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CONCEPTUALISING MOBILITY

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ABSTRACT: The information on the impact of mobility on society is plenty but scattered. A good understanding of the impact of mobility requires first an understanding of what mobility actually means. This paper lists aspects of mobility that can contribute to a useful conceptualisation. It is found that in its core mobility is about connectivity of individuals. In addition mobility is more than just geographical mobility of human interactions. Mobility also has important temporal and contextual dimensions. Mobile technology has increased mobility in these dimensions and has been the driver of digitalising society into a mobile network society that connects not only individuals but also remote data and objects. There seems to be a need for an in depth conceptualisation of mobility that has to be updated along the lines of a fast moving mobile technology and mobile society.

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1 Introduction

A decade ago few people ever expected mobile communication to be so widespread by 2010. At the very moment the world counts more than 4.5 billion mobile connections and that number is said to continue growing fast, by 2013 it is estimated to cross the cape of 6 billion (GSMA). There already exists lots of scattered evidence that this expansion of mobility has an important impact on society. But the impact of mobility on society is not yet fully understood and there also remains controversy concerning the advantages and disadvantages of increasing levels of mobility. More crucially it is not yet understood what mobility actually stands for as it has been used to refer to different phenomena. Indeed, if one wants to know what the impact (both benefits and costs) of mobility are it is necessary to get a grasp of what mobility actually means. The facts that mobile technology, mobile communication and mobility are closely intertwined, only adds to that confusion. In sum mobility is an important complex phenomenon and there is a need for a general concept that is able to unite and order the different aspects of mobility encountered in circles of everyday life, business and academics.

The aim of this paper is to tackle the conceptualisation of mobility by identifying the crucial components of mobility. Both sociologists and geographers have recently reviewed selected aspects of mobile communication and mobility. Their publications turned out to be valuable to capture the complexity of mobility and partly helped us in selecting the cornerstones for the conceptualisation of mobility. The direct contribution of our paper lies in summarizing and ordering the main components of mobility into a useful framework. Indeed, prior work did not offer such a general framework for understanding and discussing mobility, an exception being Kakihara and Sorensen (2002). It has to be stressed that conceptualisations of mobility will have to be adapted in function of the rapid changing mobile human behaviour.

The remainder of the paper is organised in 4 sections. Section 2 presents the key features of mobile communication and mobility. Section 3 discusses three important dimensions of mobility. Section 4 summarizes characteristics of the mobile network society. A last section summarizes our conclusions.

