New ways of conceptualizing space and mobility: Lessons from the Sahel to the globalized world

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New ways of conceptualizing space and mobility: Lessons from the Sahel to the globalized world[1]

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April 2012

Abstract
To date, geographers have conceptualised the increased mobility of contemporary societies in terms of conflicting or complementary relationships between spaces of places and spaces of flows. These approaches are, however, influenced by a "sedentary" vision of geography, in which mobility is conceived of as movement between relatively fixed locations. Building on earlier work, this article offers a conceptual alternative to this view in which places are predominantly defined by the crossing of flows and are defined as mobile as well. Our aim is to show how the model of the mobile space, originally developed in Sahelian Africa, could be possibly applied to the globalized world. Our model is based on a paradigm in which mobility is considered as the primary driving force of the production of geographic space. This allows us to reconsider both the production of space through movement and the control of space through borders. The paper argues that the way Sahelian societies comprehend space shares similarities with new currents in the globalized world, most notably because mobility and uncertainty have become the foundation of contemporary social organization.

Keywords: Space mobility, places, flows, networks, globalization, Sahel

Introduction

Since the pioneering work of Gottmann (1952), several generations of geographers have examined how the tension between mobility and place has been affected by changes in the international political economy and cultural politics. The intensification of global flows throughout the 1980s and 1990s contributed to a growing interest in the 'hostility' between territorial and relational modes of space organization and to a passionate debate within geography, fuelled notably by O'Brien's (1992) provocative theory on the end of geography, Ohmae's (1990) theses on a borderless world, and Castells's (1996a) seminal work on the network society.

In recent years, debates on the relationship between territories and networks seemed to have somewhat abated: it is now acknowledged that places have not gradually disappeared and been replaced by a space of flows. On the contrary, it seems that networks – and the movement that goes with them – have emerged as the prime, but not exclusive, force of organization of geographical space. Most commentators agree that networks cannot be understood without reference to their territorial background. The main issue not being so much whether the space of flows will gradually supplant the space of places, but how these two types of space can coexist in a globalized world and be simultaneously analyzed (Castells 1999, Taylor 2007).

The topological spatiality brought about by networks has, however, profoundly changed the way geographers approach the world, including some of the most fundamental and controversial concepts, such as space and place. The fundamental question posed by geographers no longer addresses only the location of humans and of their activities; it also aims at understanding how such activities are interconnected in space. In other words, it has turned to the exploration of "the distance" between places and between people. This shift from the study of *location* to the study of *position* is made necessary by the increasing restlessness in the globalized world. The fact that *relation* rather than territory or bounded place has become the relevant unit of analysis calls for the development of new geographical tools, which should not be designed to describe and interpret static objects

but, rather, moving flows that contribute to building places (Thrift 1999, Massey 2005, Cresswell 2006, Merriman 2012).

In this paper we argue that despite an overwhelming number of studies on flows and networks, most of contemporary geography remains strongly influenced by a 'sedentary' vision of space in which mobility is primarily seen as movement between fixed locations and territories are the key analytical units of geographic research. Following Amin (2002: 387), for whom "*the language of spatial change remains that of assuming organization along scalar and territorial lines*", we call for a revision of the way geographers identify their objects.

Our underlying hypothesis is that, in a world where fixed location nodes, territories and geopolitical boundaries have lost part of their usefulness as flows have intensified, it has become necessary to challenge the 'sedentary' paradigm of geography based on its trilogy of points, lines and surfaces. This paper contributes a new understanding of current mobilities, in which mobility is the actual driving force, and not the mere consequence, of accelerating global integration. This article builds on an earlier work in which we presented a model of 'mobile space' in the Sahel (Retaillé 2005, Retaillé and Walther 2011). Our objective here is to demonstrate how spatial organization in the Sahel seems to capture the new conditions of the globalized world where places are predominantly produced through the intersection of flows. This position is rather problematic if flows are increasingly difficult to predict and are characterized by shifting trajectories. This emphasis on the versatility and unpredictability of flows distinguishes our approach from previous attempts made to grasp movement, which either considered that interactions between fixed locations guide the flows of goods, people, and ideas, or conceived of space as an explanatory variable situated outside of the explained phenomena.

Our work shows that an alternative spatial ideology for which societies are *with* space is particularly important because our understanding of, and our action on, the social world is strongly influenced by the way we formulate the concepts of space and place. In addition,

we show how distance can be measured in a mobile world. The current debate on globalization focuses primarily on the characteristics of the fixed locations and on the nature of the flows exchanged between places, and rarely considers that movement is primarily about distance between places. In so doing we explore how the mobility patterns observed in a peripheral context such as the Sahel can potentially contribute to a renewal of mainstream geographical theory. Given the newness of the 'mobile space' approach in geography these new ways of conceptualizing space and mobility can only be exploratory at this stage.

