WHAT ROLE DOES CELL PHONE USE PLAY IN BUILDING MOBILITY SKILLS?

A study based on empirical data from Cameroon

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Summary

This article proposes an understanding of how the use of mobile phones contributes to the accumulation and implementation of mobility "*skills*" in Cameroon. This country was chosen because cell-phone use has been growing rapidly for 25 years and because travel is made difficult by a lack of information (bus departure times, place name signs, etc.) and safety on roads and streets. However, being mobile is an essential prerequisite in an urbanizing country where jobs, services and family members are increasingly spread throughout space. The main aim of this contribution is therefore to report on the efforts and strategies deployed by individuals to integrate into the "*dispersed society*". From a theoretical point of view, the paper is based on the notion of "*skill*", which refers to all the know-how and behavioural dispositions needed to plan, perform and modify a journey in space and in real time. This approach has the advantage of going beyond an analysis in terms of transport cost and infrastructure development to focus on what people do to be, and remain, mobile depending on the contexts they encounter and the material and cognitive resources they possess. The corollary of this theoretical approach is the recourse to qualitative survey techniques (semi-directive interviews and participatory observations), which are the most appropriate tools for exploring individual travel attitudes in detail. The results indicate that the use of mobile phones facilitates the practical implementation of mobility (collection of information, orientation, overcoming travel difficulties, etc.), but also represents a new source of risk (theft, "deresponsabilization" of drivers, etc.) to which answers must be provided.

Keywords: Cameroon, Cell phones, qualitative methods, mobility skills, "*dispersed society*".

Résumé

Cet article propose de comprendre comment l'usage du téléphone portable contribue à l'accumulation et à la mise en œuvre des « *compétences* » de la mobilité au Cameroun. Ce pays a été choisi parce que les téléphones cellulaires s'y diffusent rapidement depuis 25 ans et parce que les déplacements y sont rendus difficiles par le manque d'informations (horaire de départ des autobus, panneaux indiquant les noms de lieux, etc.) et de sécurité sur les routes et dans les rues. Pourtant, être mobile est un prérequis indispensable dans un pays qui s'urbanise et où les emplois, les services et les membres d'une même famille sont toujours plus disséminés dans l'espace. L'enjeu de cette contribution est donc de rendre compte des efforts et stratagèmes déployés par les individus pour s'intégrer à la « *société dispersée* ». Du point de vue théorique, le papier se fonde sur la notion de « c*ompétence* », qui désigne l'ensemble des savoir-faire et des savoir-être permettant de planifier, d'accomplir et de modifier en temps réel un parcours dans l'espace. Cette approche a l'avantage de dépasser une analyse en termes de coût et de développement des infrastructures de transport pour s'intéresser à ce que font les individus pour être et rester mobiles, en fonction du contexte qu'il rencontre et des ressources matérielles et cognitives qu'ils détiennent. Cette approche théorique a pour corollaire l'utilisation de techniques d'enquête qualitatives (entretiens semi-directifs et observations participantes), qui sont les plus appropriées pour explorer en détail les comportements individuels en mouvement. Les résultats indiquent que l'usage du téléphone portable facilite la réalisation concrète des mobilités (collecte d'informations, orientation, lutte contre les désagréments du voyage, etc.), mais qu'il représente aussi une source nouvelle de risques (vols, déresponsabilisation des conducteurs, etc.) auxquels il convient d'apporter des réponses.

Mots clés : Cameroun, téléphone portable, méthode d'enquête qualitative, compétences de la mobilité, « *société dispersée* ».

Introduction

Predominantly rural in the years leading up to 2008, the Cameroonian population is now more than 55% urban.[1] The number of inhabitants in Douala, the economic capital, increased fourfold between 1976 and 2005[2] and its surface area increased by 326 hectares per year over the same period.[3] The urbanization of Cameroon is also expressed by the generalization of small- and medium-sized cities (10,000 to 99,999 inhabitants), of which there were 38 in 1976 compared to 93 in 2005.[4] The area occupied by these intermediate urban centres has grown to the detriment of agricultural areas and forests.[5] By distancing people from work, markets, schools, hospitals and administrative services, the physical spread of cities stimulates the need to move from rural and periurban areas to city centres. This situation is emblematic of what sociologist Éric Le Breton calls the *"dispersed society*".[6]

However, contrary to what the representation of an increasingly mobile Africa conveys,[7] moving is not self-evident. People need to know how to do several things to move from one place to another[8]: orient themselves, estimate distances and times, ask for directions, combine the different modes of transport available, be creative when responding to unforeseen constraints, etc. This last point is all the more important in Cameroon, where specific problems arise for travellers, such as the informality of transport rules and prices[9] and the scarcity of signposts (highway signage, street names, etc.).[10] The possibility of moving therefore depends on particular skills, i.e. on a combination of know-how and soft skills, both socially transmitted and acquired through experience, which makes it possible to plan, control and rectify a journey in space. These skills include mastering technical tools such as GPS or mobile phones.

In Cameroon, the diffusion of cellular phones is rapidly becoming a reality: from 2,800 in 1995, it increased to about 19 million devices in operation in 2016. Out of every 100 Cameroonians, 80 are equipped with a mobile phone, almost as many as among Canadians (85 per cent).[11] Mobile phones have pervaded all areas of human life and accompany people on their travels. In Yaoundé, Merlin Ottou observed many pedestrians or public transport users consulting their telephone's screen or chatting with a remote interlocutor.[12]

The article aims to understand how the use of mobile phones contributes to the acquisition and application of mobility skills. It is based on the assumption that digital technologies do not always replace corporeal travels, but complement and enrich them.[13] This study is justified by the fact that little work has been done on the use of cellular phones in the context of internal mobility in African countries.[14] Thus, the first challenge of this reflection is to fill a gap by showing how the mobile phone can become the "*ally*" of Cameroonian travellers. But the use of this type of device requires resources (phone credit, electricity, etc.) which are unequally distributed among individuals.[15] The second challenge of the article is therefore to shed light on inequalities in access to, and use of, mobile phones which result in an uneven potential for mobility assistance for different people and greater or lesser difficulties in integrating the "*dispersed society*".

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[1] Perspective Monde : http://perspective.usherbrooke.ca/bilan/servlet/BMListeStatSpecifique?codetheme=1.
[2] Bureau Central des Recensements et des Études de Population (BUCREP), 2010, p. 20.
[3] Communauté urbaine de Douala (CUD), 2012, p. 10.
[4] BUCREP, 2010, p. 19.
[5] Ministère de l'Administration Territoriale et de la Décentralisation (MINATD), 2012, p. 29.
[6] Le Breton, in Faberon, 2015, p. 92.
[7] Steel, Cottyn and Van Lindert, in De Haan, 2017, p 152.
[8] Buchot, 2012, p. 11.
[9] Pasini, 2018, p. 125-126.
[10] Pasini, 2018, p. 231.
[11] Perspective Monde : http://perspective.usherbrooke.ca/bilan/servlet/BMListeStatSpecifique?codetheme=1.
[12] Ottou, in Nzhie Engono and Leka Essomba, 2018, p. 89.
[13] Rallet, Aguilera and Guillot, 2009, p. 10-12.
[14] Porter, 2015, p. 81.
[15] Pasini, 2018, p. 131-132.

