

Local meanings of global connectivity

An exploratory study into the effects of internet use on youths' everyday lives in Cameroon

Mirte Cofino

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If it wasn't for the last minute panic, nothing would ever get done.
- Anonymous

Summary · Samenvatting · Résumé

Ever since internet has become a hot topic in development studies, most research has addressed the potential applications of internet access in relation to various development objectives. However, although internet access is commonly assumed to be beneficial for its users, few studies have specifically addressed the question of how the use of the world wide web influences individual users. Therefore, this study explores the potential effects of internet use on the everyday lives of Cameroonian youths in semi-rural environments. The range of effects studied is narrowed down to three main aspects: 1) mobility and activity patterns, 2) social networks and 3) social transformations as reflected in changes in norms, values and lifestyles. Building upon a wide range of disciplines, a theoretical basis was derived from the available material on internet use in developing contexts, complemented with insights from developed settings.

Considering the broad nature of the study, a diverse methodology was applied, including an activity diary survey, qualitative in-depth interviews and questionnaires addressing both quantitative and qualitative questions. The methodological setup was kept as flexible as possible to allow for incorporation of findings from the field. Over the course of a ten-week fieldwork period in Cameroon, new impacts of internet use were discovered and incorporated in the further study as much as possible.

The results indicate that internet use is mainly associated with increases in perceived mobility, changes in the scope and composition of social networks and tentatively points to changes in lifestyle. Moreover, the type of information retrieved from the world wide web may not be in accordance with expectations about 'valuable' internet use, but does contribute to individuals' sense of liberty and independence through access to information and widening of their horizon. Follow-up research in the form of a longitudinal analysis on this topic is highly recommended in order obtain a better insight into the extent to which the changes in the aforementioned factors can be related to internet use.

Nederlands

Vanaf het moment dat de verwachtingen rond internet ontwikkelingsstudies in hun greep kregen is het gros van het academisch onderzoek in dit veld gericht geweest op de mogelijke toepassingen van internet voor verschillende ontwikkelingsdoeleinden. Echter, hoewel over het algemeen wordt aangenomen dat toegang tot internet een positief effect heeft op haar gebruikers zijn er maar weinig studies geweest die deze vraag daadwerkelijk aan de orde hebben gesteld. Daarom verkent deze studie de mogelijke effecten van internet gebruik op de dagelijkse levens van Kameroenese jongeren in semi-rurale gebieden. De studie beperkt zich tot drie hoofaspecten: 1) mobiliteit en activiteitenpatronen, 2) sociale netwerken, en 3) sociale transformaties in de zin van veranderingen in normen, waarden en levensstijlen. De theoretische basis werd ontleend aan een brede verscheidenheid aan disciplines, waarbij de beschikbare materialen op het gebied van internetgebruik in ontwikkelingslanden aangevuld werden met inzichten uit de meer ontwikkelde context.

Gezien de brede opzet van de studie is gekozen voor een diverse methodologie, waarbij gebruik wordt gemaakt van een enquête gebaseerd op een activiteitendagboek, kwalitatieve diepte-interviews en vragenlijsten die bestonden uit zowel kwalitatieve als kwantitatieve vraagstellingen. De methodologische opzet geeft zoveel mogelijk ruimte voor flexibiliteit met het oog op de integratie van bevindingen uit het veld. In de loop van de tien weken durende veldwerkperiode in Kameroen werden verschillende nieuwe facetten van internetgebruik ontdekt en zoveel mogelijk verwerkt in de verdere studie.

De resultaten wijzen uit dat internet voornamelijk geassocieerd is met een verhoogd gevoel van mobiliteit en veranderingen in de schaal en samenstelling van sociale netwerken. Verder duidt de uitkomst voorzichtig op veranderingen in de levensstijl. Bovendien is het soort informatie dat internet biedt niet per se in overeenstemming met de verwachtingen betreffende 'waardevol' gebruik van internet, maar draagt ook het 'minder waardevolle' gebruik bij aan een gevoel van vrijheid en onafhankelijkheid door de toegang tot informatie en een verbreding van de horizon. Vervolgonderzoek in de vorm van een longitudinaal onderzoek wordt van harte aangeraden om een beter inzicht te kunnen verkrijgen in de mate waarin veranderingen in de bovengenoemde factoren inderdaad gerelateerd kunnen worden aan internetgebruik.

Français

Depuis que l'Internet est devenu un sujet brûlant en études du développement, la plupart des recherches aient porté sur les applications potentielles de l'accès Internet par rapport aux objectifs de développement. Cependant, bien que l'accès Internet est communément supposé être bénéfique pour ses utilisateurs, peu d'études ont abordé spécifiquement la question de savoir comment l'utilisation du World Wide Web influence de ses utilisateurs. Par conséquent, cette étude explore les effets potentiels de l'utilisation d'Internet sur la vie quotidienne des jeunes camerounais dans des environnements semi-rurales. La gamme des effets étudiés est réduit à trois aspects principaux: 1) les programmes de mobilité et de l'activité, 2) les réseaux sociaux et 3) les transformations sociales comme en témoigne l'évolution des normes, valeurs et modes de vie. S'appuyant sur un grande éventail de disciplines, une base théorique a été créé en base de la matériel disponible sur l'utilisation d'Internet dans des contextes de développement, complété par des idées de situations développés.

Considérant le cadre de l'étude, une méthodologie diverse a été utilisée, et se composait d'une enquête sur des journaux d'activités, des entretiens qualitatifs en profondeur, et des questionnaires portant à la fois des questions quantitatives et qualitatives. La configuration méthodologique a été maintenu aussi flexible que possible pour permettre l'incorporation des résultats sur le terrain. Au cours de la période de travail de terrain de dix semaines au Cameroun, des nouvelles impacts de l'utilisation d'Internet ont été découverts et incorporés dans l'étude d'autres autant que possible.

Les résultats indiquent que l'utilisation d'Internet est principalement associée à une augmentation de la mobilité perçue, des changements dans la portée et la composition des réseaux sociaux et provisoirement des points à des changements de mode de vie. En outre, le type d'informations extraites de la World Wide Web peut-être ne serrent pas en conformité avec les attentes concernant l'utilisation d'Internet "utile", mais contribuent au sentiment individuel de la liberté et l'indépendance grâce à l'accès à l'information et l'élargissement de leur horizon. Suivi de la recherche sous la forme d'une analyse longitudinale sur ce sujet est fortement recommandé afin d'obtenir un meilleur aperçu de la mesure dans laquelle les changements dans les facteurs susmentionnés peuvent être liés à l'utilisation d'Internet.

Preface

How did I perceive the world before I was introduced to internet? Over the course of this study, I kept on pondering on this question. I first browsed the internet at the age of 13: an age at which the world was still revealing its depths, peeling off the protected limits of childhood as my world grew bigger. As such, I am unable to judge the extent to which internet or simply 'growing up' expanded my horizon.

It was only in 2007, when I resided in Cameroon for an extended period of time, that I became aware of the significance of internet access. Unable to see my friends and family, I used internet to share my experiences with them, communicate with them, read up on what was going on elsewhere in the world and search for information for the work I was doing. Having been accustomed to internet use, the world wide web was no secret for me anymore – but having access at those moments did make me aware of its value.

I was surprised to notice that Cameroonians also perceived the internet as extremely valuable. The number of internet users was still fairly limited at the time, connections were slow, equipment was old. Nevertheless, people believed that internet held great promises for the future of the country. One of the experiences that made me most aware of how deeply Cameroonians believed internet access to be a solution to their problems was our visit to Mbiame, an isolated village on the Cameroonian highlands. The village, only accessible by rocky, unpaved roads, was home to a substantial population of youths who had little outlook on a better future. After our breakfast, we were invited to visit the local headmaster of the school. Upon accepting his invitation, he told us his dream: that a computer school were to be set up in the village. Considering that no running water or electricity were available, this seemed a sky-high ambition to us. Nevertheless, it made me think: what about internet makes people have so much faith in it?

Whereas initially, I was intrigued to see how much faith people placed into internet as a solution to their problems – one of the first things which inspired me to engage in this study. However, as time passed, I became increasingly fascinated with the effects of such situations: what happens if individuals browse, *use* the internet? The world wide web represents a portal to the world – a world which is extremely different from the world from which people access it. So, then, what would happen if local people – sometimes literally stuck in their local living environment – peak through the hole in the wall to something they may perceive as paradise? How would they evaluate the disparities between their reality and the virtual world they encounter? How would people find their way through the massive amounts of information, what would they do with such information? Moreover, how would different perspectives, alien cultures be dealt with? Would meeting different cultures lead people to define their culture more precisely, or redefine it...? In short: what happens at the moment that local meets global?

If only for this question, I feel that this topic is a very geographic and fascinating one. I have been on a journey – literally and metaphorically – to a different world full of new perspectives onto something that represents such a big share of my daily life, discovering a lot about others and perhaps even more about myself along the way.