The next section of this article describes the history of geographical thought on the tension between mobility and place that have influenced our work. In the third section we describe the alternative to the previous dominant representations of space based on our work on mobility in the Sahel. After presenting the main components of the model based on a new system of axioms, we argue that the way Sahelian societies comprehend space shares many similarities with the globalized world – most notably the fact that mobility has become the foundation of social organization. In so doing, our paper explicitly deals with the spatial dimensions of social relations, and the example of Sahelian societies is used to show how it is possible to conceptualize movement when it becomes permanent. The model invites us, in the fourth section, to reconsider both the production of space through movement and the control of space through borders. Finally, a concluding section stresses the implications of going beyond the sedentary paradigm of geography so as to understand today's geographic transformations.

The tension between mobility and place
Scholarly discussion of the tension between mobility and place is hardly new. In the early 1950s, Gottmann (1952) broke new ground by developing a theory of global political space based on the opposition between political partitioning of geographical space and movement. For Gottmann, partitioning was necessary for political expression and control of individual freedom, even though it was movement that produced the structures of social space. In this context the world of states, where borders were invested with particular

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symbolic importance, was accounted for by geopolitics. However, Gottmann conceived of movement as a mere change of position or state between two locations whose qualities remained stable; in his view, for example, as they moved, an emigrant would become an immigrant, an export would become an import, an outflow would become a foreign direct investment, but at no time these were taken for what they really were: flows that animated the circulation in the world.

Since then, building on the pioneer work of Harvey (1990) on the tension between the fixity of state regulation and the fluidity of capital flows, four main bodies of literature have reconsidered the importance attributed to territories and emphasized the role of networks. Despite their conceptual differences, those approaches all stress that scholarship has too often considered space as a mere territory – the "*territorial trap*" described by Agnew (1994) – over-emphasized the division of space as a mosaic of states and neglected the other forms of social space.

In a series of books and articles, Castells scrutinized the tension between space of flows and space of places. In his early work on the network society Castells (1996a) thought that the space of flows would transcend the space of places. He later considered these two dimensions of space to be inter-related and was one of the first to recognize that in the knowledge-based informational society the analysis of the space of flows could lead to a renewal of geographic theory (Castells 1999). He argued in favour of considering knowledge not only as a resource that could be accessed from a limited number of privileged places, but also as a flow in and of itself. Another relevant contribution is his demonstration that the space of flows had become (or become once again, depending on which historical temporality we consider) the dominant form of space because it allowed global elites to operate strategically dominant activities without having to depend as much as in the past on the constraints of localities.

Taylor (1994, 1995) has made another important contribution to the debate. Rejecting the death of the nation-state thesis, the author emphasized the singularity and importance of

states in a time of globalization. Critical for our model of space is the idea that globalization has hardly marked the victory of economics over politics, but rather a change of scale (from local to global), a change in the logic of the production of wealth (from predation to production and trade), and a change in the pace of economic activity (from regular to just-in-time business strategies). According to Taylor (1994), the power of states and their ability to control borders is not fundamentally undermined by economic globalization, because states are adapting to modernity by using territoriality at different scales: they tend to preserve existing boundaries as political containers, promote economic growth by creating economic blocs as wealth containers, and promote smaller territories as cultural containers.

More recent work by Taylor and his colleagues has also informed the model developed in this article, particularly the distinction between town-ness, which refers to local external urban relations, and city-ness, which refers to the network structure between cities. According to Taylor *et al.* (2010), town-ness and city-ness form two complementary processes, which differ considerably in terms of scale, structure and actors. Therefore, they should not be approached using the same analytical tools: centrality and territories are captured by the hierarchical structure of central place theory and rank size rule, whereas intercity relations developed within the world city network by firms require a network model.

A third approach contributed to the 'relational turn' in geography (Yeung 2005). Its main contribution was to stress that functional and institutional areas rarely matched, notably because political actors were not only characterized by their local roots but also by their relational power to *reach* other actors. Following Massey's (1984, 2005) and Thrift's (1999) commitment to understanding space relationally and to considering places as networks of social relations, this approach notably challenged the concepts of scale and region as used by political scientists within new regionalism (Allen and Cochrane 2007). This transformation is made possible by a diffuse form of governance based on a set of political arrangements that extend well across and beyond the given borders of the region.

In this dynamic, the power of the state, far from having diminished, has been transformed to *reach* the players regardless of their location and their distance to it (Allen 2003). By using a network-based approach, the relational geography paradigm stressed that it was no longer necessary to consider a region or a cluster as a closed entity but that it was necessary to take into account their national and international relations (Allen *et al.* 1998, Amin 2002).

As with other network-based approaches, relational geography stressed the necessity of explaining social attitudes not only by the attributes of the individual actors but also by their relationships with each other. This, of course, applies not only to political structures but also to regional economic organizations (Yeung 2002). In economic geography, the major interest of the relational economic geography approach has been to examine first how places have been transformed by the development of a global production and management system of flows, and secondly how locally-rooted institutions and societies have in turn transformed these global flows. As shown by Henderson *et al.* (2002: 437), exclusive attention to the state as a level of aggregation "*is becoming less useful in light of the change occurring in the organization of economic activities which increasingly tend to slice through, while still being unevenly contained within, state boundaries*". This requires a shift from a linear and vertical approach towards a more network-oriented approach focusing on the interconnected functions and operations that allow producing, distributing and consuming goods and services.