The paper is structured in three main parts: the first part provides an overview of research into the relationships between space cognition and cell phone use, the second part justifies the analytical framework and data collection method, while the last part presents the results. The main conclusion of the article is that the use of cell phones while travelling allows better mobilization of the resources and information available within the social network, although it also reduces travellers' autonomy. In short, the experience of mobility becomes less risky and more reversible when equipped with a mobile phone, but at the same time it loses part of its initiatory and oneiric dimension.

1. State of the research on cognitive aspects of the human-space relationships

In this section, I first provide an overview of research into human-space interrelations. I then try to shed light on how mobile phone use interferes with spatial practices. This section concludes by identifying gaps in these sectors of research in order to identify topics that need further exploration.

1.1. The cognition of space as derived from field experiences and social transmission

There are many studies on the mechanisms of space cognition. This body of research is multidisciplinary and includes both psychologists and geographers. Psychologist Jean Piaget[16] was one of the first to analyse the stages of children's cognition of space. These stages are not an addition of knowledge, but rather a construction by differentiation and distortion of older knowledge. The author considers that young people's understanding of the world around them is achieved through repeated interactions with it. In the 1970s, James Herman and Alexander Siegel[17] showed that the appropriation of the living environment was achieved through landmarks such as roads, railways and borders. In the course of an experiment in which children aged 2 to 11 were invited to walk through a small-scale city model drawn on the floor, first in a classroom and then in a gymnasium, researchers revealed that the more frequent the contact with the places is and the clearer the limits of the space considered, the greater the ability to memorize the objects found there. More recently, geographer Mathis Stock has questioned the existence of a correlation between the geographical proximity of a territory and familiarity with it. He explains that foreign places may become known as long as they are visited regularly. He gives the instance of tourists who transform their holiday residence into a place of identity anchoring.[18] Reginald Golledge suggests that space cognition is constantly updated by the specific objectives of people.[19] He concurs with Colette Cauvin's view,[20] who calls "*functional spaces*" the mental spaces built through the memorization of certain features of the physical environment that are meaningful in the context of a given action. For example, in the case of a motorist, the memorized elements include the location of car parks, one-way streets and traffic lights. These "*functional spaces*" are concrete to the extent that they enable people to move, but they form an inseparable couple with the "*cognitive spaces*". Indeed, men and women, youngsters and the elderly, local people and immigrants, the rich and the poor, do not perceive the world that envelops them homogeneously, but through two distorting prisms: the individual characteristics and the culture of belonging. Colette Cauvin's work therefore assumes that the link between humans and space is both an individual and a collective construction, which is also underlined by Thierry Ramadier.[21] The psychologist distinguishes two processes that enable people to appropriate geographic space. Firstly, the individual "*encodes*" the attributes of space, that is he gives them meaning. This "*semiotization*" (the process of sense-giving) of material places is based among others on the education and norms that prevail in a society. In particular, the acquisition of reading ability (around 6-8 years of age) makes it possible to decipher signposts and to master official place names (toponymy). It is at this time that children move from a representation of space centred on themselves to a representation of space based

[16] Piaget, 1992, p. 149.
[17] Herman and Siegel, 1978, p. 402-405.
[18] Stock, 2006, p. 8-9.
[19] Golledge, 1999, p. 7.
[20] Cauvin, 1999, p. 2-4.
[21] Ramadier, 2010, p. 22-23.

on landmarks that they share with other individuals (street names, monument names, etc.[22]). In addition, the degree of autonomy afforded by parents determines the ability of children to venture far from the home. In Europe, spatial practices are truly decentralized from the neighbourhood of residence from the age of 15-16. Before this age, the exploration of new spaces is conditioned by the economic and cultural capital of the parents.[23] The result of this confrontation with diversified places is the creation of a kind of mental data bank facilitating the decoding of architectural or urban codes visible in the landscape. In a second step, individuals use these data to "*read*" the environment they encounter. This helps, for example, to understand why populations do not all have the same relationship to metropolises: this difference stems from an unequal ability to interpret the signs present in urban territories, which itself derives from past spatial experiences of varying richness.

At this stage, the main lesson to be learned is that knowledge of space increases with the multiplication of mobility experiences, and the transmission of skills such as reading. In fact, the more an individual manages to mentally appropriate a given territory, the more freedom he has to develop his projects and actions in it. However, the use of mobile phones renders the need to interact with the environment obsolete: the observation of the landscape, its organization, signs and landmarks become secondary. What are the effects of cell phone use on the perception and practice of space? This issue is discussed in the next section.

1.2. Cell phone uses and experiences of physical space

Although much remains to be understood about the relationships between the uses of information and communication technologies (ICTs) on the one hand, and the knowledge and practice of physical space on the other,[24] an increasing number of studies are addressing this issue.

In 2007, Kudzai Guvi[25] examined mobile phone use by young South Africans. He revealed that adolescents are more likely to maintain social relationships virtually than in real space. This digital sociality, which involves fewer face-to-face contacts, reduces opportunities to experience the material world. This overall observation is in line with that of other researchers who have shown how the use of ICTs changes the relationship between people and the physical environment. Gilly Leshed & al.[26] observed ten drivers whose trips in New York State, United States, were guided by GPS.[27] The results indicated that the use of a navigation system leads motorists to disengage from the environment they are driving in. Some survey participants simply followed the oral and visual instructions from the machine, no longer paying attention to what was happening outside the car. For example, one of them explained that he relies on the GPS map to locate areas of low visibility and adapts his speed accordingly.[28] Observation of the road through the windscreen becomes almost secondary. However the geolocation system can also facilitate the mobility of people with a poor sense of orientation. In this sense, GPS stimulates the discovery of new places, and therefore curiosity about the geographical space, because it provides a sense of security[29] and offers people the opportunity to benefit from services that meet their needs (by accelerating the search for a petrol station, a hotel, etc.). The conclusions drawn by Michael Leyshon & al.[30] are consistent with those of Gilly Leshed & al., although they were obtained in different regions: New Jersey (United States) and Cornwall (United Kingdom). The authors sought to determine the extent to which the use of a mobile phone equipped with GPS increases young people's ability and desire to expand their *"known world*".[31] The study

[22] Ramadier, 2010, p. 64.
[23] Ramadier, 2010, p. 65.
[24] Leyshon, 2013, p. 590.
[25] Kudzai Guvi, "*Cataclysmic or enchanting: The impact of private spaces on broader social interaction amongst teenagers*", 2007.
[26] Leshed & al., "*In-Car GPS Navigation: Engagement with and Disengagement from the Environment*", 2008.
[27] Leshed & al., 2008, p. 3-4.
[28] Leshed & al., 2008, p. 5.
[29] Leshed & al., 2008, p. 6.
[30] Leyshon & al., "*Mobile Technologies and Youthful Exploration: Stimulus or Inhibitor?*", 2013.
[31] Leyshon & al., 2013, p. 590.

shows that the use of mobile phones leads young people to lose interest in the territories they travel through and, at the same time, gives them the confidence to discover new places. This last aspect is explained by the role of adults: 78% of the students surveyed ask their parents for directions by phone.[32] The use of cell phones makes it possible to maintain the minimum security necessary for the adventure, even if the price paid in return is greater digital surveillance on the part of the parents.[33]