2 Key features of mobile communication

Mobile technology allows individuals to be involved in mobile communication. Most often it is stressed that mobile communication raises the potential mobility of individuals. In fact mobility is frequently discussed in a dual framework that makes a distinction between the developed and the developing world. In the developed world mobile communication is said to enhance mobility whereas in the developing world it is said to improve connectivity. Independent of geography the key feature of mobile communication, however, is not potential mobility but permanent and ubiquitous connectivity. The main difference between internet-based connectivity and connectivity through mobile phones is a difference in the degree of engagement. With the recent start of the mobile internet cycle it is expected that more users will connect via the internet via mobile devices than desktop PCs within 5 years.
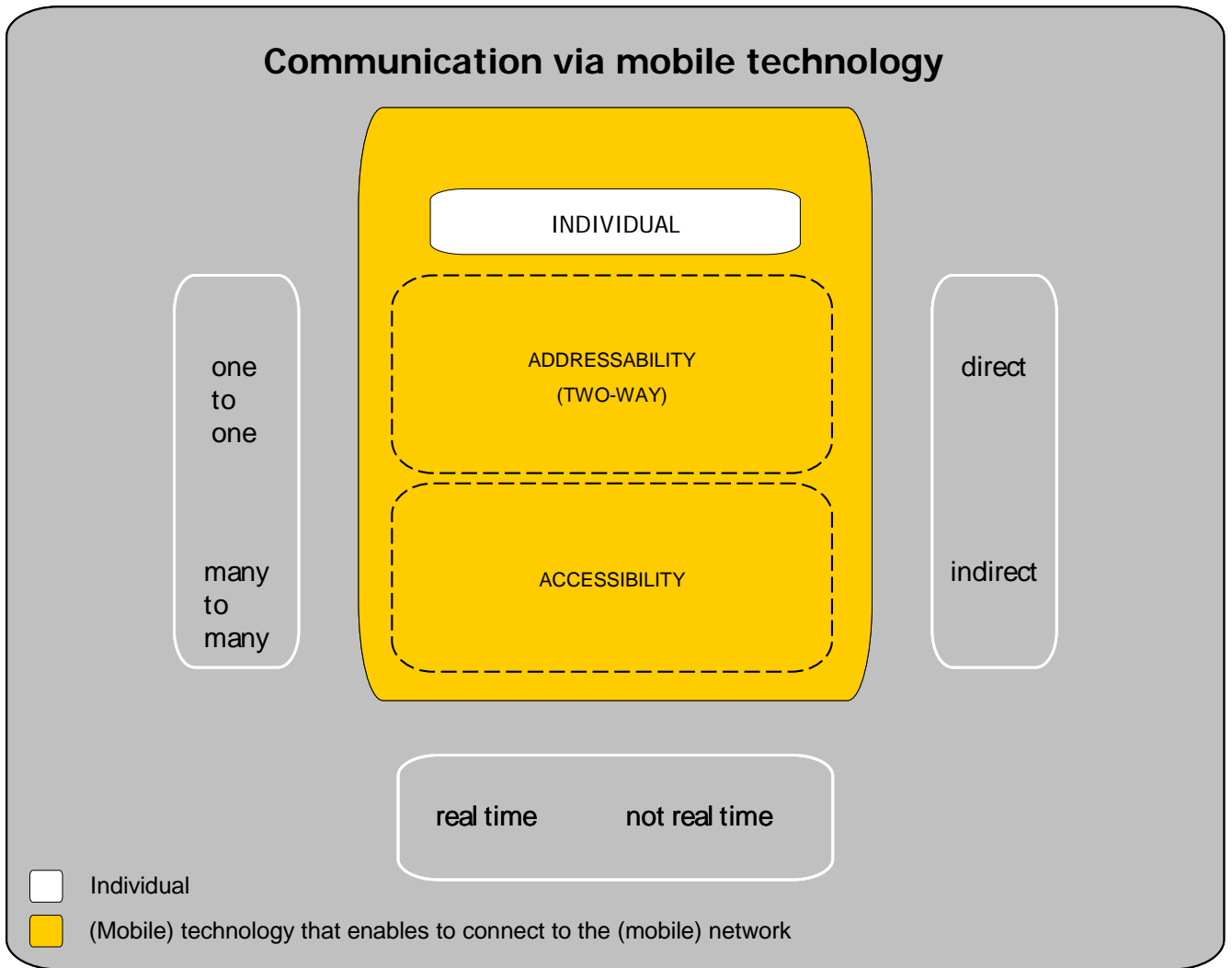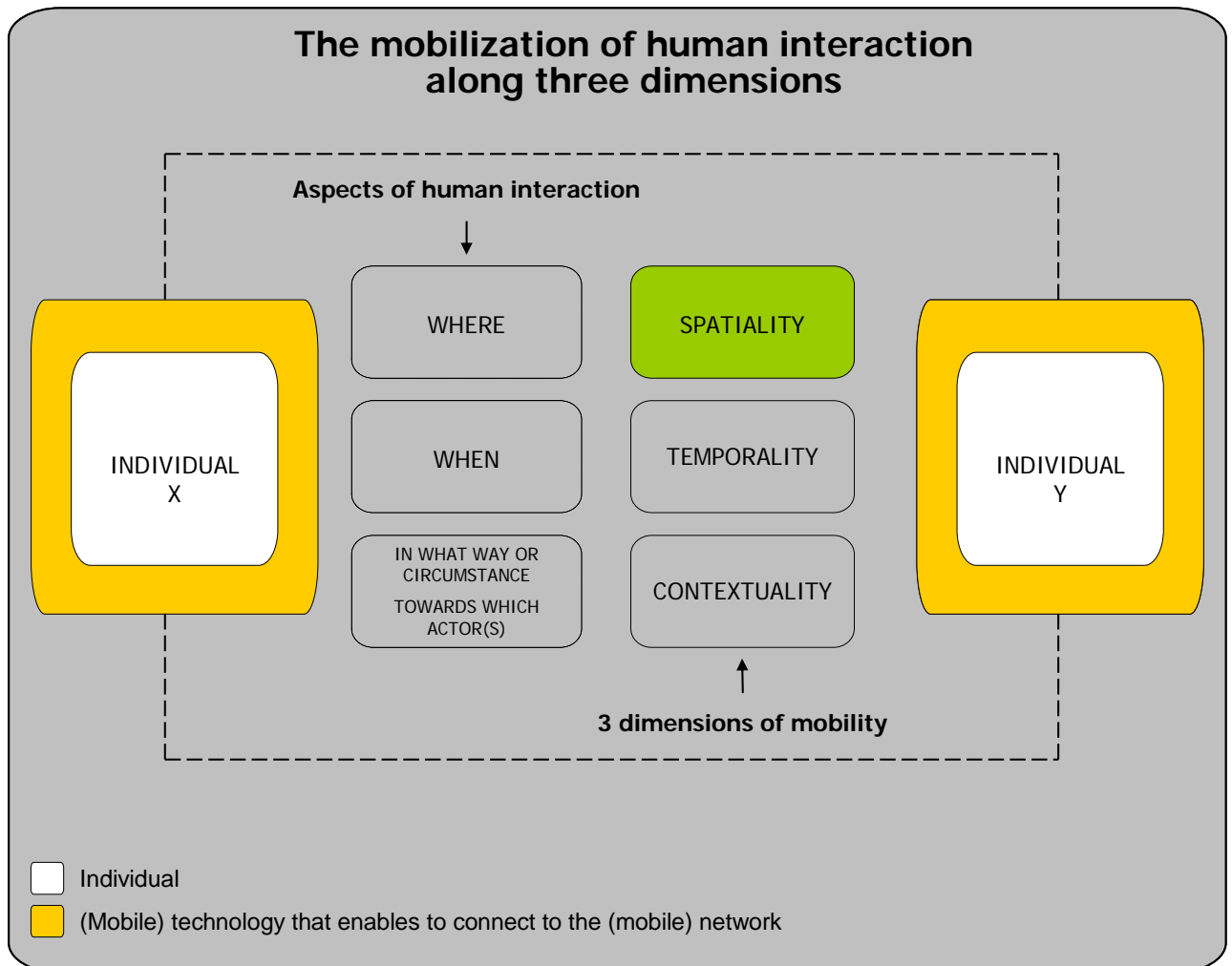
Source: based on Castells et al. (2007) and Ling & Donner (2009).