The fourth perspective has been termed the "mobilities turn" and has acquired international renown since the beginning of the millennium (Urry 2000, Hannam *et al.* 2006, Sheller & Urry 2006). The mobilities turn intends to rebuild sociology on the basis of a "new mobility paradigm", which requires a reformulation of the objects, methods and problems of the discipline, and to develop a sociology that would focus "*upon movement, mobility and contingent ordering, rather than upon stasis, structure and social order*" (Urry 2000: 18). The current intensification and diversification of mobilities calls into question the study of society conceived as "*embedded within notions of nation-state, citizenship and national*

society" (Urry 2000: 5). Mobility also represents both a social and geographical trajectory that tends to weaken the concept of social classes that are too static in a world of permanent flows. What is now far more important for sociology and other space-related disciplines is to apprehend how individuals build networks and alliances; how the material transformations and technologies affecting people mobility are reshaping social life and the community; what the relationships that develop between humans and objects through the senses are; and the consequences of current mobilities on citizenship.

The mobilities turn investigates not only the mobility of people but also, and more importantly for our paper, the mobility of large geographical objects, asking: does everything that moves need to rely on systems of immobility to work properly? (Urry 2003). In a paper discussing the im(mobility) of airports, Adey (2006: 90), for example, argues that "*objects, things, buildings, landscapes and* (…) *airports, are not viewed as merely static and fixed*", principally due to the movements that animate them constantly. However, whether places can also be mobile is an open question (see Cresswell & Merriman 2011). In their seminal paper on the new mobilities paradigm, Sheller and Urry (2006) seem to support both views. On the one hand, they assume that places themselves are immobile, since "*mobility is always located and materialised, and occurs through mobilisations of locality and rearrangements of the materiality of places*" (Sheller & Urry 2006: 210). In a highly mobile world, places are the only things that don't move. But on the other hand, the authors also argue that "*in the new mobilities paradigm, places themselves are seen as travelling, slow or fast, greater or shorter distances, within networks of human and non-human agents*", which suggest that they could also be called mobile (p. 214). The case study of Sahelian Africa, presented in the next section, takes the argument a bit further by showing how places organized along trade routes have, until today, been affected by a strong mobility and how this understanding of space is fundamental of our mobile space approach.

An alternative model

The originality of our approach is that it is based on the primacy of movement in the changing organization of space. Therefore, it goes beyond the traditional point-line-surface interpretation of traditional spatial analysis and its 'sedentary' perspective. For that reason, the model has been termed 'mobile space' (Retaillé 1995, Retaillé and Walther 2011). It considers that not only people, goods, capital or knowledge are currently more mobile, but that circulation also affects places themselves, which means that a given place can move from one location to another while keeping the same function within the spatial structure.

A detour through Sahelian societies

We can legitimately pose the question as to why is the Sahel regarded as representative of current tendencies in globalization and mobilities. On the fringe of the Sahara, the Sahel is isolated from the currents of globalization even if it hasn't remained totally untouched by its forces. It is not, however, the adaptation of Sahelian society in the face of shifting global currents that we seek to measure but a unique case in theoretical space which has produced a very different cultural geography than the mainstream in other parts of the world that have been characterized by sedentary societies. Despite its peripheral location the Sahel case can contribute important insights to the re-conceptualisation of space and flows in the world

The Sahel is significant in that it has remained a quintessentially mobile space. Successive attempts to establish territorial entities failed to take into account the societal and geographical necessity for constant adaptation based principally on movement. Once in places, the rigid application of ideology and modern state forms in the Sahel led to a succession of catastrophes, both ecological (difficulties in responding to prolonged drought) and economic (such as challenges in successfully adopting territorially fixed approaches to agriculture). Despite its separation into modern states and the reorganization of internal and international borders, mobility has remained the most effective counter to geographical uncertainty.

Consequently, geographical uncertainty has been a central principle in the organization of Sahelian space. Local populations – including non-nomadic ones – rely on this principle and often resort to internal mobility as an alternative to emigration, which is a relatively recent phenomenon in the region. That the geographical uncertainties that characterize the Sahel are primarily climatic does not detract from the generalizability of the conception of mobile space that we develop here. Rather, the Sahel case forces us to conceptualize territoriality as a process in progress, beset with uncertainties and dominated by mobility. Although peripheral to the world, the Sahel is at the heart of a circulatory system that links the Sahara and Southern savannah and forest regions. These geographies are socially linked by the shifting urban markets that spring from human circulation and patronized by these populations living on what most would consider the thin edge of ecological survival, but who nonetheless prosper due to local knowledge that has proved to be the key to their remarkable adaptability.