The use of mobile phones not only influences how individuals perceive space, but also how they plan their journeys on public transport. This was revealed by a multidisciplinary research project carried out in Nairobi, Kenya.[34] In this metropolis, most travel is provided by a semi-formal minibus service, known locally as *Matatus*. However, until now, users have lacked information on the frequency of buses and the neighbourhoods they connect. They have therefore depended on, often unverifiable instructions, provided by friends.[35] The *Digital Matatus project* team attempted to correct this deficiency by recording, using a mobile application, the latitude and longitude of the stops served by each bus line.[36] These spatial coordinates have facilitated the creation of various navigational tools. For example, one company has developed the *Ma3route* application, which makes it possible to plan a route, identify high-traffic areas, find out the price of a trip and even rate the *Matatu* driver.[37] In addition, a network map comparable to that found in major Western capitals has been created. Following its publication, the researchers conducted focus groups with students, *Matatu* drivers and owners to discuss its accuracy and usefulness to populations. They also conducted a survey using a standardized questionnaire to gather the opinions of undergraduate urban-planning students regarding the map.[38] The results show that students, by visualizing the network diagram, discover new roads and are more likely to discover neighbourhoods they had not previously visited.[39]

Some of the references cited above take a critical view of the role of ICTs in transforming social practices. Gilly Leshed & al. believe that the use of technology should not be separated from the society in which it is embedded.[40] Individuals appropriate the functions offered by the device, but they also reinvent and divert them, in order to better meet their needs.[41] Michael Leyshon and his colleagues question the "*death of distance*", which is often seen as a direct consequence of mobile phone use. They claim that young Americans and British people are aware of the illusory nature of the proximity offered by telecommunications.[42] While ICTs enable the creation and maintenance of remote links, this does not mean that face-to-face interaction has become obsolete. On the contrary, direct contact seems unavoidable in certain situations related to social or professional life.[43] In fact, by facilitating the expansion of social networks, telephone use encourages young people to visit places where they would not have gone without knowing someone there. However, at the same time, the use of mobile technology gives young people the opportunity to ignore where they are at instant T and where they are going.[44] The interesting point about these articles is that they focus on the way people use ICTs to acquire greater control over space. Thanks to the knowledge available through GPS, the Internet and mobile phones, space is an increasingly controlled dimension. The expression "*Geography 2.0*"[45] corresponds well to this situation where individuals more easily carry out their activities in real space by first going through virtual space. This new geography is a relevant starting point to analyse what humans do WITH space rather than what they do IN space. This means that

[32] Leyshon & al., 2013, p. 596.
[33] Leyshon & al., 2013, p. 599.
[34] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, "*Leveraging Cellphones for Wayfinding and Journey Planning in Semi-formal Bus Systems: Lessons from Digital Matatus in Nairobi*", 2015.
[35] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, 2015, p. 228.
[36] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, 2015, p. 230.
[37] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, 2015, p. 237.
[38] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, 2015, p. 236.
[39] Klopp & al., in Geertman, Ferreira, Goodspeed and Stillwell, 2015, p. 237.
[40] Leshed & al., 2008, p. 2.
[41] Leshed & al., 2008, p. 3.
[42] Leyshon & al., 2013, p. 601.
[43] Sheller and Urry, 2006, p. 217.
[44] Leyshon & al., 2013, p. 601.
[45] Valentin, 2008, p. 3.

space is not simply a material framework in which a person acts, but rather a set of distance relations that people modulate according to their objectives by communicating and moving. Space is "*a crossroads of mobile individuals*", as Michel de Certeau wrote.[46]

But the literature review on the interrelationships between ICTs uses and mobility practices also reveals gaps. First of all, it is worth noting the scarcity of research on this topic covering tropical Africa. Apart from the *Digital Matatus project*, only a few articles address the issue of the links between mobile phone use and travel on the African continent. For instance, Gina Porter[47] states that young Tanzanians who travel to visit a relative in the city use mobile phones to check their itinerary or to be guided to their destination. However, she does not have an explicit interest in the "*skills*" of mobility. The author merely captures how the use of cellular phones is complementary to physical travel, particularly in the real-time management of travel and its hazards. From a slightly different perspective, Ambe Njoh[48] seeks to determine the conditions under which the use of ICTs can improve governance and urban planning in Cameroon. Although not directly related to our issue, this contribution provides welcome background information. It shows that utility companies (such as electricity and water suppliers) could locate their customers more quickly, and therefore better meet their needs, if the cellular phone were used in conjunction with a complete and accurate address system.[49] However, such a system does not exist in Cameroon's major cities, where places still have a formal name and several informal names.[50] As a result, employees of utility companies can spend hours searching for the homes of their subscribers.[51] Ambe Njoh does not mention the possibility of being guided from a distance by a relative or friend, a practice that is still poorly documented in the case of Cameroon.

Secondly, with the exception of Gina Porter's[52] contribution, the articles on which this work is based take little account of the disparities in users' access to ICTs. Nevertheless, digital technologies are not within everyone's reach. In the developed world, the differences are mainly explained by educational and social criteria. Thus, older generations are less comfortable with a computer or smartphone than younger generations[53] who use them on a daily basis. In the developing world, income disparities and the lack of infrastructure can be added to the above criteria. In Cameroon, poverty is concentrated in the countryside[54] which justifies the fact that many rural people do not use ICTs. In addition, cities are systematically better connected to the networks (electricity, telephone, etc.) than the countryside. Mobile phone operators target urban dwellers as a priority because they are more solvent and more numerous than rural populations, which in turn guarantees higher profits.[55] The influence of these inequalities on travel planning and implementation should be clarified, as it is likely that digital disconnection reduces individuals' ability to move in material space.

At the end of the literature review, three main biases were identified regarding the study of the links between cell phone use and spatial practices. The first bias is geographical. Indeed, while ICTs are developing rapidly in Africa, the issue of their convergence with physical mobility attracts little attention from researchers, notably in French-speaking countries such as Cameroon. The references cited above are concentrated on English-speaking Africa, with the exception of Ambe Njoh's article. The second bias identified is thematic. Most of the work focuses on a specific function of the phone (GPS, route planner, etc.) and tries to understand how it interferes with mobility behaviour. This is a mistake because the user can combine the different options offered by their device to get from point A to point B. For example, people can check the exact name of a place with a relative before entering a

[46] De Certeau, 1980, p. 173.
[47] Porter, 2015, p. 86-87.
[48] Ambe Njoh, "*Implications of spatial and physical structures for ICT as a tool of urban management and development in Cameroon*", 2012.
[49] Njoh, 2012, p. 345-348.
[50] Njoh, 2012, p. 345-346.
[51] Njoh, 2012, p. 348.
[52] Porter, 2015, p. 85-86.
[53] Bergier, 2016, p. 33.
[54] Institut National de la Statistique du Cameroun (INS), 2015, p. 70.
[55] Pasini, 2018, p. 127-128.

query into a GPS or route planner. The last bias concerns the lack of attention given to disparities in access to ICTs, which are so prevalent in African countries. These inequalities must be taken into account because they prevent part of the population from using the telephone to facilitate their mobility. This article aims to address these biases using a qualitative method, which is presented and justified in the following section.