The above figure shows the two main features of mobile communication to be individual accessibility and addressability. Mobile communication can differ in three aspects: it can either be direct or indirect, real-time or not real time or one to one, many to many or a combination of the latter two. Latest technological evolutions suggest that mobile technology may one day be implanted in the human body. In the above figure this would show up in the (partial) convergence between individuals (white space) and mobile technology (yellow space).

3 Dimensions of mobility

The previous section underlined that the key to mobility is connectivity between people. There is evidence that these human interactions have been constantly mobilized. Interpretations of mobility are still too often limited to humans' independency from geographical constraints. Kakihara & Sorensen (2002) were the first to criticize this narrow definition while offering a useful extended perspective. The following figure illustrates their view, showing mobility to have three interconnected dimensions that relate to different aspects of human interactions. Indeed, ICT applications have facilitated the mobilization of human interactions not only in terms of (1) spatiality, but also in terms of (2) temporality and (3) contextuality. Spatial mobility increased due to

extensive geographical movement op people, objects, symbols and space itself. This mobilization results in a convergence between individual and place. Temporal mobility gained momentum as multitasking and instantaneity fuelled polychronicity. Contextual mobility picked up pace as diversified modalities of interaction were introduced. This mobilization in three dimensions asks for a new way to explain social patterns. Social mobilization can be described as a dynamic process of fluiditization of the social topology of the interaction between people. Overall, mobile technologies play an important role to create and organize effective fluid work environments but they can also bring a number of problems such as ad-hoc communication and interaction overload.