Sahelian Africa offers a fascinating window on the relationships between places and flows because local societies have developed a spatial culture based on movement that shares many similarities with the flows of globalized world. Building on such an exotic case implies however that we accept that theoretical transfers can go from the periphery of the world, to the centre, and more importantly, from the rather marginal subfield of development or tropical studies to the core of the discipline.

The alternative model presented in this paper builds on earlier work on Sahelian societies, which showed most notably how, far from being limited to a climatic domain, the Sahel is primordially a space of movement (Walther and Retaillé 2008). Because of the great uncertainty that characterizes the region, local societies have long developed unique patterns of mobility. Expansion, for example, refers to those phases when farmers move northward, thanks to heavier than average rainfall, or fill the voids left between the main densely populated regions. This movement gives rise to new frontiers, such as the agricultural fronts, which have historically developed in the region (the last one occurred during the years that followed the independences of Sahelian countries in the 1960s).

Conversely, the process of contraction results from the withdrawal of men and activities towards cities and southern regions during droughts.

In the Sahel, places are not defined by the same features according to season, year, or the hazards of individual and collective life, as shown by Gallais (1968) in his seminal study of the Inner Delta of the River Niger in Mali. Gallais' (1968) great discovery went beyond the cultural ecology. He showed that the various specialized groups (farmers, herders, fishermen, operators from the waterways) populating the Delta could live together because they took turns in the different sites according to the seasons and their ecological potentialities. Due to the seasonal flood of the Delta, wet and dry lands were used according to a complex management of natural resources that necessarily implied large population movements. Such spatial arrangements were made possible by pre-colonial political structures, such as the 19th century Diina of Seku Aamadu centred on the Inner Delta and Macina for instance (de Bruijn & van Dijk 2001). The Sahelian empires were never territorial empires but controlled roads for the profit of a centralised authority. Sites were nonetheless interconnected by a system of circulation that went through major temporal changes due to political, economic and climatic uncertainties. Places were mobile in the sense that they could move along the main routes of commerce, while retaining their economic and political functions.

Roads and North-South trails highlight the general spatial structure of the Sahel. The major road can fix temporarily on any one of these trajectories. These axes are lined with institutions that are relatively stable in terms of localisation but not in terms of their level of centrality. Places are mobile along roads. Finally, both nomadic and sedentary groups can expand or contract according to climatic, socio-economic, and political conditions. They may thus produce an incipient mesh during the "sedentary" phases (sprawl) or a weakly hierarchized polarisation during the mobile phases (contraction). It should be noted, moreover, that the major axis of structuring can also migrate, with the consequence that the whole chain of cities is moved further west or further east. The story of the succession of major routes crossing the Sahara during the Almoravid Empire, the Mali Empire, the

confederation of Hausa cities, the Kanem Empire, and the Senussi political and religious order illustrates the ability of such places to be recreated.

In such a spatial organization, both economic resources and political alliances result from the ability to establish social ties between places, rather than investing in productive activities in fixed locations. Long-distance trade is predominantly based on this principle, which supposes that traders maintain a large number of clientelist ties in various locations, so as to obtain and sell their products according to shifting demand and border differentials, whereas agricultural producers are much more dependent on specialized and non-mobile investments (Walther and Retaillé 2008). In the Sahara, nomadic societies have always needed sedentary populations that can be mobilized if needed and that are usually located in the major urban centres or oases. Political alliances between nomadic tribes follow the same logic: in Mauritania, for instance, shifting political alliances and frequent conflicts do not favour the creation of fixed territorial political units. Places are produced temporarily by the sporadic meeting of tribes. Such gatherings lead to the creation of temporary places by moving from place to place without affecting place ownership (Retaillé 2006). Faraway and scattered sites therefore accommodate ephemeral places until they form a single entity, time (and not space) acting as bond.

The ability of Sahelian societies to control distance without trying to control surface is at odds with the territorial notion of states. The ongoing conflict between the two paradigms has resulted in the decline of historical nomadism and its mutation into other types of movement-based activities, such as tourism, cross-border trade, smuggling, and terrorism. This conflict also allowed highlighting that control of movement is power. While nomads' power rests on the possibility of being home anywhere without having to support the cost of looking after the space between the places, the power of states is built on the ability to control movement, and impose "areas" and "territories" of production and transhumance that disrupt the general circulation patterns of Sahelian populations.

The components of the model

As of the 1960s spatial analysis has conceived of spatial organization in terms of three structural elements of cartography: point, line, and surface (Haggett 1965, Getis & Boots 1978). The first element localizes places, the second, represents links, and the third, represents areas. In spatial analysis, each of these structural elements refers to a specific geographic feature: the point for location, the line for distribution, and the surface for area. By combining these structural elements and geographic features, three fundamental processes are highlighted: the polarization and concentration of human activities in a given place; the organization brought about by relations between social actors and/or places; and the delimitation associated to the production of territorial limits.