2. Analytical framework and data collection method

After having demonstrated the interest of a study on the interrelationships between cell phone use and mobility practices in Cameroon, the next part focuses on methodological aspects. It begins by justifying the analytical framework, built around the concept of "*skills*". It continues by giving an explanation of the data collection strategy. The latter is based on semi-directive interviews and participatory observations. The limits of our methodological choices are explained because they can have an impact on the final results.

2.1. Conceptual framework

In this article, the concept of "*skills*" is at the heart of the reflection. It is based on Vincent Kaufmann's work on "*motility*".[56] This concept refers to all the factors and resources that allow someone to move through space. It depends firstly on the existence of physical networks (transport, communication, etc.) and the conditions of access to these networks (rules, tariffs, etc.). Secondly, "*motility*" is determined by the aspirations of individuals, by their greater or lesser willingness to move.[57] In Cameroon, for example, some retirees have the financial means to travel but they prefer a sedentary lifestyle. They want to spend the end of their lives in the village where they were born and raised, surrounded by their relatives and friends.[58] Finally, "*motility*" is conditioned by the "*skills*" of each individual.[59] This criterion is the most important of the three. Indeed, no one can benefit from a transport infrastructure without a minimum of intellectual mastery. By way of example, road users must obtain a driver's licence, take out car insurance and pay for a motor vehicle safety inspection test at regular intervals. In other words, they must understand and follow standards; otherwise the use of the road network becomes more expensive (fines issued by the police). In addition, the lack of mobility "*skills*" can lead to captivity,[60] a situation that may be contrary to the lifestyle desired by individuals. Mobility skills are extremely diverse, but can be grouped into three main types (table 1).[61] Many mobility skills are directly related to cell phone use. For instance, it offers the possibility to better cope with the distance from family and friends by maintaining a presence that can be activated at all times.[62] The device helps to fight the feeling of loneliness and thus facilitates the control of its effects. With regard to procedural skills, the flow of information within migration networks accelerates the integration of the newcomer into the host city or country.[63]

Types of skill	Definition of skill types	Practical example of skill application
Operational	Ability to effectively use and adjust spatial mobility according to the needs and context.	To find one's way in a city without becoming lost.
		Evaluation of travel costs (bus ticket, toll road tax, etc.).
Emotional	Ability to control the emotions linked to spatial mobility (anxiety, nostalgia, boredom, etc.).	To know how to wait at bus stops.
		To avoid travelling at night.
Procedural	Ability to easily adapt to new places (or situation) and to integrate into community life at the destination.	To expand social relations in an unfamiliar place.
		To understand the layout of streets in an unknown city.

Table 1. Breakdown of the concept of "*skill*"

[56] Vincent Kaufmann, "*Les paradoxes de la mobilité"*, 2017.
[57] Kaufmann, 2017, p. 30-31.
[58] Pasini, 2018, p. 210.
[59] Kaufmann, 2017, p. 31.
[60] Rémy, in Vodoz, Pfister-Giauque and Jemelin, 2004, p. 24.
[61] Aranguren : https://www.ville-en-mouvement.com/fr/content/apprendre-la-mobilité-programme.
[62] Pasini, 2018, p. 157.
[63] Pasini, 2018, p. 71.

The skills approach to mobility has two main advantages. Firstly, it allows us to take a step back from traditional approaches to travel, which focus too much on cost and network development aspects. This break with older analytical models is important, because inequalities are not limited to the issue of access, but also extend to the ability to move.[64] Therefore, thinking in terms of "*skills*" is about understanding how a person's or group's greater or lesser ability to move explains their degree of social inclusion. Secondly, our approach has the advantage of recognizing the dynamic nature of the construction of mobility know-how. The word "*skills*" refers to an ability that has already been tested by oneself or by the person who transmits it (an elder, a teacher, etc.).[65] For example, one knows how to ride a motorbike because one has done so in the past or because a biker has explained how to do so. The word "*skills*" does not have exactly the same meaning as its synonyms. In particular, it differs from "*capacities*", which is the potential for an individual to succeed in doing something:[66] one assumes that one can travel by motorbike, but one is not sure if one can actually do it. This definition of "*skills*" is appropriate insofar as it takes into account the know-how constituted by individual practice and the know-how shared by those with more experience in mobility. This point is crucial because, in Africa, opportunities for movement are often defined by the resources available within the group.[67] On the other hand, being disconnected from, or deprived of, social relationships makes it impossible to benefit from the "*skills*" of others: mobility becomes more improbable.

However, working with the concept of "*skills*" in mobility also requires caution. Two main reservations should be highlighted. First, the approach chosen breaks mobility down into a series of separate tasks, whereas in reality travellers simultaneously perform several tasks, each of which is based on distinct "*skills*". Let us take the case of a motorist from French-speaking Cameroon who travels to one of the two English-speaking regions. This motorist relies at the same time on his ability to drive ("*operating skill*") and on his ability to adapt to a foreign environment ("*procedural skill*"). In addition, the first encounter with traffic signs in English ("*procedural skill*") makes future travel in the English-speaking area more likely, as the traveller will be better prepared for the feeling of strangeness (a strengthening of "*emotional skill*"). These illustrations show that the "*skills*" of mobility form a system and that the boundaries between them are much more porous than shown in the table above. The second weakness of the approach is the risk of opposing people who are capable of displacement and those who are not. Such an opposition would be simplistic,[68] since a person may be competent for one type of mobility and not for another. To take a more concrete example, let us think about teenagers who are still too young to drive a car but are experts in organising a programme of activities by telephone that are dissociated in time and space. These teenagers cannot be simply portrayed as skilled, nor as unskilled. This shows that the concept of "*skills*" should be considered as relative, and their significance always depends of the context.

The skills that allow people to move through space are difficult to quantify. There is no official reference system for mobility know-how. Thus, while some skills are controlled by the State (driving, for example), the majority of them escape any formal monitoring[69] and are mostly based on individual learning (orientation, time management, etc.). A qualitative method seems to be more suitable for exploring these informal learning processes than statistical analysis techniques.

2.2. A qualitative method to explore mobility skills accumulation and usage

The empirical data used in the article come from a geography thesis carried out in Cameroon between 2012 and 2018. They were obtained during three field visits lasting three months for the first two (2014 and 2015) and one month for the last (2016). Most of the data were collected in the centre of the Moungo department (settlements of Loum, Manjo and Éboné),[70] but information was also

[64] Kaufmann, 2017, p. 60.
[65] Buchot, 2012, p.55.
[66] Buchot, 2012, p. 55.
[67] Pasini, 2018, p. 71.
[68] Le Breton, in Faberon, 2015, p. 89.
[69] Le Breton, in Faberon, 2015, p. 100.
[70] Pasini, 2018, p. 17-25.

collected during trips to other regions. In line with the evolution of research practices in social sciences,[71] I have tried to build a collaborative relationship with local populations. As such, Cameroonians were never perceived as mere respondents but rather as "*partners*"[72] in the survey. This positioning has led me to work only with volunteers, which has two advantages. First, the individual who contributes voluntarily to a scientific inquiry feels valued: their knowledge, their ways of doing things, and their experiences, are legitimate. This can give them confidence in their ability to solve complex problems and even convince them that they can reverse some unfavourable power relationships. For example, helping the "*partner*" to become aware that they can negotiate the price of their transport has the effect of increasing their control over the "*mobility budget*". In this way, the study contributes directly to the improvement in people's living conditions. Second, the recruitment of volunteer participants guarantees the diversity and quality of the data collected, because it is easier to talk about experiences through a voluntary process. However, this sampling method is not representative of the targeted population and prevents any generalization of the results. But the purpose of the research was elsewhere: to explore, on a micro-sociological scale, how individuals use space and the means, particularly cognitive ones, they deploy to achieve it. Two tools are used to achieve this objective: semi-directive interviews and participatory observations.