Mirte Cofino
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List of abbreviations

ICT	Information and Communication Technologies
ITC	International Trade Center
ITU	International Telecommunication Union
UN	United Nations
NGO	Non-governmental Organization
CDC	Cameroonian Development Cooperation

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La reconnaissance est la mémoire du coeur
- Jean Baptiste Massieu

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1. Introduction

Democracy.
Better health care.
Economic growth.
Education.
Empowerment.
Freedom of expression.
Knowledge.
Development.

The promises associated with universal access to internet are enormous: all of the abovementioned issues are expected to benefit substantially from new sources of information, to which internet would provide access. Influential institutions such as the United Nations and the World Bank have emphasized the need to facilitate universal access to internet, hoping that the recipe for growth as extracted from Asian economies will cook up similar miracles in Africa¹ (World Bank 1998; UNDP, 2001). Over the past decade, countless institutions and NGOs fully aimed at the promotion of ICT for development have sprang up in attempts to change the nations for the better: the technology that (consciously and unconsciously) changed so many aspects of life in Europe and the United States is hoped to contribute to economic growth, improvement of basic services, poverty relief, literacy and HIV/AIDS prevention, just to name a few (Chéneau-Loquay, 2007; Benotsch et al, 2004; Mercer and Liskin, 1991; Heinrich, 2001:2; Johnson Osirim, 2001). Although the above are important expected benefits in the development context, the emphasis on internet access as a basic human right is related to the access to communication and information that internet provides. Access to knowledge is considered to be at the basis of good education, informed business decisions and general personal development therein.

Notwithstanding the range of positive effects internet access may have in developing countries², one may wonder how the actual use of the world wide web impacts the lives of individual end-users. Currently, studies concerning the use of the internet in developing countries typically aim to establish internet application in the fields of health care, education, emancipation and economic progress. Thus, the largest share of the literature simply assumes internet access as a tool to solve development problems, and addresses problems associated with its provision or the lack thereof. Notwithstanding the importance of such studies, it is interesting to see that internet use itself is solely presented as a

¹ Africa is a substantial continent, and as critics rightly point out, in fact, it makes no sense to treat “Africa” as a unit of analysis. Even sub-Saharan Africa is too diverse, too coarse a region to investigate. Nevertheless, “Africa” is more commonly used as key word than the specific country of analysis. For the purposes of this study, a narrower definition will be used later on.

² In accordance with the United Nations classification (United Nations, 2011), Europe and North America will be referred to as “developed” and sub-Saharan Africa as a “developing” region.

beneficial influence on the course of everyday life, or even as a fundamental human right of those living without it (APC, 2009; cf Mercer, 2004). This is an interesting stance considering that for many end-users of the technology, the possible ways in which their internet use could influence their daily lives is unclear: the question what impact internet access has in the everyday life of the average African (wo)man is hardly ever asked, let alone answered. Especially in developing countries, where internet access remains a source of high hopes and where internet is expected to soon be available to a greater share of the population, information concerning the potential effects of internet access in people's daily lives could provide valuable insights for development specialists and policy makers alike.

The idea that access to internet could impact people's daily lives does not come out of the blue: the issue has been widely studied in 'developed' contexts and has been associated with among others changes in social networks (e.g. Wellman et al, 2001; Soen, 2009), mobility (e.g. Hjortol, 2009; Hlebec et al, 2006), personal well-being (e.g. Coget et al, 2002; McMillan and Morrison, 2006), changes in personal and cultural identity (e.g. Bauman, 1998), lifestyle changes (e.g. Richards, 2006) and changing communication patterns (Castells, 2001). Although the African context provides a rather different background, it would be unreasonable to expect that internet use would not have any impact on individuals' daily lives. Rather, changes could be even more pronounced, considering that the world wide web provides access to a world which was previously unknown and unreachable for the majority of the African population. As such, the internet, with its many faces, represents a new dimension to life with instant access to a wealth of different sources of information, entertainment and contact. The virtual dimension opens up a new world: an alien culture is at internet users' doorstep, ready to mingle with previous habits, standards, cultural norms, values and traditions.

In response to the abovementioned gap in the existing academic literature, this study will attempt to provide some tentative insight into the possible effects of internet use onto the everyday lives of youths in semi-rural Cameroon. In contrast to previous research, this study will focus on the impacts on the everyday lives of the individual user rather than society more generally. Considering the current status of knowledge on this matter, this study opts for an exploratory setup which is reflected in the broad scope of the research question and areas of investigation. The following research question was formulated:

To what extent does internet use, in the sense of browsing the world wide web through a public computer, impact the daily lives of 15-25 year olds in semi-rural Cameroon?

This thesis aims to focus on individuals who are already using internet, be it through public computers in cyber cafés. Such focus does not emphasize the potential constraints to use internet in the sense of having sufficient skills and access to financial resources, rather, this study aims to look into the effects of getting "online" and the consequent browsing of the world wide web, the creation and use of emailboxes and messenger services. As such, the primary focus is not *who* uses the internet most, but *how it impacts the lives of those using internet*. Within this framework, three aspects of daily life are considered in more detail: the possible effects on mobility, social networks and cultural identity in the sense of shifts in

norms, values and lifestyles from a traditional to a more modern outlook. These aspects have been translated into the following sub-questions:

- *To what extent is internet use associated with differences in mobility? Do internet users differ from non-users in terms of the scope and frequency of activities undertaken?*
- *To what extent does internet use influence the nature, scale, size and composition of users' social networks? To what extent do such impacts also affect the social surroundings of internet users?*
- *To what extent does internet use influence users' cultural identities, as reflected in their norms, values and lifestyles compared to their non-internet using peers?*

Whereas many studies have focused on rather “elitist” samples of users in the context of universities, governments or international businesses, this study mainly focuses upon young visitors of cyber cafés. After all, the majority of the population have not received university education and are likely to be employed in the agricultural sector, the informal sector or in a small business. Because of the mere share of this part of the population, it is surprising that research has turned them a blind eye in many cases. Especially youths – who mostly tend to be literate – are expected to be among the most likely to have encountered the internet in recent years. Moreover, they are most likely among the first ones to be confronted with it in the near future. Therefore, this study will focus on the ‘average’ visitors of cyber cafés who are between 15 – 25 years of age. In the absence of the possibility to conduct a longitudinal study, this group is compared to a group of non-users from the same background. Finally, special attention is devoted to the youngest share of this age group using an extra set of surveys among secondary school students of two government high schools.

Considering the exploratory nature of this study, a mixed-method approach was used, consisting of a wide range of qualitative interviews with young internet users, non-users and key persons such as teachers, owners and attendants of cyber cafés and others, questionnaires containing both closed and open questions, and activity diaries which respondents completed over the course of one week. Additionally, geographic data were collected for the purpose of creating coarse maps of the area in a later stage. These data were collected over a period of ten weeks in two semi-rural towns in Cameroon: Muyuka and Tiko. Both towns are based in the Anglophone South-West province, but whereas Muyuka was mostly oriented towards the agricultural sector, Tiko was chosen for its high level of commerce thanks to its sea port. Most qualitative interviews were transcribed in the field. Other materials, such as the questionnaires and activity diaries were only later analyzed using various research methods. The main methods of analysis employed include various statistical tests, principal component analysis and qualitative text analysis.

In what follows, this study will proceed with an overview of the available literature on internet use in Africa and discuss various studies targeting the effects of internet use on mobility, social networks and cultural transformation. Furthermore, ethical issues, such as the consequences of doing research in a foreign context and the position of this study within the prevailing views on development aid are considered. Methodological choices are subsequently outlined, followed by a general introduction of the research location and a description of the data obtained during fieldwork. The results following from these data are

presented and discussed in two sections: firstly, an overview of the conditions with respect to internet access and -usage is presented, followed by an elaboration onto the main areas of impact: (perceived) empowerment through knowledge and information, changes in social networks, changes in lifestyle, increased (perceived) mobility and, surprisingly, the increasing social risks for young internet users to become involved in fraudulent activities which substantially impact their future perspectives. The eighth and final chapter provides a brief reflection, summarizes the study's conclusions and places these into the perspective of existing and potential future research.

2. Background of the study

This study is informed by a wide range of disciplines: development studies, anthropology, psychology, science and technology studies, sociology and, of course, various fields of geography. Although such an approach would do justice to the current trend of interdisciplinarity, this choice has been born out of necessity rather than interdisciplinary ideology: whereas internet access in itself is a widely debated theme, the actual impact of internet use on the individual has scarcely been addressed in the literature surrounding the growing digital divide. To this end, relevant knowledge about the impact of internet in Africa will be presented using the results of a systematic literature review regarding the body of work on internet in relation to Africa. The focus is subsequently narrowed to the knowledge pertaining to the effects of internet use specifically considered in this study and continues with a discussion of the available studies from developed contexts. Finally, some considerations with respect to the current development debate will be offered.