This type of interpretation, based on the fundamental premise that movement corresponds to a change in place, has had a long term influence on geography. Although he places his analysis of movement at the very beginning of his seminal text Haggett (1965) and the entire field of locational analysis do not contest the domination of places relative to flows. Though the spatial analysis almost exclusively focuses on the effect of distance on movement it fails to resolve the contradiction that results from the fact that the measurable reality of geographic phenomena is comprised of elements with unique properties, like cities, and the existence of elements that isolate these phenomena such as barriers to innovation and the diffusion of knowledge. That said, movement is considered as a consequence of the inequality between places despite the fact that, as we have already alluded, movement is the cause of the emergence of these places.

This issue can be interpreted in two ways. Drawing on Gottmann (1952), movement could be acknowledged as fundamental to the production of space and that partitioning of space was subsequently necessary by human investment in place. An alternative perspective is that the study of human movement provides an important basis for understanding the ordering of space around the concept of distance. If there is distance it can be recognized only after identifying two points and replying to the fundamental question of geography: "where"? However, the analysis of geographic processes resulting from the study of

particular geographic features and their transcription on a map appears increasingly unlikely to account for movement. In a world marked by the supremacy of movement over fixity, it seems rather complicated to define movement in relation to what is fixed. Geographic axioms thus need to be redefined, by conceiving of movement as the main shaping force of spatial organization. In this case the fundamental question is no longer "where?, but "is there distance"? Rather than merely considering a point of origin and a destination, geographical analysis must contemplate the object in movement to order to observe changes of state, the various stages and lengths of the journey, and the conditions that result in the intersection of movements.
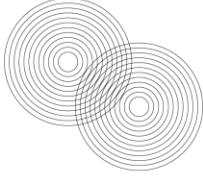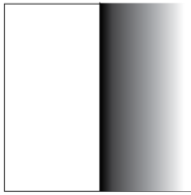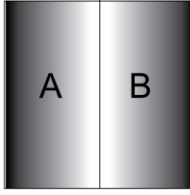
What kind of conceptualisation should be adopted? Some authors have argued against representing recent patterns of mobility through static maps, especially with respect to ephemeral phenomena such as trade fairs and conventions (Glückler 2007). Others have also argued that, since spatial forms are social properties that do not exist by themselves and only emerge through human behaviours it is not possible to represent a new paradigm of mobility through graphic elements and far better to develop metaphors that capture new practices linked to mobility (Urry 2000). Thrift (1996) and Merriman (2012) have notably argued for a non-representational approach in geography, which could explain the fact that mobility has become "*the primary activity of existence*" (Thrift 1996: 286) in contemporary societies. Similar to Thrift, we have difficulties representing an alternative model in which movement, and not places or territories, is the driving force of the production of space. However, we suggest that it is possible to draw on the Sahelian example developed in our previous model (Retaillé and Walther 2011) for imagining an alternative approach for the globalized world that takes a graphical form. Our aim here is not to fix something that is fluid with rigid images but to present the reader with an alternative and exploratory view of what a mobile paradigm would look like.

The representations in Figure 1 are an attempt at presenting such a mobile-space paradigm of geography. Instead of identifying structural elements and then trying to take into account how these elements can take new forms when flows intensify, we start by considering the

three main forms resulting from a state of permanent movement. As indicated in the first line of our figure, these are identified as divergence, convergence, and crossing movements, respectively. Movement can lead to a *divergence* when it stems from its place of departure, to a *convergence* when directed to what will become a centre, or to generalized *crossing* when it occurs in no centrifugal or centripetal direction.

Figure 1. Mobile-space paradigm

Our movement-based axioms call for a fundamental revisiting of the forms of limit that can exist within mobile space. In our model, each of the movements produces a particular form of limit: the confines, for example, constitute the limits of divergence, thresholds form the limits of convergence, and the horizon is the only limit that can be formed from the globalized crisscrossing exchange of flows. We define confines as a form of limit with a

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distinctive side, the inner one. Beyond it, uniformity opens the possibility of exploration, possibly of conquest, and reminds us of the threat of invasion. Similarly, we define thresholds as a limit with two distinct sides, one looking inwards, and the other one outwards. Horizon is different from both in that it represents a limit with no edge, neither inner, nor outer. Mobility is at the heart of the definition of horizon, as the position of a social actor can change without him having to move, for example when he is part of a constant flow of information. The horizon is unattainable in spite of movement, and cannot be reached by moving forward, as it simultaneously extends backward.

Within the space of movement, the most basic forms are also in movement. A line that limits expansion is a frontier, the area of movement is range, and the crossing of movement is the place. The dominant sedentary paradigm does not tolerate blank spots on maps. Thus the aim of cartographic exploration was to erase the unknown and to name and claim things on Earth. The mobile paradigm is free from this imperative. When movement comes first, the expansion that affects sprawl pushes limits back to confines: here we find the *frontier*. The encounter with another *frontier* produces a crystallized boundary that sends the reference movement back to the centre of emission. This is what we term social and spatial convergence, an increased attachment to identity, and the territory. Finally, going past the frontier through any kind of crossings results in a multitude of possible exchanges that we call places. The principal change between our approach and previous attempts to characterize mobility is that our main component is no longer a localised stock (of people, of foreign investment) characterised by their x and y coordinates, but the flow itself that we try to understand through its intensity and its interactions with other flows.