The mobilization of human interaction along three dimensions

Aspects of human interaction

INDIVIDUAL X	WHERE	SPATIALITY
	WHEN	TEMPORALITY
	IN WHAT WAY OR CIRCUMSTANCE TOWARDS WHICH ACTOR(S)	CONTEXTUALITY
		INDIVIDUAL Y

3 dimensions of mobility

☐ Individual

🟧 (Mobile) technology that enables to connect to the (mobile) network

Source: based on Kakihara & Sorensen (2002).

A first possible critique to this three dimensional conceptualisation of mobility is that it does not include all aspects of mobility. For example, how does their focus on human interaction capture the communication between devices in intelligent traffic applications? A second possible critique that applies to the set-up is that it mainly looks at ICT thriving social mobilization without paying attention to the reversed causality between society and technology. Causality between society and technology has been an ongoing debate in academics since the publication of the theory of co-construction of technology and society according to which people shape future ict developments rather than the other way around (Latour & Woolgar, 1979; Fortunati, 2005a). The next section describes the general framework of the mobile network society.

4 The mobile network society

The mobilization of human interactions has culminated into a mobile network society because of two main trends. At the one hand the extension of the reach of connectivity around the world and at the other hand the intensification of this reachability of individuals. The ubiquity due to affordability of mobile phones resulted into the availability of widespread access and individual addressability. This spread of mobile communication has also lead to a mobile logic in society. The current mobile communication society can be seen as a deepened and diffused version of the network society. Not mobility as such but individualism and increasing safe autonomy is the defining social trend of this mobile society.
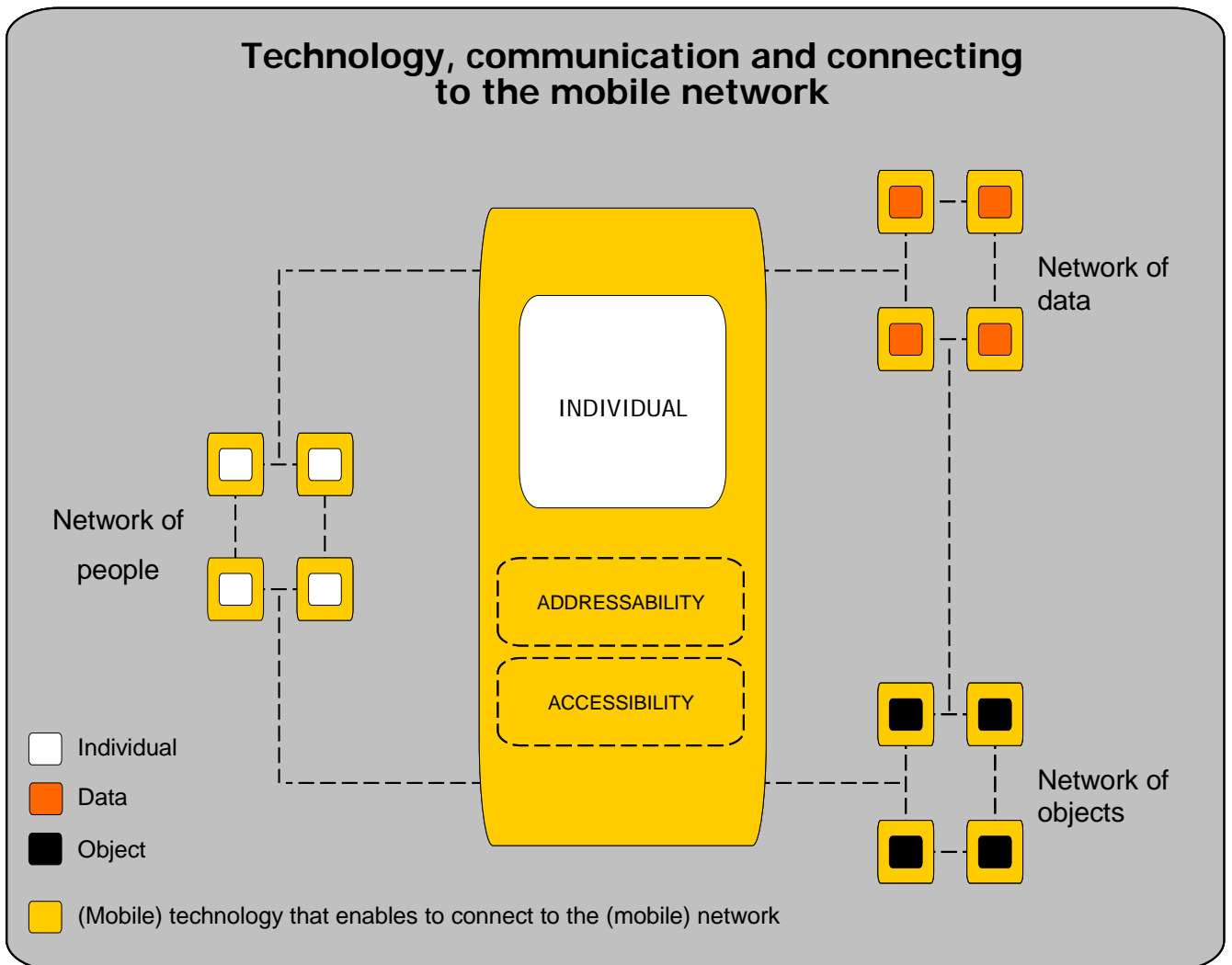
Source: based on Castells et al. (2007) and Ling & Donner (2009).