2.1 | Systematic literature review

Internet in Africa is not as recent a phenomenon as one might expect. Whereas in developed countries, internet access became widely available to the public in the early 1990s, the introduction of the technology in developing countries followed only several years later. The oldest article in the academic search engine Scopus in which internet is presented in relation to African development was published seventeen years ago (Myers, 1993). Over the subsequent five years, academics and development initiatives alike grew increasingly interested in the potential positive applications of internet in the African context, and research on the matter expanded rapidly. The necessity to become ‘connected’ became all the more urgent towards the late 1990s, when internet was celebrated the catalyst of unprecedented economic growth in various developed and Asian economies (Castells, 1996). This focus on “linking up” was supported by important institutions, such as the World Bank’s ‘Knowledge for Development’ program (World Bank, 1998) and later on also by various initiatives and publications of the United Nations (e.g. UNDP, 2001).

The global attention for internet as a means to facilitate development inspired a substantial body of work on the importance of internet availability as well as experiments with internet provision in a wide range of African settings and marked the beginning of a still raging debate whether or not internet access may enable developing countries to “leapfrog” themselves into a new stage of development (see Alzouma, 2005; Mercer, 2004, 2005; Goldstein, 2008). Taken altogether, at the time of writing, the body of work in this field had grown to such proportions that it provided a dazzling amount of information of which it was hard to obtain an overview. Thus, considering the scope of this literature and the additional difficulty that the term “internet” has frequently been mentioned both as subject of investigation and as part of various research methodologies, a systematic literature review was conducted to provide more insight into the available knowledge and research gaps.

The review was initially kept as broad as possible, addressing all articles concerning the combination of internet and Africa available in the academic search engines Scopus and Web

of Science³. To this end, the query “internet AND Africa” was applied, systematically narrowing down the search from there. In this narrowing process, the following objectives were taken into consideration:

- to focus on the implications of internet *use* for the *individual user* rather than inequalities in access to internet or applications of internet use in achieving other development objectives;
- the aim to displace the focus from specific, rather privileged groups towards the average potential and current internet user in cyber cafés;
- the main topics of interest for this study: mobility and activity patterns, social networks and cultural transformation.

These objectives were translated into a number of criteria which were used to individually scan the abstracts of the initial results. These criteria and a more elaborate overview of the approaches used in the selection process can be found in Appendix 1.

The review revealed that the available literature mainly focuses on a number of core topics, whereas other matters seem to remain unattended. Internet provision is presented both as a goal in itself and as a means to achieve improvement on a range of development indicators. As such, studies typically aim to increase or facilitate access to internet (Marek, 2003; Oyelaran-Oyeyinka and Lal, 2005), argue for its necessity (Goldstein, 2008), discuss the consequences of the global “digital divide” (DiMaggio et al, 2004; Bussiek, 2005) and, mostly, research its application in a wide range of situations (see Alzouma, 2005 for an extensive enumeration). Most popular themes include health care, education and income-generating strategies, reflecting the continent’s most pressing problems.

Since the booming start of the internet in the late 1990s, an increasing number of scholars have also critically evaluated the sometimes nearly utopian expectations of internet access, among others arguing that internet access does not provide an all-encompassing solution for development problems:

The Internet is presented as a technological panacea, able to solve all manner of ‘development problems’ including tax collection, health care, law enforcement, rural isolation and freedom of information.

Mercer, 2005: 245

It is not the first time that grandiose hopes of leapfrogging development have been attached to a new technology. [...] However, the optimism which often marks some of these views is not sustained by clear evidence when it comes to how these technologies will perform the miracle. What we are offered as arguments is constituted by a set of general statements and enthusiastic accounts of the potential change ICTs might generate.

Alzouma, 2005: 340

³ Whereas these search engines do provide a reasonable overview of available literature within academia in general, alternative sources, including freely available online studies, and, more importantly, possible African-based studies on this issue, may have been missed using this approach. Selection, however, was inevitable, and given the scope of this research, these search engines provided the most representative option.

Critics have also pointed to the difficulties in introducing internet without reinforcing existing inequalities between rich and poor in the local situation. Whereas the gap in the global network may appear to have been partially bridged, smaller but perhaps more persistent inequalities tend to evolve locally between a small elite of internet users and the remainder of the population, for which internet access is an unaffordable luxury (Mercer, 2005: 244-245; Alzouma, 2005).

Out of thousands of articles in Scopus and Web of Science, only a handful of articles address the effects on the individual internet user, and most of these even tend to do so half-heartedly. Chivhanga (2000) for example, employs the promising title “An evaluation of the impact of internet in Africa”, but subsequently focuses on the diffusion and perceived economic benefits of internet availability in developing countries. However, some exceptions are available. These will be discussed in the section below, followed by a evidence from studies in developed contexts.

2.2 | What *is* known about the impact of internet on the individual African user?

Two answers can be provided to the question of what exactly is known about internet use in Africa. The long answer would be that it is difficult to say, because there may be countless reports from NGOs and other non-academic sources which have not been taken into consideration in the systematic review (cf. Alzouma, 2005: 340); the short answer would be that hardly anything is known at all.

General information about individual internet use

Among the few articles which do mention the impact of internet use on the individual user is Uimonen’s study into the effects of internet on translocality in Tanzania (2009). In her anthropologically based account, Uimonen describes the creation of new connections and identities through the ICT facilities in the Bagamoyo College of Arts. However, in a dedicated section, she also describes a number of observations concerning the impact of internet use on her respondents’ everyday lives, including effects such as extended online social networks, the transformation of the ICT building into a commonplace to meet and “hang out”, and the status associated with internet use. She also finds that the pupils’ primary use relates to email and messenger communication, news and education-related materials. Nevertheless, they also consult the internet to look for information on “personal interests” including religious websites, music and media (ibid: 285, cf. Mercer, 2005). Although this is valuable empirical information, it may only serve as an indication, as it was not the primary objective of Uimonen’s study and is not based on a sufficiently large sample to be representative for a general trend.

Mercer (2005) adds to these findings that internet use is male-dominated and concentrated in urban areas. Moreover, internet users scored above average on their level of education and internet use was mainly employed for private purposes rather than in the context of business or work, accessing mail, news, porn and other generally leisure-related websites (ibid: 252-253).

Mobility

The systematic literature review yielded no results on the combination of internet, Africa and various terms for mobilities (see Appendix 1 for an overview). Whereas this seems surprising at first sight, it should be taken into consideration that both the transportation- and internet infrastructure can by no means be compared to those in more developed countries. As such, one could imagine that these challenges may hamper the daily travel- and activity patterns to such extent that solving other mobility-related issues should be prioritized over researching its potential connection with internet use. Nevertheless, there is no reason to assume that virtual mobility would not have its influence in terms of physical mobility, especially in places where physical transportation is a substantial barrier. Moreover, these infrastructural problems could also provide additional reasons to see if online communication and information exchange could be used as an alternative to daily travel, or if perhaps the demand for travel will grow, putting additional pressure on the transportation system.

Although mobility has not been linked to internet use in current literature in African contexts, the issue of mobility itself has recently been given more attention in academic literature (cf. Porter, 2010). Within this body of work, the main themes addressed include the significance of mobility for everyday well-being (e.g. Porter, 2010), the importance of physical mobility for social and economic mobility and 'livelihoods' (e.g. Gough, 2008; Porter et al, 2010), and the issue of inter-continental migration (e.g. Langevang and Gough, 2009). Such studies have found among others that the concept of mobility itself is perceived as important among youths: "Mobility is 'worn with flair' [...] as a confident assertion of greater opportunity and their increasingly consumerist selves" (Porter, 2010: 170, cf. Gough, 2008). Furthermore, the extent of daily mobility is heavily associated with the creation of social networks, which in turn is expected to positively impact the chances to obtain employment (Porter, 2010).

Finally, Langevang and Gough (2009) find that the daily mobility and imagination are not restricted to the area in which the person is living, stretching far beyond local or even national borders. Therefore, one could imagine that internet-stimulated imaginations of places within the country and abroad could lead to an increased need to look for ways to increase their travel potential. This potential to travel is considered to be of vital importance: "Migrating abroad [...] is seen as the most effective way by both young men and women to achieve some motion in their lives, though few are successful" (ibid: 753). Although these studies provide an interesting perspective on the mobilities of African youths, most studies are focused on urban settings and rural-urban or urban-international migration rather than semi-rural or rural settings. Nevertheless, they provide some points of attention for the study at hand.

Although mobility initially was limited to physical mobility, it turned out that scholars have written about perceived mobility in the sense of virtual travels. Mercer (2005) remarks for example that 'developed places' are generally considered 'fantastic': "[...] surfing the Internet from Tanzania is a virtual adventure of global proportions" (ibid: 255). Uimonen (2009) also indicates – to a lesser extent – that individuals may not cross boundaries in real life, but that they do experience a sense of 'translocality' in being online.