Reconsidering the production of places and the control of movement
The model put forward in this article invites us to reconsider how the divergence, convergence or crossing of flows leads to creating various kinds of frontiers, ranges, and places and begs the question of what new forms of limits flow from these processes.

Producing space through movement

The nature of *place*, long thought rooted in site and location, is now being questioned by the ubiquity of movement. Some authors have argued that two types of places existed in reality: authentic places, which allow memory to take root, and non-places, which are ephemeral products stemming from the intersection of contemporary flows and are associated with movement and intersections, synonyms of confusion, conflict, and dispersion (Augé 1995). The jungle of underground corridors, the gathering of fluid tribes, airports, or highway junctions may be examples of such non-places, which can be defined "*neither as identity, nor as relational, nor as historical*", in opposition to the sociological notion of place "*linked by Mauss and a whole ethnological tradition to one of a culture within time and space*" (Augé 1995: 100). Place is equated with roots, identity, and society, while non-place are associated with movement and intersections, synonyms of confusion, conflict, and dispersion.

However, the complexity of places produced by mobile spaces calls for a re-examination of the foregoing dichotomy and for a conceptualization of place that is able to account for mobility. In classical geography, place was defined by its fixity, its "genius", its natural quality, which enabled identity building. Depriving place of this symbolic feature resulted in a *site*. As of the 1980s, geography nonetheless recast the notion of place, by conceiving of it as an ephemeral spatial object produced by individuals who gather on it. Massey (1991) wrote of this place that it was made not only of its internal attributes, but also and above all of its relations to the outer world. Places have been increasingly perceived, then, as locus for action and practices, as locations of social relations, and sites with meaning. Because places are produced not only by the "local social world" but also by the characteristics of the location and the meaning attached to it, geography has progressively thought of societies not as *in* or *upon* space, but rather as *with* space (Retaillé 1997). Places are not to be defined by a particular scale but by their ability to abolish distance: in a certain place, the distance between social actors tends to zero. Hence the fundamental question geography should address: is there any distance?

Such characteristics allow a clearer distinction between places and sites and localities: places are primordially conceived of as ephemeral recompositions stemming from the intersections of contemporary social networks, whereas sites refer to the location where durable infrastructure of localities, such as cities or markets, is present. Put differently, localities are sites with a name and a limit whereas places are a geographical locale, which can take various size or temporal configurations. At the root of a place, lies movement rather than fixity. This is the lesson of contemporary globalization. Goods, people, capital, services, and knowledge move according to their own rhythms, amplitudes, and directions: fast or slow, strong or weak, reversible or irreversible. The state boundaries of the international system slow or speed these movements depending on whether they function as filters or interfaces. Places within a globalized world thus take on new meaning; they are no longer fixed objects but mobile objects, animated by waves, whose intersections and the interferences they provoke give birth to *places*.

When movement is constant, spatial differentiations between places are constantly at work. The space of flows ceases to be an abstraction crossed by immaterial flows of capital or information. It relates to real space, in which individuals bestow meaning on places and go about their daily activities. This change has been theorized as a passage from the world (which corresponds to the sum of everything that is on the surface of the earth without necessarily being connected) to the World with a capital (which refers to the integration of people and places). Cities, for example, which were considered as small worlds by themselves due to the fact that they concentrate a fraction of the world's economic and cultural wealth, have become integrated in the World (Lévy 2000). Using a musical metaphor, if we consider that localities are like concert halls, then places that emerge from these concert halls are to be conceived of as performances with a fixed duration. Such a metaphor can characterize the social networks of the globalized world, be they enterprises, NGOs, lobbying groups, terrorist ones included. Social networks are only made visible during a localised event that we call "place". The mobile place is not the non-place but is linked to a locality that draws sometime ephemeral events.

Temporary clusters formed during international fairs offer one of the most evident manifestations of the ability of places to be defined as ephemeral intersections of continual movements that constantly animate the world. Scholarly discussion of the importance of these events in the global political economy supports the idea that fairs share several of the features of the Sahel described earlier: trans-local links, intensive exchanges, the construction and maintenance of social networks, confrontation and idea/knowledge exchange, and the identification, selection and interaction with new partners (Bathelt 2006, Maskell *et al.* 2006, Glückler 2007). What these events show in particular is that permanent geographic proximity is not an absolute criterion for contemporary enterprises. Indeed, these can favour ephemeral meetings during which information that is crucial for the development of new products is exchanged. These places rest on a system of central nodes that allow connecting "*the global political economy and provide participating firms with access to new technologies, market trends and potential partners*" (Bathelt & Schuldt 2008: 855). Firms gather in a small space and for a limited time, which enables connection to world markets and benefits from a high density of local partners.