The interviews allowed survey participants to trace in detail the progress of one or more of their recent journeys. To ensure the quality of the information, which is based on individuals' memories, only trips made the week before the interview were taken into account.[73] The discussion was loosely supervised, except for the stimuli given to the speaker to encourage them to specify the destination, motivations, difficulties, activities and stratagems associated with their travels. The aim was to reconstruct the "*black box*" of each trip, understanding the reason it was undertaken, any unforeseen events and the person's reactions in response to these events. In addition to these major themes, the "*partner*" could add any discussion topics deemed useful. Moreover, in order to create a climate of trust, the choice of the interview location was left to the "*partner*", so that they would designate a place where they felt comfortable. The discussions were often held directly at the participant's residence, and sometimes in bars. Finally, the conversations were recorded using a Dictaphone to avoid the need to note down information. By doing so, I was able to look at the "*partner*". Being able to observe the interlocutor, and being observed by him in turn, accelerates the building of trust necessary for this research work. In total, about 30 interviews were conducted and transcribed following out return to France. They last on average one and a half hours.

Observation consists of following travellers to understand how they actually carry out their journeys. It is done without pre-constructed tools, so as not to put an *a priori* reading on individuals' practices and choices. The technique focuses on all the perceptible dimensions of situations, such as body postures, gestures, object manipulation (cell phone, GPS, etc.). The observation was participative insofar as I accompanied Cameroonians during one of their daily journeys. The individuals solicited for an interview, and those concerned by the observation, form two distinct and hermetic groups. This separation ensures that people whose attitudes may have been influenced by the content of the interview are not observed. This precaution helps to minimize the behavioural distortions of the "*partner*", knowing that my presence is already a source of disruption. The aim is not to multiply the risks of bias by selecting Cameroonians who are involved at several stages in the research process. In total, I observed 30 trips: 22 were for commercial or agricultural activities, 3 to go school, 2 to visit family, 2 to carry out administrative procedures and 1 for tourism. As regards the means of transport used, 25 trips were made by motorized vehicle and 5 on foot. Of the 25 motorized trips, 19 were made using public transport and 6 by private vehicle (mainly motorbikes). Participatory observation has the advantage of allowing information to be collected at two levels: not only does it give access to what the traveller is doing in a real situation ("*external*" description of the situation), but it also gives the observer the opportunity to use what he is experiencing to feed his reflection ("*internal*" description of the situation). Indeed, participatory observation implies a complete immersion in the explored reality. The researcher is at the centre of the events that interest them, to the point of becoming in turn a

[71] Lacoste-Dujardin, 1977, p. 30-31 ; Leyshon & al., 2013, p. 594.
[72] Lacoste-Dujardin, 1977, p. 23.
[73] Pasini, 2018, p. 345.

subject of study. This positioning leads me to reflect on my own reactions to the conditions and hazards of the trips I have taken part in. What were my reflexes when confronted by police roadblocks, a bus breakdown, or the arrival at night in a city? How did I use my mobile phone in these circumstances? Answering these questions provides elements as enlightening as those emanating from external observation of populations. Ultimately, participatory observation is about bringing the interviewer and respondents together in a common destiny that is characteristic of partnership.

This part allowed me to clarify my theoretical and methodological choices. The analytical framework affords a key role to individual actors as they mobilize skills to move through space. This focus on individual actors aims to break with deterministic explanations of mobility, which present mobile people only as agents driven by social forces. Instead, this work attempts to study how, after a period spent diagnosing their situation, individuals bring together the resources (including cognitive resources) required to set themselves in motion. Individual actors are also at the heart of the methodological approach since participants in interviews and observations have the opportunity to influence the research process (by proposing new discussion items, for example). Now that the conceptual approach and investigative techniques have been presented, I will adduce the results in the following part.

3. Empirical evidence

This section presents the empirical results. It is organized into two main sub-sections: the first explains how the use of mobile phones facilitates the way people behave when travelling (operational and emotional skills), while the second focuses on how the use of telecommunications helps in managing the uncertainties inherent in mobility. This second subsection also shows that the possession of cell phones may increase the risk of being robbed at bus stops or on public transport. In this sense, using a phone in a public space creates an entirely new situation to which users need to adapt (procedural skills).

3.1. An alteration of mobility experiences

3.1.1. "Knowing-how-to-wait" and endurance to mobility

The use of mobile phones has an impact on the way waiting and travelling times are experienced. At a bus station, the phone helps pass the time until the bus leaves. In Cameroon, as is the case in most African countries, buses only leave the station if there are enough passengers on board. This situation is explained by a desire for maximum profitability, in order to compensate for the numerous road charges levied on users (purchase of fuel, payment of taxes, etc.). The consequence for the passenger is that several hours can pass between their arrival at the bus station and the actual departure. Knowing how to wait is therefore an important asset: it demonstrates the passenger's ability to adapt to the situation and to comply with the implicit rules set out by the transport companies. From a usage point of view, individuals pass the time making calls, answering SMS messages or entertaining themselves. For example, Jovic[74] takes advantage of waiting times at the bus station to listen to his favourite music. However, this way of using one's time is constrained by the technical properties of the device, such as battery life, memory storage capacity or the strength of the network or WIFI signal. In addition, the diffusion of mobile phones has not actually instituted new practices, but has simply provided an additional way for people to overcome boredom. Another way of passing the time, which is more traditional and now coexists with mobile communication, is the consumption of food and drink. Bus stations offer street food, such as sliced fruit, roasted peanuts and meat skewers.

Once on the road, the cell phone is always to hand. It is rarely used throughout the journey because of the technical constraints mentioned above and because some functions are not accessible after departure. Thus, the noise of the engine and the driver's choice of his own playlist may prevent

[74] A list of the interviews used in this article containing the dates and locations of the interviews is provided at the end of the paper (Table 2). All the names used in this article are pseudonyms.

the passenger from listening to music on their phone. Consequently, it is instead used to interact with relatives or customers, as Flaubert testifies:

> "*The mobile phone is very important for me. It allows me to keep in touch with customers and to build loyalty with them. Later, during my trip to Douala, I will keep my customers informed. I am going to tell them that I am in Manjo and that, in two hours at the latest, I will be there*".

The mobile phone is also used for playing games, as Rodrigues explains:

> "*When I travel by bus, I have time to play. I use the phone for that. It distracts me. It helps clear the head a little bit. That means that when you leave here for Douala, the time seems to pass more quickly*".