Social networks

Perhaps it is the work of Johnson-Hanks (2007) that comes closest to an account of the social impacts of internet use on an individual level. In her study, Johnson-Hanks describes how Cameroonian women hope to find a better future by marrying spouses from European countries while employing the internet to market themselves as potential wives. She finds that although this practice has substantial social implications, it fits comfortably within the traditional framework of “proper womanhood” and “legitimate marriage” (ibid: 642). Moreover, she finds that the way Cameroonian women employ the internet to find suitable husbands reinforces their cultural traditions, while making use of a novel technology.

Additionally, Mercer (2005) finds that internet use is associated with disparities in status and ‘modernity’: especially youths employ internet to ‘show off’ their capabilities and, mainly, indicate their relative level of modernity. Moreover, she finds that youths come together in cyber cafés as a place to ‘hang out’ and be ‘cool’, a finding confirmed by Uimonen (2009).

Although few results have been reported in the area of social networks, divergent but abundant potential consequences of internet use have been reported in literature targeting developed contexts. Some of these studies will be considered in the next section.

Social transformation

Changes in the social fabric, especially in terms of social norms and values, represent a complex issue: processes of cultural transformation are multifaceted to the extent that it is hard to establish the complete range of indicators which influence their dynamics. In terms of ethnographic literature, this is complicated by increasing scrutiny in anthropology: whereas sociologists and anthropologists produced elaborate works on “the African culture” in the sixties and seventies, the cultural turn led to an increased sense of cultural sensitivity, and, moreover, acknowledgement of the personal incompetence to represent other cultures – let alone changes therein (e.g. Gardner and Lewis, 1996). As such, it has become difficult to find materials which allow the researcher to form an idea about cultural conventions in among others African nations.

Nonetheless, there does seem to be global consensus that the rules of the social fabric in virtually all, but especially traditional societies, are changing rather drastically as a result of increasing interconnectedness and cultural interchange, although the direction of such change is subject of debate (see, for example, Castells, 1996; Bauman, 1998; Nyamjoh, 2003; Powell, 2001; Gardner and Lewis, 1996; Featherstone, 1990). Cultural protectionists (Schumacher, 1973 for example) have argued against modernization and globalization since the introduction of various communication technologies – radio, television, mobile phones, computers and now internet – globally and in the African continent specifically. In the spirit of Schumacher’s book “Small is Beautiful” (1973), scholars and activists alike have spoken up against the increasing globalization of our world and the consequent perceived and expected loss of individual cultures (e.g. Hamelink, 1994). Protagonists, on the other hand, have argued that specific locales will maintain or even strengthen their customs and traditions exactly as a result of the global exchange (e.g. Castells, 1996; Featherstone, 1990; Barber, 1995).

The issue of cultural transformation was addressed by Nyamnjoh (a Cameroonian by birth). In a philosophical contribution on the issue of globalization, he describes how Africans have become 'obsessed' with politics of identity and belonging, and how this translates into changes in the social fabric:

“Customary African values (e.g. mainstream philosophy of life, agency, and responsibility that privileges interdependence over autonomy) and politics of inclusion (opening up to minorities and foreigners) are under pressure within the struggles and politics of entitlements in an era of sharp downturns and accelerated flows of opportunity-seeking capital and migrants.” (2003: 2)

In her study about Pentecostalism through internet, Hackett (2009) similarly warns for the possible individual effects of 'electronic media': quoting Kalu, she explains the 'transforming effects' in terms of "personality cult, individualism, commercialization, and marketing of spiritual services" on the traditional African context with its 'emphasis on communal ethics and ritual efficacy' (ibid: 497). As such, she finds that internet could also influence the structure of social life and personal identities.

2.3 | Contributions from developed contexts

Whereas internet access in developing countries is warmly welcomed by academics who expect it to have a positive impact on its surroundings, the first ones to study the effects of the technology when it was introduced in developed societies were not always as optimistic. Increasing loneliness, disappearing face-to-face interaction, a decrease of mobility and drastic changes in norms and values dominated scientific endeavors: fear and optimism alternated – and still do. This section presents some findings from previous research on the three core issues of this study: individual mobility, social networks and cultural identity. Each of these subtopics will be discussed below.

Mobility

Internet and mobility have been inextricably linked in academic research since the internet became widely accessible. During the earliest stages of its development, Steven Graham (1998:167) put the now famous words to the fear that internet would mean "the end of geography": internet-mediated communication was expected to become so important that the significance of distance would eventually disappear completely. With the domestication of internet use, this anxiety turned out to be largely unjustified: the predicted impact of internet use on commuting, e-shopping and face-to-face interaction turns out to be less than was expected, or, in some cases, than was hoped (Schwanen et al, 2007).

Nevertheless, the impact of internet (and ICTs more generally) on travel behavior and activity choices has been extensively studied by a substantial number of scholars from mainly developed countries. As in most research associated with internet use, results tend not to be uniform and debate remains. Scholars do agree on a number of issues: internet activity mainly functions as a complementary activity to other, "offline" activities. Additionally, internet use is commonly associated with *increased* mobility in the form of trips (Mokhtarian, 2002; Hjortol and Gripsud, 2009; Farag et al, 2006; Hjortol, 2009). Put

differently, internet users are expected to make more rather than less trips compared to non-users.

The causality of the association between virtual and physical mobility, however, is debated. Schwanen et al (2006: 585) argue that “it is well established that ICTs are changing the spatial and temporal organization of the activities of households [...]”. Empirical evidence follows, in a study by Kwan (2009:449), who argues that the impact of internet use on human-activity travel patterns differs significantly between genders, but that for both genders, internet use has significant impact upon maintenance activities and leisure. Kenyon (2010), on the other hand, concludes that she obtains no evidence to support a link between virtual and physical mobility, which is in agreement with earlier findings of Hjortol and Gripsud (2009).

Singular evidence about the potential impact of internet use on the scale of trips was suggested by Sasaki and Nisihii (2010), who concluded that the use of ICTs had a negative effect on the average duration of trips. If backed up by future evidence, this could imply that whereas the number of trips increases as a result of internet use, the overall scale of operation decreases as the trip duration decreases as well.

Research by Chen and Wellman (2005: 541-2) indicates that ICT use is positively related to the creation of so-called “glocalized networks” – local networks functioning on a global scale. Nevertheless, long-distance travel (by plane) would remain a necessary complement to networks of entrepreneurs, because face-to-face interaction facilitates the creation of trust. A similar idea was voiced by Urry (2003), who also maintains that face-to-face interaction will not disappear as a result of increased internet use. Chen and Wellman (ibid) do conclude that these networks do tend to remain within the same ethnic group, rather than spreading over various types of people.

Social networks

Various authors have emphasized the potential social threats associated with technological progress. Whereas the majority of their arguments is directed at society as a whole (which will be elaborated upon in the subsequent section), some authors have also examined the consequences of internet and ICTs more generally for interpersonal relationships.

Early empirical work examined expected societal threats such as internet-inflicted increases in loneliness, decreased well-being, negative effects on social interaction and social isolation (Coget et al, 2002; Gross et al, 2002; Nie et al, 2001; Katz et al, 2001 to name a few). To the surprise of many, however, empirical studies revealed that for many users, social indicators tended to be influenced positively rather than negatively. Castells (2001: 116-117), maintains that the discussion around the impact of internet use in the current era has been dreadfully misinformed. Summing up often-quoted fears such as social isolation, loss of face-to-face communication and identity issues, he is quick to contradict these, arguing that these studies preceded the “widespread diffusion” of the internet, lack thorough empirical research and revolve around ‘simplistic and misleading questions’ which target highly specific risk groups. Thus, Castells continues, the internet should not be seen as a threat, but rather as a tool for communication and interaction (ibid).

Numerous studies have presented empirical material on the effects of internet use on a wide range of social indicators including personal well-being, social capital, civil participation and personal empowerment, just to name a few. Whereas the debate remains highly complex, often producing conflicting results, some general trends can be observed in the developed context.

Internet appears to have been domesticated by the majority of the population in the United States and most European countries (Stoneman, 2008). As the internet is growing into a common part of everyday life, adults and youth alike in developed countries spend sizeable amounts of time online chatting, e-mailing, surfing the web and taking part in online forums (i.e. Howard, Rainie and Jones, 2001; Birgnall III and Van Valey, 2005; Mesch, 2006). So far, research has suggested that internet use does not seem to replace other forms of contact including face-to-face communication and other media such as telecommunication and television use: rather than replacing or transforming their uses, time spent on the internet was shown to be supplementary to these activities, at the expense of the average time spent per activity (Coget et al, 2002; Wellman et al, 2001; DiMaggio et al, 2001; Madell and Muncer, 2005).

However, internet's impact on individual's social networks still remains subject to debate: whereas a substantial number of independent studies have shown that both social capital and online as well as face-to-face social interaction are more likely to increase rather than decrease as a result of internet use (Shah et al, 2001; Soen, 2009 and Katz et al, 2001; Howard, Rainie and Jones, 2001; Wellman et al, 2001 and Mishna et al, 2009), other studies have found that the time spent among friends and family decreased significantly with increasing time spent online (Nie and Erbring, 2002; Nie and Hilligus, 2002; Stoneman, 2008). Especially when the internet use turns into an addiction, the latter is associated with increased loneliness and decreased well-being (McMillan and Morrison, 2006).

