated with their insertion into transnational media systems, for many other people (e.g. the majority of the UK population who still live within 5 miles of their birthplace) the messages of national broadcasting systems are often still reinforced by deeply sedentarist patterns of life and culture.

In 1933 the art historian Rudolf Arnheim proposed that the new invention of television was best understood metaphorically, in relation to questions of physical transport – as a ‘means of distribution’ – but of images and sounds, rather than of objects or persons. To this extent, he argued, television is fundamentally related to modes of transport such as the motor car and the aeroplane – but in this case, as a ‘means of transport for the mind’ (Arnheim, 1933, quoted in Rath, 1985: 199). Evidently, Arnheim’s argument works at the level of metaphor by transposing the function of physical modes of transport to the virtual sphere, where the entities being transported – images and ideas – are themselves immaterial. If we trace the etymology of the word ‘metaphor’, we find that its original Greek meaning is precisely to ‘transport’ or ‘carry across’ – in this case, to transfer significance, by using a figure of speech in which a name or descriptive term is transposed from one realm of meaning to another. My own concern here has been simply to try to indicate, schematically, what kind of analytical benefits might accrue from the restoration of the broken linkage between the analysis of symbolic and physical modes of communication. (see Morley, 2010 and forthcoming).

Object lessons

Some of the concerns which I have attempted to address here were highlighted recently in an imaginative BBC project which also brought together the issues of transport and digitalized communication. In August 2008, the BBC sponsored and ‘branded’ a shipping container, to which was attached a GPS transmitter, which allowed its progress to be monitored over a year as it criss-crossed the globe.⁷ The beauty of the project lay in its very simplicity: at a literal level, the GPS facility allowed those who used the BBC’s website to track it (and its changing contents) online, in real time, and thus get a vivid sense of the geographical scale and complexity of the flow of international trade. Simultaneously, the box functioned not simply as a vehicle for its material contents, nor just descriptively as an ‘object lesson’ in transport geography, but also metaphorically, as a vehicle for generating a variety of detailed individual stories about the world economy and globalization, delivering multi-platform content for the BBC’s television, radio and online audiences (Morley, 2010).

If, as I argued earlier, the standardization of the container box was crucial to the development of today’s globalized material transport system, it is also important to note the parallel with digitalization in the media and communications industries. Just as digitalization converts all information into a standardized, ‘intermodal’ form, which is readily transferable across different media ‘platforms’ so, with containerization, the

transport industry, before it, became 'intermodal'. This is to say that containerization is to the movement of material goods as digitalization is to the movement of information. If that is so, when we speak of the significance of technological 'convergence' – as scholars within communications studies have now done for some time – it is to its significance within the field of transport, as well as within the digitalized media industries, that we must attend.

The BBC project vividly demonstrated the many benefits of bringing the analysis of communication and transport into better integration than they have enjoyed in recent years. However, the study of the shipping industry also alerts us to a more fundamental point concerning the inevitable danger of generalizations – such as the common assertion that we increasingly live in a 'culture of speed', if not instantaneity. One striking conundrum which the study of shipping offers us is not simply that container ships still go at very slow speeds, but that, as oil prices have risen, the very latest and biggest boats have been built to go even more slowly, in order to save fuel costs. Thus, right at the heart of the process of globalization, somewhat counter-intuitively, we find some rather important things slowing down.

Moreover, this conundrum serves also to remind us of the dangers of failing to respect the specificities of particular fields of analysis. In arguing for the better integration of the analysis of symbolic communications and material forms of transport, I am not arguing for their reduction to some uniform set of analytical laws. In this connection, we should remember Michel Serres' reminder that 'the best synthesis takes place on a field of maximal differences' and his corresponding warning against the dangers of 'lazy' forms of what he calls 'pass-key' analysis, whereby ready-made interpretations, at a high level of abstraction, are paraded as the solution to all problems. Rather, as he observes, if 'a single key won't open all locks' and 'the best solutions are local, singular, specific' then 'each time you try to open a different lock, you have to forge a specific key' (Serres and Latour, 1995: 91 et seq.). To twist Serres' metaphor a little, I am suggesting that, when trying to enter a house with more than one lock on the door, there may be considerable advantage to putting related keys on the same key ring.⁸

Notes

1. For an interesting revisionist position on this debate see Peters (2006).
2. In this respect William Brown and his colleagues at St Andrews have recently made an important intervention in the field of migration studies (Brown et al., 2010), which both addresses the articulation of the material and representational dimensions of migration and also insists on treating 'trafficking' (of people and of illicit substances) as central, rather than merely incidental aspects of these issues.
3. But see Levinson (2008) for a revision of his earlier optimism in relation to the future of extended global supply chains, in our increasingly 'security-conscious' era. See also 'The Travelling Box: Containers as a Global Icon of our Era' conference at University of Southern California Santa Barbara, 2008 details at www.ihc.ucsb.edu/containers/box/conference
4. For a fascinating representation of these developments in the form of historical fiction, see Unsworth (2009).
5. See also Thomas Mailender's art work, based on the extravagant piles of luggage often loaded on to migrants' cars – *Les Voitures Cathedrales* (2004, Paris, Musée Nationale de l'Histoire et des Cultures de l'Immigration).

6. See also in the UK, the recently advertised services of a company supplying helicopters to an elite business market – ‘Don’t Drive: Fly Above the Crowd’ (www.rotormotion.com).
7. See: bbc.co.uk/thebox
8. For a set of comparable approaches to that advocated here, see the special issue on ‘Communication and Mobility’ of *The Communication Review* (vol. 13, no. 4), edited by Stephen B. Crofts Wiley and Jeremy Packer.

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