These quotations convey the idea that transport time is no longer "*lost*". Thanks to their telephones, passengers can "*double*"[75] their time, that is to superimpose activities related to work or social life onto transport time. The bus then presents a form of life in motion,[76] characterised by the continuity of occupations both before and after departure. This use of technology helps to develop a kind of "*endurance*" to mobility. In Cameroon, journeys take a long time because they are punctuated by numerous stops (tolls, passengers boarding or alighting, etc.) and because the roads and vehicle wear and tear limit traffic speeds (a 100 km journey between Douala and Loum takes at least 2h30).

Picture 1. This picture illustrates why public transport moves at a moderate speed, thus extending the travel time between cities. In the foreground, one can see that the road surface is of poor quality (cracks are visible in the asphalt). In the background, there are two minibuses heavily loaded with luggage and merchandize.

[75] Jauréguiberry, 2007, p. 82.
[76] Sheller and Urry, 2006, p. 213-214.

In addition to this, trips take place in unfavourable conditions as far as passenger comfort is concerned (crowding, heat, etc.). By serving as an object of distraction, the use of the telephone makes people less aware of the inconvenience of travelling for several hours. Just focusing on something else, like a cell phone screen, renders the brain impervious to other stimuli. This aspect, highlighted by the experience of the "*invisible gorilla*",[77] is already well documented in Europe. For example, Geoffroy Patriarche & al.[78] mention the fact that reading a book can help people ignore the noise on Brussels' public transport network. This type of stratagem is likely to induce mobility, because the passenger can form a kind of protective "*bubble*" around themselves and thus better cohabit the space with other passengers.

3.1.2. Direction-giving via mobile phone

During my travels in Cameroon, I never saw any motorists or bus drivers consulting a road map. I also do not recall seeing any road maps for sale, which suggests that there is no demand for such a tool. Cameroon is an "*oral society*".[79] Speech plays a central role in daily life, especially since many Cameroonians are unable to read or write. In 2012, almost 19% of 15-24 year olds were illiterate. The rate for women is even higher at above 22%.[80] In the other age groups, the proportion of those who have never attended school is higher still: 31% of women aged 40 to 44 have had no formal education, twice as many as those aged 20-24.[81] These data explain why the mobile phone, which allows for oral communication, has been so successful in Cameroon. In surveys of ICT usage, itinerary research is not represented. On the contrary, interactions with relatives are included among the uses of ICTs. A 2014 study noted that telephone calls and text messages are among the most well-known services used by Cameroonians.[82] A proportion of the time spent on the telephone is used to ask for directions, as Jovic, a high school student in Loum, explains:

> "*The mobile phone helps me a lot when I am travelling without my parents. It helps me to find my way. Which way should I go? Where should I go? Without a phone, how am I going to do it? I get too confused when I travel alone. As they are used to travelling, parents can say: "Okay, you stop there. You take another taxi, you continue along this road". That is how I manage. If I do not have a phone, who am I going to call? There may be no one on the street to ask. I am obliged to use my phone and, at that moment, I need to have credit. Otherwise, it is over for me*".

Jovic seeks the help of his parents because he recognizes that they have greater mobility experience than he does. The first lesson to be learned from this situation is that the young man remains somewhat dependant on his elders. Jovic pointed this out at the end of the quote, indicating that he absolutely must have credit on his phone so that he can continue to call if necessary. This lack of autonomy can also be seen in where the telephone credit comes from. As Jovic does not work, and has no income of his own, it is therefore his parents who finance his communication time, as he indicated in another part of the interview:

> "*For the credit, it is my parents who give me the money. They really are the ones who help me with the phone. Otherwise, where can I get the money? I am only a student*".

The purchase of telephone credit is an important differentiating factor in Cameroon: not all households have the means to finance the communication of the youngest. Income is often unstable, as it is acquired through activities which are seasonal (agriculture) and/or informal (without a contract and

[77] Christopher Chabris and Daniel Simons "*The invisible gorilla: how our intuitions deceive us"*, 2011.
[78] Patriarche & al., 2009, p. 207.
[79] Kibora, in De Bruijn, Nyamnjoh and Brinkmani, 2009, p. 110.
[80] INS and ICF International, 2012, p. 29.
[81] INS and ICF International, 2012, p. 31.
[82] Agence de Régulation des Télécommunications, 2014, p. 46.

therefore without any payment guarantees). Jovic's case is special in that one of his parents is an employee of a money transfer company and has a regular salary.

The second conclusion that can be drawn from Jovic's statement is that he is aware of the importance of having telephone credit in a mobile situation. It is conceivable that he will ensure that his account is recharged before departure and/or that he does not consume too many units *en route*. Telephone credit corresponds to a communication potential that can remain in a state of latency until arrival. In this way, Jovic equips himself with the ability to activate an emergency hotline if he feels lost or if he has any doubts about the direction he is going in. This search for safety can be considered as a skill, insofar as it allows less apprehension of movements in unknown areas and to unknown places.

The third lesson that can be inferred from Jovic's statement is that his parents give him precise and real-time information about the itinerary he needs to follow. This form of "*tele-guidance*" necessarily involves the use of spatial landmarks. However, there may be distortions between the reference points proposed by the guide over the telephone and those that actually exist. The evolution of landscapes over time may lead to the modification or demolition of certain places (shops, bus stops, etc.). In addition, the benchmarks chosen by the parents are not necessarily those that Jovic would have chosen in the field. Let us recall here that "*cognitive spaces*" are built on the basis of each person's motivations, experiences and personality.[83] They are extremely heterogeneous from one individual to another. This leads to misunderstandings between the guide and the person he is trying to assist. The risk is that the traveller may feel more lost as he wanders through the streets until he finds the landmark indicated via the phone. The telephone conversation provides a form of a permanent adjustment: the guided person specifies their position and describes their environment to their interlocutor, so that the route to follow can be updated. In contrast to what is sometimes described in the scientific literature,[84] the use of mobile phones stimulates interest in the physical environment.

The fourth aspect raised by Jovic's testimony is the differentiation introduced by the possibility (or impossibility) of asking a member of his social network for directions. Jovic obviously does not have the knowledge to travel alone, but he can rely on his family's help to be mobile anyway. But other individuals may not be able to rely on this assistance for at least two clear reasons. Firstly, in order to be guided remotely, people need to be able to make a call and maintain that communication over a relatively long period of time. This requires access to electricity (to charge the phone's battery) and being in an area covered by the cellular network. However, the latter is discontinuous in the urban periphery and in the countryside. Jovic, whose family lives outside downtown Loum, evokes the random nature of network coverage:

> "*Sometimes my parents are inside the house and are forced to go out because there are certain waves that cannot get in. So they go outside to pick up and say, "Hello? Hello?" And then, if the person calling is very far away, in the agricultural plot for example, there is no network. At this juncture, it is impossible to call them*".

This testimony suggests that it is not always easy for Jovic to call his parents from outside and, therefore, to ask them for directions. Geographically, this shows that space does not offer the same opportunities for connection everywhere and that the use of ICTs is heavily determined by the infrastructure available. Secondly, in order to be tele-guided by relatives, they must have the required experience and knowledge to pass on. Although Jovic's parents are "*used to travelling*", this is not always the case: people who rarely travel and/or travel only in their city of residence (due to material constraints, for example) have less spatial knowledge than those who travel frequently and in more diverse places. Let us remember that familiarity with a foreign territory increases if, after an initial period of discovery, recurrent practices take place in it.[85] People with limited mobility are surrounded by places they consider foreign and therefore lack information to guide their relatives who venture there.