This theoretical proposition of a mobile space flowing from Sahelian nomadic society addresses most notably the notion of place. What is a place? The confusion between site, locality, and place is the limit of the sedentary paradigm. On the contrary, the mobile paradigm requires that they be differentiated and that place refers exclusively to a localised event, be it ephemeral or enduring. It should also be noted that, *a priori*, the very property of place that erases distance and thus creates the conditions for unity also precludes the possibility of conferring a dimension to the same place. Hence, in order to designate a place it is first necessary to identify the link and therefore the movement that creates it. On this basis, it is difficult to consider scale as an object. As a matter of fact, within the sedentary paradigm, scale is a defining tool or, at best, an attribute. With mobile space, the definition of a relevant scale and levels of nesting is no longer a necessary methodological stage. We argue that scale no longer is the miraculous tool to be used to describe spatial organization. In our view, places can be seen primordially in terms of locales where the local and the global can be observed simultaneously. Most notably, we argue that if the Earth limits the

global scale, this is not the case for the local scale, whose extent can vary greatly, from the size of a hotel room to one of a cultural area or political and ideological "territory". As such, a territory can be considered as a sort of place if defined by unity.

Controlling space through borders

The second implication of our model refers to the transformation of the forms of limits. In what follows we argue that the territorial vision of space upon which contemporary forms of borders are based have been diminishing in relevance. Our argument is based on the fact that the geopolitical frontier, which contained and controlled movement, is being problematized more and more by growing transnational flows and by an increasing awareness of our planet's ecological sustainability and cross-cultural issues (Cresswell 2006). The current level of generalized mobility forces us to consider new forms of limits. Distinct from the geopolitical border, ideally those limits should not be enclosed and should break away from the principle of totality. Indeed, in the contemporary world identities are blurred and their relation to space proceeds from different territorialities. As the recent debates in cultural geography have shown, there can be no "cultural area" enclosed as geopolitical territories as Huntington suggested (Lévy 2000, Retaillé 2000). Similarly, there is no intrinsically economic region and therefore no such thing as a stable comparative advantage in a world where factors of production for basic technologies are produced rather than being endowed, or where corporate wealth comes from the ability to mobilize relational assets (Yeung 2005). Thus a frontier conceived of as a two-side limit is no longer the only viable one (Ernste *et al.* 2009) whereas cultural, economic or political limits are diluted into a space that is homogeneous and continuous in terms of *a priori* value and which we call mobile space.

The idea that other forms of limits are necessary to conceptualize the contemporary world militates against the fascination that borders have exerted on geographers and other social scientists. From City-states to Empires and to Nation-States, borders have been central to explaining the very nature of political space in a sedentary world and have shed light upon historical transformations of Western political formations. On the one hand, it is because

this form of boundary was in part inconsistent with the Merchant Republic that these political formations progressively collapsed; on the other hand, it is because external borders were too distant from the political centre of Empires to erase internal borders that these formations disappeared. What remains is the modern state, whose strength was long able to pretend to a perfect correspondence between collective identity (nationhood) and territory (sovereignty).

From then, the modern frontier has played a major role in shaping the notion of identity in the Western world. It is the frontier that makes it possible to distinguish between "community" and "society". Collective identity therefore has a dual character: it is considered as a community by outsiders but forms a society. This dual property forced the presence of a border, i.e. a limit with two sides, between "us" and "them". This frontier is first and foremost a cultural border and stems from a major investment in the land. The state thus obeys a territorial imperative that can be followed only within a sedentary framework. Difficulties in controlling movement also lead to defending the frontier. This is how bulwarks, citadels, glacis, customhouses, rules, and exchange controls arise.

There is no such thing as a state without a territory and a full recognition of its total sovereignty. Sovereignty is expressed through two properties an ideal state must possess so as to exist: exhaustiveness and exclusivity. Exhaustiveness refers to the fact that, based on a social contract, the state is the only guarantor of power, resulting in a definition of sovereignty that conflates the social and the political. Exclusivity means that sovereignty cannot be delegated to other actors, lest the state be dissolved. Society as a whole is part of the state, and individuals are either inside, or outside the state. Exhaustiveness and exclusivity make a state a place (in terms of identity) and a territory (a space of material and symbolic production). Based on these axioms, society is thus defined as a population living on a territory and exploiting its resources, according to a social organization of work whose inequalities are justified by a social contract. This is the purest sedentary tradition, in that territory is conceived of as the place of the Nation and frontiers are the walls that enclose them both materially and symbolically.