One of the main predictors of social impact seems to be the degree of internet use. Overall, limited and responsible use by average users without a history of social difficulties has been reported to have the abovementioned positive effects on the size and contact frequency within the social network, but has additionally been associated with decreases in loneliness (Coget et al, 2002) and increased participation in religious and civil activities (Robinson and Shanks, 2002; Jennings and Zeiter, 2003 respectively) . Heavy users, on the other hand, tend to experience more of the problems associated with internet addiction, including higher levels of loneliness, lesser social interaction and below-average church attendance (Coget et al, 2002; Robinson and Shanks, 2003 resp).

Neustadt and Robinson (2002) additionally found that internet users tend to spend more evenings with friends and less with relatives and neighbors, a finding confirmed by Hlebec et al (2006). Thus, although results are inconclusive to confirm a definite trend, internet use does alter the activities undertaken with various actors in the user's network, and additionally influences the composition of strong and weak ties in the network: whereas non-users are more likely to focus mostly on local ties such as family and neighbors, internet users are more likely to choose to spend their time with friends and acquaintances (Neustadt and Robinson, 2002).

Furthermore, Mesch (2006) reports possible changes in family relations as a result of internet use: especially considering the recent introduction of the technology, the younger generation tends to become the “expert” when it comes to computer- or internet-related problems. In conjunction with parental responsibility to negotiate adolescents’ online privacy for the sake of their own safety, these processes may lead to tensions in family relations. Similar tensions were found by Aslanidou and Menexes (2008), Slater (2003) and Wang et al (2005), although these mainly resulted from problematic internet use.

Finally, a number of other interesting findings about the role of internet use and expansion of social networks emerges. A recent study by Soen, for example, reveals that contrary to previous findings, the internet may be used not only to reinforce or maintain existing, strong ‘offline’ ties, but that it may also be used to create *new* relationships with people previously unknown (2009). On the other hand, the scope of these new relationships tends to be limited: Matei and Ball-Rokeach (2001) suggested that newly formed ties remain within ethnicities and rarely cross them, a finding confirmed by the research of Chen and Wellman (2009).

Social transformation

Historically, technological development is associated with substantial social transformation, which led to heavy polemics about the role of ‘modernity’ in moral decay⁴. A telling example in this respect is Ulrich Beck, who argued that having transgressed the need for mere survival, differences in the social structure emerge as a result of technological developments:

“Changes of lifestyle and forms of love, change in the structures of power and influence [...] [in] modernity, the plough, the steam engine and the microchip are visible indicators of a much deeper process, which comprises and reshapes the entire social structure.”

(Beck, 1992: 50)

In the light of this time spirit, the emergence of internet technology is also perceived by many as a threat to society. Especially in its early days, ample dark scenarios of future internet-dominated societies were drawn up by alarmed scholars including the abovementioned, but also Bauman (1998; 2000) and Fukuyama (1999). Most of these intellectuals perceived the internet as a vital instrument within the wider social modernization process, which associated internet use with increasing individualism, destruction of social standards and deteriorating norms and values.

Although internet use and social change cannot and should not be seen as a causal, one on one relationship, previous research has shown that technological change may create grounds for social change, or at the very minimum facilitates change (e.g. Carey, 2005; Fukuyama, 1999; Castells, 1996). Change can be for the better, and in many respects changes as a result of technological progress are heavily connoted with positive values such

⁴ Consider, for example, the mere term “modernity” for the period following the first industrial developments. Although one could dwell on this matter endlessly, it would take another thesis in the field of History to illustrate all these developments. For elaborate accounts of these changes, see for example Giddens (1991), Gellner (1996) and the works of Beck (1992 for example).

as freedom, liberty and progress (e.g. Castells, 1996; enumeration by Fukuyama, 1999: 4). Whereas I don't intend to deny the positive impacts of technology on society, it seems worthwhile to also explore the risks of these changes such as increasing individualism, missing loyalty and trust and weakening senses of "community" as emphasized by among others Bauman (2000), Stoneman (2008) and Bruhn (2005) respectively.

An interesting empirical contribution in this respect has been written by Richards (2006). In her PhD, she describes the impacts of "cyber culture" onto a generation of high-profile socio-economic individuals in South-Africa. Although this is a rather specific, elitist sample, the research situation has aspects from both developed countries (as these 'Generation X'ers are living in geographically isolated areas with a level of services comparable to developed nations) and developing countries (the wider surroundings and their historic roots). It is therefore all the more interesting that Richards concludes that participation in chat rooms substantially impacts individuals' sets of social norms and values:

"The internet has drastically changed the views people hold about themselves and the cultural groups they live in. Global computerized networks connect even the most remote cultural groups with each other and with the constant flow of new information from around the world into one particular system makes it possible to relook and assess traditional belief systems on a continuing basis."

(Richards, 2006: 3)

In the remainder of her publication, Richards mainly focuses on the specific group of 'Generation X'ers. Employing a particularly psychological and locally situated perspective into the South-African history, this study could not be considered representative for other African nations, but it does suggest that cultural transformation should be considered as a potential effect of internet use.

2.4 | What can be expected based on western experience?

Although research outcomes are by definition context-dependent and should therefore be treated with care when it comes to their validity in other contexts (de Laet and Mol, 2003; Verran, 1999), they can point to potentially important factors which can be kept in mind as potential areas of attention in this study.

In summary, the following results may be taken into consideration in the research process: with respect to mobilities, the existing literature points to potential changes in the number of travels undertaken, the average duration of trips, increase in international trips and internet use at the expense of leisure time. In terms of social networks, literature on developed contexts emphasizes the risks of loneliness, social isolation, identity issues the creation of new friendships and tensions within family structures. Additionally, potential changes could occur in time spent with friends at the expense of time with neighbors. Finally, internet is suggested to provide a supplement rather than replacement for other forms of contact. On the aspect of social transformation, changing values with respect to freedom, liberty, progress, self-image, culture and decreasing community cohesion are reported. However, considering the substantial differences between the Cameroonian contexts and the research contexts in which these studies were conducted, these

suggestions should be carefully interpreted and translated into the local situation. To this end, a number of these differences are explored.

First, a substantial difference in how internet is accessed should be considered: in the technologically more advanced and richer situations, the majority of the population has access to internet, and this access typically extends into the domestic spheres. Internet use for most Cameroonian citizens, on the other hand, is limited to public computers in internet cafés. Cyber café mediated internet use thus automatically puts restrictions on time spent online through financial and practical constraints in the form of fees and opening hours. Considering the findings of for instance McMillan and Morrison (2006) on internet addiction, the limitations on internet availability might provide a form of (unintended) protection for excessive use. Additionally, two studies found that internet use in internet cafés has positive effects on sociability, because rather than being solely restricted virtual encounters, users also physically meet others and interact with them. Nonetheless, internet cafés cannot impose the ways in which visitors make use of the internet. Various NGOs have encountered problems with users employing the internet for different objectives than they had planned (Clark, 2003).

Although a rapid increase in users is expected, at the time of writing, only a marginal 3.23% of the overall African population is using the internet (ITU, 2010) – such figures of course do not by any means compare to the penetration of internet use in developed contexts. However, considering the growth of internet access and the fact that most Africans are sufficiently educated to make use of the internet, this share is highly likely to increase rapidly. Nonetheless, this disparity in internet penetration should be taken into consideration when applying results from the developed context in this study.

The development debate: a theoretical contribution

Internet technology has been warmly welcomed as a potential means for development by a wide range of development organizations, led by the encouragement of the World Bank (1998) and the United Nations (UNDP, 2001). Ever since, internet has been rather uncritically promoted as “the” new way to “leapfrog” into development, learning from the development process of mainly western societies and using the available information to establish a modernized and high-tech society (c.f. Mercer, 2004; Alzouma, 2005).

Although internet may indeed represent one of the most promising tools for knowledge sharing, the creation of international connections and economic growth, numerous development organizations seem to have rather unbalanced, perhaps even utopian expectations of internet use. This effect is reinforced by the virtually solitary emphasis on its positive potential on the one hand and the lack of attention for its potential negative consequences on the other (see, for example, APC’s vision and mission statement, which purely reflect the widespread expectations from internet access: APC, 2011). Internet provision or stimulation of the use of ICTs is seen as a powerful tool for ‘modernization’, which tends to maintain the classical idea of evolutionary, linear and context-independent progress: it is roughly assumed (or hoped) that technology will have similar effects onto the African situation as it has had in developed or quickly developing societies such as Europe and South-East Asia. Such expectations are rather technologically determinist, allowing little attention for cultural differences in interpretation and use of the technology.