[83] Cauvin, 1999, p. 4.
[84] Leyshon & al., 2013, p. 599.
[85] Stock, 2006, p. 8-9.

3.1.3. Getting information on probable immigration destinations

Empirical results indicate that the mobile phone is being used to gather information on future immigration destinations. Connecting to the Internet, when possible by telephone, helps to familiarize oneself with remote areas by providing access to images and information on living conditions. In this respect, *Facebook*'s role is crucial because it allows for the publishing of videos and photographs. Cameroonians living abroad like to "*show off*" by posing in front of famous monuments or exhibiting objects that attest to their professional success (cars, clothes, etc.). In this way, they contribute to the construction of the myth of "*easy*" success in Western metropolises and in oil economies such as Gabon, Equatorial Guinea and Nigeria. This representation is spreading even faster as young people now spend a lot of time commenting on the pictures posted by their *Facebook* contacts. Mado, a 21-year-old woman, provides this example:

> "*I go on Facebook and Whatsapp every day. This morning, I went on Facebook to reply to my messages, to post a picture and to comment on my friends' posts. I really like to comment on the photographs taken by my friends abroad. It encourages me to travel. I can see other countries which are different from Cameroon*".

Thanks to Mado's testimony, we can understand how there is no distance maintained between what is shown on *Facebook* and the true situation. What matters is not the reality of what is shown, but the dream that the photographs embody. The young woman's need to react to the publications of her fellow expatriates is only proportional to the lack of work and material accumulation opportunities in rural Cameroon. In terms of competence, this "*consumption*" of *Facebook* content is problematic insofar as it arouses desires for immigration without taking into account the difficulties such a project entails. The images accessible on the social network say nothing about the constraints of life in Paris or in the new oil "*Eldorados*", which can be a source of frustration when people are leaving for these destinations.

Mobile phones can also be used to prepare for internal immigration within Cameroon. This is the case for Patrice, who wishes to follow a training course in carpentry in Douala. The problem is that he has no family in the city to offer him accommodation and the demand for student housing is clearly far higher than the supply available. Despite the difficulties, the student manages to book a room via his parents' contacts. He narrates how he acquired the flat in these terms:

> "*One evening, we were all at home. My father's phone rang. It was one of his friends, whom he met when working on construction sites in Douala. The friend told him: "Concerning the case you told me about, a room is free near the Akwa-Nord pharmacy, in Deido. The room costs 10,000 CFA francs per month." My father said, "Okay! Give me the landlord's number". My father called him. They negotiated quickly. Three days later we went to Douala to secure the offer. We paid in advance for three months*".

Patrice's example highlights the role of the cell phone in information acquisition. In Cameroon, rental ads circulate mainly from person to person and by word of mouth, hence the importance of having a diversified and extensive social network. A landlord will generally prefer to rent his property to someone he knows, because it reduces the risks and speeds up the resolution of potential conflicts. In Patrice's case, the parents served as key contacts and guarantors for the landlord. From the mobility skills perspective, the acquisition of housing in a new city encourages the exploration and enrichment of geographical knowledge. Patrice gradually discovers his environment: he limits himself first to the streets near his place of residence, before venturing into more distant spaces. After a while, personal landmarks are created, such as the location of the market and the places where students gather (libraries, bars, cybercafés, etc.). Elisabeth Murphy-Lejeune describes this phenomenon of progressive personalization of space as "*nidification*" (nesting).[86] Without the mediation of the telephone, the search for accommodation would have taken longer and been more uncertain; without such an anchor

[86] Murphy-Lejeune, 2000, p. 15.

point, Patrice would not have been able to start his training and develop regular mobility in Douala; he would therefore not have been able to extend the part of the world he masters.

3.2. Dealing with mobility risks

3.2.1. The "umbrella effect": the example of technical breakdown management

In March 2015 when I was travelling from Loum to Dschang, the bus broke down in the middle of the trip. We found ourselves near Melong. My initial reflex was to call the colleague I was due to meet in Dschang to inform him of the situation and warn him there would be a delay. He advised me not to wait for the bus to be repaired and to get on the first alternative bus that came along. He also told me that I would not have to pay for a new ticket and that would be up to the drivers to make arrangements between themselves. This is called a "*transfer*". Following the call, several buses stopped and passengers transferred to different vehicles. This anecdote illustrates how the use of the mobile phone made it easier to manage a situation I had never faced before: it gave me access to information that helped me to negotiate and continue the trip. Without such information, I would probably have panicked and ended up buying a new ticket on the replacement bus. The trip would have become more expensive. This experience, in which the telephone played a central role, turned into a new skill as it allowed me to know what to do in future similar circumstances.

However, the use of cellular phones can also lead to more nuanced results in terms of adapting to mobility risks. In the agricultural-product transport sector, the cell phone has become an essential tool for managing technical hazards (punctures, engine failures, etc.). Before the diffusion of cell phones in Cameroon, the driver of a damaged vehicle needed an important ability to take the initiative: he could either attempt the repair himself or, in the event of more serious problems, ask a local resident to go and find a mechanic (assuming the breakdown occurred in an inhabited area). Today, the first reflex of the driver of a damaged vehicle is to call his employer, as Pierre, a wholesaler based in Loum, points out:

> "*We load the goods onto the truck. Sometimes, the truck has a puncture. The engine may fail. In these cases, the driver calls you. You have to pay another truck to pick up the goods or you go out there with the bus. You take as much as you can. Otherwise, the goods will rot on the way and you will lose everything*".

This quotation raises two interesting points. Firstly, it underlines the urgency in getting goods to their destination, in particular foodstuffs with a limited shelf life. The aim is to avoid economic losses by using a second truck as soon as possible. The stakes are high, because the working capital of an agricultural trader depends mainly on their sales; the loss of part of the cargo reduces the profit margin, compromising future purchases and, in the long run, the entire activity. Secondly, the quotation reflects the truck driver's lack of autonomy, and whose first reflex is to report the incident to his boss. In France, Francis Jauréguiberry[87] refers to the "*umbrella effect*" which describes the habit of calling one's boss in case of difficulty. This automatism can be analysed in two different ways. On the one hand, it may be thought that notifying the boss of a breakdown is part of an established procedure. This allows the expeditor of the goods to react quickly, while the driver is sure to get help. By doing so, the driver is recognized as a reliable and competent employee. On the other hand, the existence of such a procedure promotes a form of "*deresponsabilization*" on the part of the driver, which can have serious consequences. Being able to get help easily results in less vigilance on the road and an increased risk of accidents. This danger is all the more real as many wholesalers measure the efficiency of the transport company by its speed of delivery: it is necessary to arrive before the market opens to have time to unload the products and place them on the stalls.

[87] Jauréguiberry, 2007, p. 100.

3.2.2. Having a mobile phone increases the risk of being attacked

Generally described as a tool that facilitates mobility, the mobile phone is also a risk factor for its users. Indeed, it is one of the main targets for thieves. The latter operate not only during the day, but also at night, as "*Super*" explains:

> "*There are risks of aggression because we are used to travelling at night to supply cities with food. The main danger comes from the "coupeurs de route" (highwaymen). They block the road and, when they see that there is a trader in the vehicle, they think you have a lot of money. They search you and take everything from you: your money, your wristwatch, your mobile phone*".