The above figure summarizes the building blocks of the mobile network society. Mobile technology surrounding an individual enables her to be relentlessly connected and to interact within networks of choice. This encourages setting up instant communities of practice with users producing new content and services. Communication autonomy and new information networks may also foster socio-political change. The figure shows that individuals can communicate within networks of people but also within networks of objects (such as mobile money networks) and

within networks of remote data that are stored in the cloud. Mobile communications allows for interlacing interactions as there can be several streams of interaction simultaneously. This can blur the social context of individual practice possibly causing social problems. For example as work and work processes are transformed the boundaries between work and the private sphere get blurred what may put pressure on relationships within families. Especially in the developing world having access to a wireless network can also be a source of personal value and as a social right. Mainly in the developed world mobile communication can be characterised by consumerism, fashion, instrumentality and meaning. A final impact of mobile communication on society is its potential impact on the transformation of language.

5 Concluding remarks

With the mobile internet cycle steaming ahead within a few years most users will connect to the internet via mobile devices. Emerging mobile technologies have been shaping society towards a mobile network society and a digital society. In addition societies have been shaping technologies. Future industry players will have to fully understand this two-way impact to be successful. In this paper however, it is argued that a full consideration of the impact of mobility on human behaviour needs in the first place an understanding of what mobility actually means. What are the useful aspects of mobility for its conceptualisation is the question we addressed in this paper.

A first finding underlines that the key aspect of mobile communication is not potential mobility but connectivity. Mobile technology allows individuals to be accessible and addressable. A second main finding shows that these human interactions (connections) have been constantly mobilized and that this mobility shows up in 3 dimensions explaining the mobilization of social patterns. Traditionally mobility has got a geographical connotation but mobility does also have a temporal and contextual dimension. Taking into account these three dimensions social mobilization becomes a dynamic process of fluiditization of the social topology of the interaction between people. A last finding shows that exactly this mobilization of human interactions has culminated in a mobile network society with mobilized human interactions but also mobilized interactions between humans, remote data and objects. Not mobility as such but individualism is the defining social trend of this mobile society.

Future research has to look deeper into and has to constantly update the conceptualisation of mobility as mobile technology and digital society are constantly changing at a very rapid pace. In addition attention has to be paid to schematize the impact of mobility on society.

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