In recent decades two different, yet equally important, processes have increasingly challenged the modern state borders. Scholarship has demonstrated that, far from having disappeared, national borders have experienced a highly heterogeneous evolution for the last decades (Popescu 2012). On the one hand, the proliferation of functional interdependences and institutional partnerships has resulted in a relative *de-bordering* of Western territories, thanks to free labour market, increased mobility of capital and monetary union policies. For a certain number of core urban regions, regional integration has effectively contributed to reducing trade protections, national bias related to consumer preferences, administrative difficulties, lack of cross-border infrastructure, and, to a lesser extent, cultural and language differences. On the other hand, the increasing securitization of national borders at the periphery of large regional blocs has lead to a resurgence of nation-state building called *re-bordering* (Scott & van Houtum 2009). Cultural mobilizations interfere with frontiers and interdependencies and hurt the double property of the state; the frontier becomes an instrumentalized fiction.

This opens new prospects for the study of limits. In a globalized world, some flows do not face limits. This is the case of knowledge, for example, of which Castells (1996a) said that it was not accessible in a particular place, but was a flow in itself. This is also the case of global financial flows, which became accessible from any point in space instead of stock exchange exclusively. In both examples, the relevance of the concept of border gives way to what we call the horizon. This horizon is a new kind of border, whose limit is constantly pushed back by the expansion of flows throughout the world. Heading towards the horizon, there is no preferred direction, as when connecting to the Internet.

It is an undeniable fact that the ability to control movement is also part of the core strategies of power that drive our globalized world. Thanks to the modern state, which enclosed the world by establishing national boundaries and controlled flows between political territories, both riches and power could grow. Success for the state meant the control of movement. Nowadays, however, an ever-growing number of flows means that

control of distance is paramount in the struggle for power. Sedentary power and nomadic power both aim at controlling movement, the former along its borders, the latter in its places of gathering. Sedentary power filters movement through controls, customs, norms and visas, whereas nomadic power captures movement through the control of roads. The two spaces of power by the control of movement meet in spaces; it is even the intersection of such flows that effect places.

Markets are an emblem of place. Today, the network of global cities allows grouping activities from distant places, without necessarily having to group their respective territories. Thus, the circulation that drives the world cannot be reduced to the flows it originates because it also produces differentiation and hierarchy between places. Taylor (2000) elaborates on this by stating that the process that leads to the creation of global cities is fundamentally different from the one of central places. This new model of urbanization conceives of the decline and prosperity of cities more as a function of their relative positions within a network than of their relations with their hinterland. It could therefore be inferred that centrality is also mobile and supplants hierarchical centres.

Conclusion

This article has argued that our understanding of contemporary geography can only be improved by taking into consideration the "new geographies of circulation" that arise from the intensification of flows, innovation in technologies and transcendence of geographic scales that characterize globalization. Such new geographies force scholars to reconsider the axioms usually adopted to apprehend space, which rest on the assumption that movement is a mere *dis*placement between fixed location nodes. The model presented here builds on the idea that the increased mobility of goods, people, capital, and knowledge no longer fits the idea of a sedentary world and has suggested a series of alternative elements that contribute to better capturing mobility. Instead of the traditional trilogy of points, lines and surfaces that has been used since the 1960s, the article has developed an original framework that distinguishes between different types of movements, forms generated by such movement, and the new limits that arise in a mobile world.

Our paradigm has then invited a reconsideration of the ability to produce places through movement. In order to highlight the specificities of places in the contemporary world, we have first distinguished between sites, locations and places. We have then argued that places have been primordially produced by the intersection of flows. Regarding the possibility of controlling space through movement, we have discussed the evolution of modern limits and have argued in favour of rethinking such limits by taking into consideration the frontiers and horizons that are produced in a space of flows that is no longer delineated only by states.

Several questions remain. For instance, what happens to territory? According to the model of the state and the double property of exclusivity and exhaustiveness, it cannot be denied that it has become more and more contested. Yet, territoriality is nonetheless still present. It may be even argued that growing mobility effects a multiplication of territorial forms just as crossings multiply. Because of the multiplication of territories, space becomes particularly opaque for those who don't have the ability or the power to move. This social distinction forces to a differentiation of at least two layered levels of world space: the topographic level, which is tied to the land and through which territoriality is expressed, and the topological level, linked to movement and expressions of globality. The dominion of movement in qualifying places confines sites and localities to topographic space. Sites and localities thus take their value through the application of norms produced at the "superior" level of global movement. The globalized world is therefore mobile because the level that determines the values of places is constantly being debated and because the qualifying norms of fixed space are thus variable.

Mobile space is also a space of choice and unequal opportunities. It highlights an inequality that is not so much "lateral" (centre/periphery) as it is "vertical" (layered space). However, the exploitation of topographic space requires that it be nurtured. Thus, the fixed world is forced to the ancient regime of spatiality to the extent that the material space of infrastructure, of the real economy, the environment and social reproduction must at any

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moment be exploitable by the movement that "goes over it". Therein lies the explanation for an uncertain world order. Contemporary societies are supposed to be defined by hyper-mobility. This, however, is really the preserve of an elite able to connect to global networks (Massey 1991). This elite benefits from the growing mobility afforded by new means of communication, and its power rests on a principle akin to the one we observed within historically nomadic societies, i.e. the ability to control nodes of globalized flows.

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