Moreover, irrespective of whether expectations towards growth and/or modernization are determinist or not, there seems to be no attention for the possible (positive *and* negative) side-effects of the use of such technologies on individual users and the society as a whole. This is remarkable, considering that research into such impacts is widespread (see section 2.3) in the very context to which is referred in terms of general positive expectations. Thus, whereas development organizations and policy makers have so far emphasized the positive potential of the technology in the debatable process of “modernization”, they have turned a blind eye on issues which were (sometimes negatively) associated with internet access in those very contexts. Even when carefully avoiding the trap of technological determinism there are ample reasons to assume that internet use could also inflict changes in the everyday lives of individual users and in the wider social structures alike when it comes to the developing context.

Summary: what should be concluded from the existing literature?

As evident from the above considerations, studies from developed countries provide a valuable source of inspiration for the study of the impact of internet access in developing regions to complement the relatively low amount of knowledge from the local context. This work inspired methodological choices and the direction of questions asked in qualitative interviews and questionnaires. In what follows, these considerations are presented.

3. Methodology

The intention to explore rather than to provide a definite account of the potential effects of internet use in the everyday lives of internet-using youths has a number of implications when it comes to its methodological setup, mainly in terms of its broad scope. A variety of research methods has been applied to truly explore the situation, allowing for the necessary flexibility to investigate those aspects which required additional attention. During the analysis, this broad scope was translated into an emphasis on qualitative rather than quantitative data, providing the opportunity to describe and explain rather than evaluating existing theories. In this chapter, the various choices for specific methods are outlined and discussed in the light of the existing literature as well as in relation to the local situation of the fieldwork location of this study specifically.

3.1 | Why youth? And why in Africa?

There are several reasons to study the effects of internet use in a developing rather than developed context. First and foremost, in developing countries, internet has not yet been appropriated by the majority of the population, leaving most of the population inexperienced when it comes to internet use – a population which hardly exists any longer in most developed countries. Considering the projected growth of internet access (ITU, 2010), the number of people who have not used the internet before is expected to decrease rapidly during the upcoming years. Secondly, spreading internet access is an explicit objective of countless development-oriented NGOs, governments and institutions such as the United Nations. Insight into the possible social and individual implications of such access could provide useful information for such organizations and policymakers alike.

Studies pertaining to internet use in Africa tend to focus on specific groups which have increased access to internet: students and academics, governmental bodies, businesses and organizations. However, the majority of the population in many African countries, including Cameroon, is engaged in farming. Especially in Cameroon, 70% of the working population is employed in the agricultural sector (ITC, 2010a). As such, a focus on the student population within universities would not do justice to the composition of the general population. Moreover, especially internet access in semi-rural areas is pursued all over Africa by a range of NGOs (see, for example, ITU, 2010b). These are the people who will newly be confronted with internet access in the upcoming years: they are not especially skilled or rich, and are likely to access internet from public computers in cyber cafés. Considering that few studies have targeted this population, it is important to pay attention to this group to foresee potential effects of their future internet use.

Considering the estimated Cameroonian internet penetration rate of less than 4% in 2009 (ITU, 2010c) this study will focus on those people who are the most likely to use the technology in the future: adolescents. For virtually any technology, the young population is generally the first to adopt it. Moreover, according to Loges and Jung (2001), young people are likely to be impacted most when it comes to the quality and nature of social interaction.

An age group of 15-25 years old was decided upon in order to limit the age range and essential lifecycle differences in the sample size.

3.2 | Mixed-method research

Ultimately, a study aiming to determine change should be longitudinal: only when gathering the same data repeatedly it is possible to avoid the risks associated with the selectiveness of the human mind (Boeije et al, 2005). However, as practical and financial constraints excluded this option, this study will draw upon two alternatives: people's own evaluation of changes in their life, and a general comparison between groups of people who do and groups of people who do not (yet) use the internet. Additionally, specific attention is devoted to differences between agricultural versus trading locations and for the youngest group of potential users: high school students.

This study seeks to employ various research methods; some for the sake of triangulation and others as complementary material to investigate different aspects of the problem. The exploratory nature of this study is reflected in the choice for a high degree of flexibility, a broad focus and an emphasis on qualitative materials: the outcomes are largely unknown and therefore call for explanations rather than hard statistics.

3.2.1 Qualitative interviews

Qualitative interviews were employed to gain a better understanding of the local culture, customs and typical daily activities. The richness of the material provided input for the questions in the questionnaire and facilitated a more thorough and grounded explanation of the statistical results once the fieldwork was finished.

The interviews were unstructured to semi-structured and ranged in duration from 30 minutes to three hours, averaging approximately one hour of actual interviewing in addition to informal conversations and near-daily interaction. A sense of structure was derived from a topic list (see Appendix 2), covering a wide scope of topics ranging from attention for the individual's personal background to his/her estimates of the number of internet users, social acceptance of internet use and internet use in relation to the topics of social networks, mobility and cultural values. Initially, all interviews were recorded and transcribed (with prior permission of the interviewee). However, as time passed, this was no longer possible due to technical problems. Therefore, all remaining interviews were recorded with pen and paper and subsequently transformed into a report using one of the computers in the cyber café. This turned out to be a blessing in disguise: a lot of time was spent in cyber cafés, which facilitated interaction with the cyber café visiting population and provided good insight into its daily routines. Although not all text from these interviews has been preserved literally, the absence of the voice recorder also had a positive impact on the openness and comfort of the interviewees.

3.2.2 Activity diaries

This study employs activity diaries to obtain some insight into the daily lives, activity- and communication patterns of its participants. Activity diary research is a well-known strategy to obtain detailed information about individual lifestyles, and was used to this end by among others Kenyon (2010) and Alexander et al (2010). Participants were asked to keep track of

their activities in time intervals of half an hour during one week. In the diary, they name the activity, to what extent it was planned, whether they had to go somewhere for this activity and whether they were with others (see Figure 1). Additionally, the participant was asked to keep track of the communication which has taken place during the day.

DAY 1

Time	Activity	Type of activity	Transportation	I am doing this with...
	<small>I.e. sleeping, working, in school, travelling (from/to), spending time with friends, household activities...</small>	<small>R=Routine, P=planned, I=impulsive</small>	<small>If you travelled, please indicate your mode of transportation</small>	<small>PC= partner/parent/child, A=other family, F=friend, C=colleague, O=other</small>
6:00		R P I		PC A F C O
6:30		R P I		PC A F C O
7:00		R P I		PC A F C O
7:30		R P I		PC A F C O
8:00		R P I		PC A F C O
8:30		R P I		PC A F C O
9:00		R P I		PC A F C O
9:30		R P I		PC A F C O
10:00		R P I		PC A F C O
10:30		R P I		PC A F C O
11:00		R P I		PC A F C O
11:30		R P I		PC A F C O
12:00		R P I		PC A F C O
12:30		R P I		PC A F C O
13:00		R P I		PC A F C O
13:30		R P I		PC A F C O
14:00		R P I		PC A F C O

Figure 1: Activity diary
after Alexander et al (2010)

Respondents are reminded of their obligation to fill out their diary 2-3 times during the week in which they are participating as much as possible through face to face contact or phone.

A small appreciation containing a financial compensation of CFA 1,000 (approximately a day's minimum wage), a pen, condoms, playing cards and candy was provided in exchange for participants who completed the diary study. The gift was announced at the start of the diary trajectory and was presented upon handing in the diary along with a completed questionnaire. Completed activity diaries were registered using a system composed of the starting date and a letter to distinguish individual entries. Both the activity diary and the questionnaire were marked with this respondent number. The advantage of such registration was that using the respondents' starting date, all diaries could be synchronized with respect to week-days while allowing the respondent to start on the day which was most convenient for him or her.

3.2.3 Questionnaire surveying

A questionnaire was designed to provide additional information for the interpretation of the activity diaries. A draft version of the survey, based upon the guidelines presented in the work of Bryman (2008), was prepared before departure. The questionnaire first addressed a number of general profile questions and subsequently continued with questions specifically aiming at travel behavior, social network connections, internet use and cultural orientation. All questions were kept as basic as possible to ensure that the research population would understand the questions. The final and most difficult part of the questionnaire was intended to test differences in cultural preferences pertaining to individualism versus collectivism, whereby a collective structure of the Cameroonian society was assumed based on previous experiences and general descriptions of African countries (e.g. Nyamjoh, 2003).

A tentative measure of individualism was based upon the work of Hofstede (2001), who described cultural differences among others in terms of the degree of individualism⁵.