When not perpetrated directly inside vehicles, thefts are committed at the bus station at the time people are transferring between services.[88] Theft rates are driven by the existence of a high demand for second-hand telephones, as poor people cannot afford to buy a new device. Theft brings in more money than a lot of legal activities (carpenter, dressmaker, mechanic, etc.). As an illustration, a foreign-branded smartphone may be sold for at least 50,000 CFA francs on the "*black market*",[89] while the minimum wage is 36,200 CFA francs per month.[90] Faced with this insecurity, new attitudes are beginning to emerge among travellers. For instance, Jovic "*hides his 3310 mobile phone in his pack of tissues*" when he travels to the city by bus. The objective is not to avoid attacks, but to minimize the possible losses by making it more difficult for thieves. However, this strategy only works for small devices, as large phones cannot be hidden so easily.

The attacks do not only affect public transport, but also pedestrians. Public space can be seen as a place where people with different social characteristics meet, talk and spy on each other. In the digital era, the avenues and squares of Cameroonian cities make it easy to find owners of laptops, tablet computers and/or mobile phones. If you are carrying a laptop bag or have a phone in your pocket then you become a target. Some individuals, nicknamed locally "*scanners*",[91] are responsible for defining the type of equipment transported (for example, if the phone is an older model or a smartphone) and then notifying an accomplice. The number of assaults is so high that city dwellers have become accustomed to it.[92] Allow me illustrate this point with an anecdote. In the hotel where I stayed in Loum, the staff (receptionists, kitchen staff, etc.) were mostly women. When they left work, they used to "*beep*" their relatives to inform them of their return trip. In this way, they avoid having to take their phones out on the street and thereby reduced the likelihood of being attacked.

Despite the risk of aggression, no Cameroonian can today imagine travelling without a phone. This paradoxical situation can be explained in two ways. Firstly, the mobile phone is perceived more as a safety tool than as a potential goal for thieves. The opinion of Alexandra, a high school student who travels daily to the centre of Loum, confirms this:

> "*When I go home from school, I always call someone. It's like we are walking together. It's like I'm being accompanied. When people see you speaking on the phone, they leave you alone. Yes, you have fewer worries*".

The second reason for the use of cell phones in mobile situations is the need to locate someone before an appointment. Indeed, unlike fixed lines, the cellular phone is not linked to a place but to a person. The first person who arrives at a meeting point is no longer forced to wait in a specific place: they can move around and go about their business. Upon arrival, other people rely on their phones to check the location of the appointment and update it if necessary. This real-time coordination makes it possible "*to no longer look for oneself as in Antiquity*", to use Jules' expression.

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[88] Moussang, 2012.
[89] Ottou, in Nzhie Engono and Leka Essomba, 2018, p. 93.
[90] Pasini, 2018, p. 259.
[91] Leka Essomba & al., in Nzhie Engono and Leka Essomba, 2018, p. 33-34.
[92] Leka Essomba & al., in Nzhie Engono and Leka Essomba, 2018, p. 33-34.

Conclusion

In conclusion, there are two main lessons which can be drawn from the study. The first is that telephone use alters the way individuals interpret, navigate and experience physical space. The use of cell phones is a factor of disengagement from the surrounding environment, but the empirical material suggests that this disconnection may have positive aspects. Indeed, by occupying themselves with their mobile phone, the individual pays less attention to the inconvenience of travel (noise, promiscuity, etc.) and becomes more resistant to it. In addition, the use of the telephone helps to reduce some of the risks associated with mobility. The practice of "*tele-guidance*" illustrates this aspect well, even if it can become a source of confusion when the landmarks mentioned by the guide are difficult to find or no longer exist in the field. In a different register, the use of mobile phones speeds up the search for information on potential destinations for migration. It allows people to resolve certain difficulties in advance, as we have seen with the example of housing in Douala. Nevertheless, the abundance of images readily available on the mobile web is problematic. These images convey misrepresentations of living conditions abroad and lead to ill-prepared migration projects. For transport companies, the telephone has become a tool for vehicle failure management. Although its use is justified by the desire to minimize financial losses, it also encourages the employee to take fewer responsibilities: employees no longer attempt to repair their vehicles and no longer seek help until they have received instructions from the boss by telephone. Finally, since the mobile phone is a target for thieves, its use increases the probability of being attacked on public transport and at bus stations. To avoid such a danger, travellers equipped with a telephone are developing new strategies (concealment of the device, postponement of non-emergency communication, etc.) that can be described as skills.

The second lesson of the article is the existence of strong inequalities in the use of mobile phones in a mobile situation. The most traditional differentiating factors are income which affects the traveller's ability to buy communication credit, and living in rural areas which results in difficulties in reaching relatives by telephone. In addition, the article uncovered the intergenerational transmission of space navigation problems: children whose parents travel rarely are less likely to be guided by telephone than those whose parents travel regularly and have mastered many different routes. By considering these inequalities, we can distinguish two profiles of mobile people. The first covers people who may rely on their mobile phones, at least intermittently, to plan, control and rectify their movements in real time: there is a convergence between the realization of mobility and the use of mobile phones. The second profile includes people who are unable to use a mobile phone while on the move: there is no longer any convergence between the realization of mobility and cell phone use. In this case, travellers are more dependent on their ability to improvise: for example, they orient themselves by asking other passengers for directions.

With hindsight, the main limitation of the article is its lack of generalizing ambition, that is to say, it does not touch enough on general principles relating to social behavior. This weakness is due to the type of the data collection methods used. Qualitative interview and observation techniques provide a detailed understanding of how individuals appropriate the possibilities offered by the telephone and how they apply them to each mobility situation, but they do not highlight the correlations between major social criteria (gender, age, etc.), travel practices and the application of these practices with the cellular telephone. Admittedly, it is not possible to consider the mobile individual as simply being determined by social factors, but it seems important to me that we take better account of them in the future. In particular, I believe it would be relevant to develop further work on female mobility. Women are frequently required to perform repetitive, short-distance movements which are linked to domestic and educational tasks (food supply, agricultural work, childcare, etc.). How and why is the cell phone used in this type of domestic mobility? To what extent does the use of the telephone open up new mobility opportunities for women?

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Appendix

First name	Gender	Place of residence	Profession	Interview date	Sections where this person is mentioned
Flaubert	Male	Manjo	Wholesaler	14/02/2014	Section 3.1.1.
Rodrigues	Male	Nlohé	Motortaxi driver	15/02/2014	Section 3.1.1.
Jovic	Male	Loum	Student	11/02/2016	Sections 3.1.2. and 3.2.2.
Mado	Female	Loum	Student	30/03/2015	Section 3.1.3.
Patrice	Male	Bakwat	Student	05/04/2015	Section 3.1.3.
Pierre	Male	Loum	Wholesaler	25/02/2014	Section 3.2.1.
« *Super* »	Male	Loum	Wholesaler	22/03/2014	Section 3.2.2.
Alexandra	Female	Loum	Student	10/02/2016	Section 3.2.2.
Jules	Male	Loum	Farmer	14/03/2014	Section 3.2.2.

Table 2. List of the interviews used in the article