The draft questionnaire was adjusted to the local context following the initial orientation in the area. Impressions from qualitative interviews as well as informal conversations with local cyber café owners, youths and a great number of people who were simply interested in the research provided input for a pre-final version, which incorporated more qualitative questions and included a more extensive part on changing norms and values. After an evaluation with a test group of ten respondents, the questionnaire was adapted one last time and subsequently printed in bulk (see Appendix 3 for the final versions of the questionnaire). Respondents were offered the choice to complete the questionnaire independently or in a more guided set-up, in which the questions were answered orally and registered by the author. Although some respondents opted for the interview-type setup, the majority of the respondents preferred to fill out the questionnaire individually, to secure their privacy⁶. Nevertheless, many of them made use of the possibility to ask clarification for questions they did not understand completely. During most of the interview sessions, respondents first opted for the self-administered questionnaire and afterwards orally discussed additional remarks about the research, internet use and their experience with internet.

3.2.4 Participatory observation

Some things cannot be learned from texts or books. One of the advantages of going to the “field” is to truly experience rather than read up on what one is writing about. Although I had already been to Cameroon for an extended stay in 2007, finding housing through interpersonal connections and sharing the same roof with Cameroonians has allowed me to get a taste of the everyday lives of various people and brought me closer to the research population. During the collection of interviews, activity diaries and questionnaires, I have exchanged ideas with many people on the streets, in the cyber cafés, in public transport and in their houses. Especially such home visits, including burials, death- and birth celebrations and family meetings, have contributed to a better understanding of the local customs and structures.

3.3 | Respondent selection

Respondents were selected mainly through purposive snowballing: interpersonal connections were used to attract new respondents, but initial respondents were carefully selected based on a number of criteria. Hard criteria included that the respondent be between 15-25 years of age, that the respondent was a year-round resident of the research location and that the respondent was not in university⁷. Especially the residency

⁵ Although Hofstede explicitly states that his results are not intended to predict the culture within specific organizations, this provided a somewhat structured reference to formulate statements which could indicate a measure of individualism or collectivism.

⁶ Due to the strong association of internet use among youths with scamming and online relationships as well as the inquisitive nature of some questions, it was not surprising that respondents preferred to answer the questionnaire individually.

⁷ Although students were avoided as participants as much as possible, qualitative interviews have been conducted with a number of students to also include their perspective.

requirement posed substantial challenges as the study was conducted during the summer months – the holiday period. Experience shows that many youths live with family members to have access to proper secondary or even tertiary education, but that they go home for holidays. Others, who were normally schooling in the research location, in turn tended to have gone for holidays too, but with family members outside their normal living environment.

The use of the snowballing process was by far the quickest way to obtain suitable respondents who were willing to participate in the study. The extensive help of a pharmacist, who was well-known in the quarters of Muyuka, was invaluable in getting access to the respondents - especially the girls - in the target group. Things that a western researcher such as myself tends to overlook are for example the embarrassment for girls when asked to participate by a complete stranger on the streets. Whereas they would likely feel obliged to agree to participate, they tend not to make such decisions for themselves. To ensure participation of some participants, I have followed them to their parental homes together with an acquaintance of the family, to explain what kind of research I was conducting and why I asked their child's assistance, upon which they all accepted. Similar strategies were pursued in Tiko, but with a more diverse network of helpful people who all provided access to several participants by accompanying me into the quarters and asking young people's help.

The snowballing strategy was complemented with simple advertisement among internet users to ensure a fair share of users in the sample – which then, consequently, did no longer reflect a random sample from the population but rather focused on those who use internet from cyber cafés while also controlling for non-users. Recruitment flyers (see Appendix 4) were deposited in all cyber cafés in the towns, with a list on which participants could indicate their name, age and phone number. Some people took the initiative to phone as well.

3.4 | A word on context

Conducting research in different contexts is not merely hard, it also brings along the risk of unintentionally imposing the epistemology and ontology⁸ of the researcher onto the subject of study. This risk, mostly voiced by sociologists and anthropologists, is a real and important one, and partially cannot be avoided. However, although one cannot escape the framework of values and logic from which one perceives the world, acknowledging its limitations opens up possibilities to think outside of it. In this respect, one way to ensure that some degree of external vision is incorporated is to make use of qualitative material in order to grasp a number of “sensitizing concepts”. This involves a careful evaluation of the concepts employed in the study against the aspects which make up the concept in the field (Boeije et al, 2005: 267). In this respect, case studies have been claimed to be the “ideal form of induction” (Hamel et al, 1993: 41), because through intense involvement in the field, the researcher would develop an understanding of his object of study during the study itself.

⁸ Epistemology refers to the ways that one feels that “valid” knowledge can be created. This is heavily influenced by one's frame of reference with respect to the system of wider assumptions which are taken for granted (ontology).

To limit the risk of imposing my perceptions onto the Cameroonian context, the qualitative interviews were semi-structured in set-up: rather than testing predefined ideas, the respondents were given the opportunity to speak freely, which resulted in a dynamic topic list which was continuously supplemented with new internet-related matters. Newly discovered issues were enquired about in subsequent interviews and evaluated in importance using the results of the open questions in the questionnaires in the analysis.

Using this approach, my initial classification of ‘youth’ for example turned out to be different from the local standard: Cameroonians generally consider “youths” as those in the age range of 15 – 35 rather than 15 – 25, regardless of whether they have a job, partner and/or children. Although this aspect could not be changed anymore, it provided valuable additions for future research. Similarly, I initially overlooked the fact that the definition of who are included in the category of “friends” could vary substantially: when asked about friends, youths seem to classify their friendships with Cameroonians according to an exclusive system, whereas in reference to ‘whites’, every person is referred to as a friend. This likely has to do with the culturally embedded faith in ‘whites’ as always being reliable, good persons compared to the deeply rooted distrust in members of the Cameroonian society. Finally, youths place a lot more emphasis on financial and material benefits in relationships, although these are reciprocal.

All of these concepts could have been misinterpreted in the analysis if they had not been critically evaluated in the light of the local meaning of the notion at hand. Although this approach made me more aware of these challenges in doing cross-cultural research, the core issue of potential misinterpretation remains and should be considered while reading this study.

3.5 | Mapping

Digital maps are a prerequisite for the intended daily paths analysis on the activity diaries. As sufficiently detailed digital maps were not available from online sources, nor from the local authorities, these were created by the author. For each of the towns, one day was employed to create a coarse map of the surroundings using a handheld Garmin GPS receiver. Data were recorded in WGS_1984 format. A local motorbike driver was paid to drive around the main roads in town, stopping at the main intersections and taking main roads through the quarters. In addition to the tracks, points were registered for important locations such as internet access points, schools, government services and churches. These points were also employed to project the tracks onto Bing Maps satellite data with which the coarse neighborhood map was manually constructed. All maps were produced in ArcGIS.⁹

3.6 | Fieldwork preparation

One of the drawbacks of selecting a country in which life is not yet quite as online-oriented as in Europe or the United States is that little information can be found online.

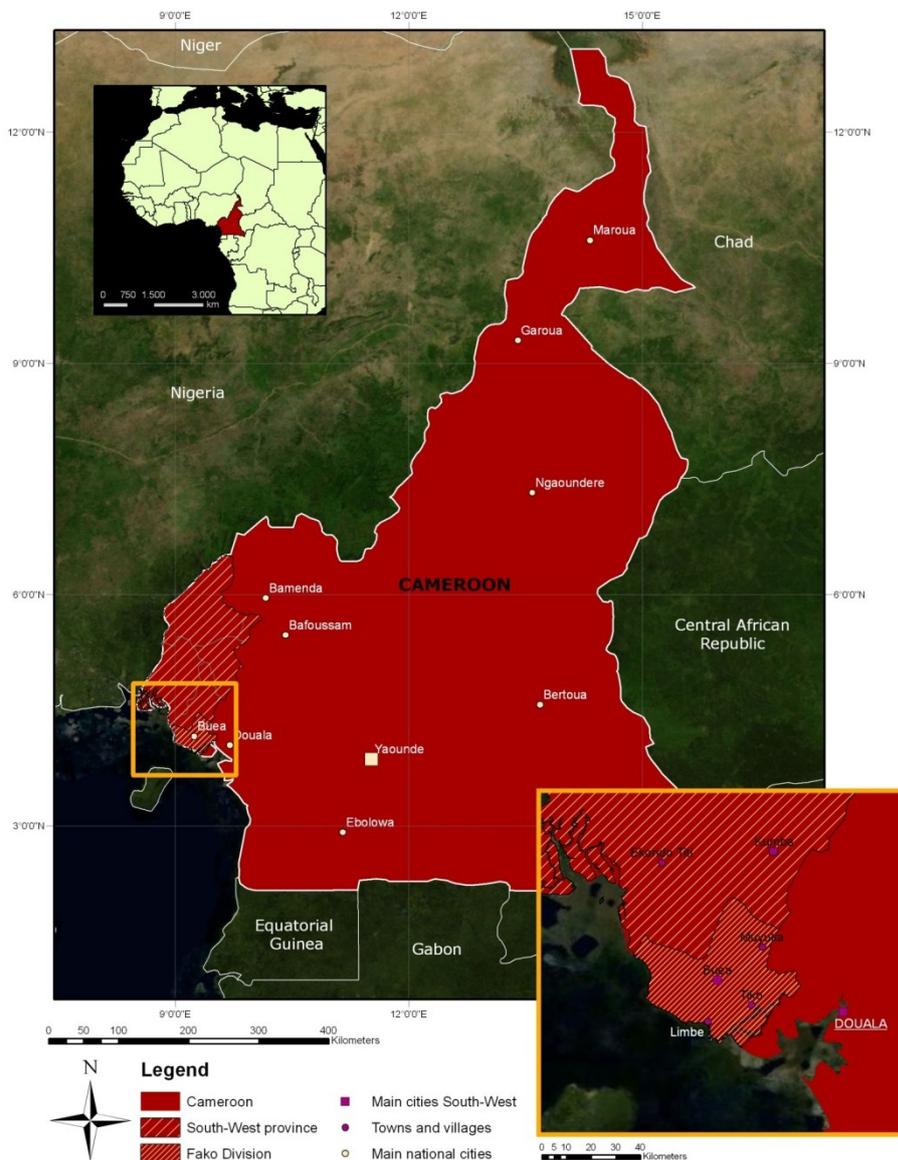
⁹ Although in the end, the activity diaries turned out not to be sufficiently detailed to perform such analysis, the maps still do provide a good overview of the research area, including the most important facilities.

Consequently, important statistics, maps and other highly useful facts and figures cannot easily be accessed, creating a lack of knowledge about the region which is to be studied: it was hard to select which area was best suited for this specific fieldwork beforehand based upon the information that is currently available. To allow for the necessary flexibility, this choice was left open until the first orientation in the field had taken place. The research location had to be a place where internet is available, but not yet appropriated by the majority of the population. The expectation was that such situation will be reflected by a relatively low number of internet cafés compared to the number of inhabitants.

The fieldwork itself was conducted in Cameroon's South-West province over a period of 2,5 months. The first two weeks of the fieldwork were used to gain some insight into the current status of internet access, after which the research locations were selected and respondent recruitment was commenced. Muyuka, a small town approximately 22 kilometers from the starting point of Buea was selected for the first part of the research. I resided in Muyuka from July 13 – August 17, while frequently making one-day visits to Tiko, the second location, where I conducted my research from August 18 – September 13. During both periods, I stayed with local families, which allowed me to obtain a better understanding of the local lifestyle in different family settings. An overview of these findings and overall image of Cameroon are presented in the next chapter.

4. Fieldwork location

With a rather inexperienced but growing population of internet users, a youth literacy rate of 72% for men and 59% for women, relative political stability and a poverty rate within the African average, Cameroon can be evaluated as fairly representative for Africa (UNICEF, 2010). This section provides a brief summary of some geographic and cultural information. The information partially derives from external sources, but also constitutes a first part of the results, as the complete image of the country could not have been established without being there.



Map 1: Geographic location of Cameroon.

Map produced by author. Background satellite image: Bing Maps, © Utrecht University 2010.

4.1 | Country profile: Cameroon

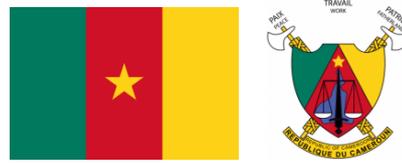


Figure 2: National flag and coat of arms of Cameroon

The Republic of Cameroon, or “*La République du Cameroun*” is located in West-Africa, sharing borders with Nigeria, Chad, Congo, Gabon and Equatorial Guinea. Its location at the sea front provides substantial business for the economic capital of Douala through export of mainly raw materials such as rubber, palm oil, cocoa, tea and banana and import of mainly second-handed or end-products from all over the world. The country’s official capital and second largest city, Yaoundé, is located more eastward (see Map 1). Cameroon is administratively divided into ten provinces, of which only the South-West and North-West province are Anglophone as opposed to the rest of the country, which is Francophone. Apart from these linguistic differences, Cameroon’s provinces are highly diverse in terms of population density, climate, culture and religion: the Islamic, arid, scarcely populated northern provinces are in sharp contrast to the lush rainforests in the Christian, populated south of the country.

Cameroonians’ first tongue used to be their own native dialect, followed by the official language in their living environment, French or English. However, youths increasingly prefer the official languages over their native dialects; some choose not to make use of their dialect at all. Because the country is home to over 200 different dialects, the majority is well capable of speaking the official language, or at least its pidgin variety. As such, interviews can be conducted in English or pidgin English without creating insurmountable language problems.

His Excellency Paul Biya has been president of Cameroon since 1982, following a long power struggle between former president Ahidjo and himself. Although formal elections involving more contestants than only Biya’s Cameroon People’s Democratic Movement were held since the late 1980s, the country is by no means a democratic one. Several respondents have complained about his authoritarian regime, which has cost several individuals their lives or freedom, although this is well-concealed towards the international public. In 2008, Biya proposed that term limits be removed and that the president shall be given immunity for his acts as president even after leaving office, which led to heavy protests among the population (L’Essentiel, 2010). Nevertheless, the bill was passed and the political climate in Cameroon has been rather calm since.

Financial system

In 2010, Cameroon ranked first on the regional Global Corruption Barometer (Transparency International, 2011a) and scored 146th out of 178 countries on the Corruption Perceptions Index in 2010 (ibid, 2011b). Corruption is a deeply rooted problem in Cameroon and has resulted in a strong cultural emphasis on money: anything can be bought, against its price. Financial contributions constitute an important part of social life: not only are individuals

expected to actively contribute to their family's well-being, each ceremony, be it for a birthday, burial, marriage or a simple church service – money is a compulsory part of each ceremony. Furthermore, the bribes for several common offenses (e.g. an expired national identity card when stopped at a routine police road check) are common knowledge and can normally openly be discussed with police officers. Additionally, friends and family are commonly expected to financially assist if one needs help.

Since Cameroon has no common insurance or banking system for the average citizen, various financial networks have developed in response, allowing individuals to save up for a large purchase, investment, or otherwise. One locally developed process is referred to as a 'game' and requires individuals, associated in a group for this purpose, to contribute a fixed amount of their earnings each month. On a rotational basis, each month one of its members is selected to take home all of the contributions for the specific month: usually a large sum of money, which individuals otherwise would have had trouble saving. The actual contribution is secured by the group size: with ten to twenty members, the added total is a large sum of money, although it does require a long-term commitment. Nevertheless, these groups tend to function well and allow people to buy houses, plots of land, invest in new job opportunities etcetera.

It is difficult to obtain a reliable estimate of the modal income in Cameroon: figures of average incomes are distorted by the substantial income differences between the elite and the remainder of the population. Officially, the Cameroonian minimum wage is set at roughly 28,000 CFA (approximately 43 euros) per month. However, an estimated 35% of the population is employed in the informal sector, where lower incomes are common (Bertelsmann Stifting, 2009). Middle-class jobs in the service sector, such as teachers, can be expected to earn between 40.000-80.000 CFA (roughly 60 – 120 euros) per month.

Transportation system

Although Cameroon does not have a government-organized public transport system, public transport is widely available against moderate prices, and is therefore frequently used. Minibuses servicing the main cities as well as localities along the main roads depart frequently throughout the day, running from early in the morning until late at night. The widely used local public transport system is typically arranged through share-taxis and motorbikes, with short, in-town rides typically costing 100-150 CFA (15-23 eurocent).

Internet in Cameroon

Internet access is available through cyber cafés all over the country, although connection speeds and fees vary from place to place. Whereas in 2007, fees were still skyrocketing for a very limited amount of time on terribly slow bandwidths, fees for internet access were reported to have dropped up to 90% in 2009 whereas at the same time, connection speeds went up (Africagoodnews.com, 2009), opening up opportunities for many potential internet users.

Accurate figures of internet use in Africa are hard to obtain, considering that the majority of internet users do not have a subscription for an internet service, but rather visit the cyber cafés at unpredictable moments. The International Telecommunication Union (ITU, 2010) nevertheless provides yearly estimates of the number of internet users for all countries and

world regions. Whereas the sub-Saharan average for Africa is set at 9,6% in 2010, Cameroon scored substantially worse with a score of 3,84% over 2009 (ITU, 2010). Taking into consideration that cyber cafés are concentrated in the major cities and populated areas, the local figure in semi-rural locations is expected to be around or slightly higher than the national average.

From previous experience in Cameroon, it was known that access to internet was best available in the main cities, among which various cyber cafés in center of Buea, the capital of the South-West province. At the time, in 2007, it was evident that administrative jobs relating to computer use would start to spring up in urban centers. Bearing this in mind and taking into consideration the aim of this study to concentrate on a rural environment but also the requirement that internet access should be within reasonable reach, the semi-rural region around Buea was selected as starting point for the fieldwork. An additional advantage was that previous knowledge of the study environment was expected to facilitate the research process.

4.2 | South-West province

The province is among the most fertile regions of Cameroon, providing ample opportunities for agricultural production and minimizing the risks on famine. Administratively, the South-West province is subdivided into six subdivisions, of which Fako division, home of both research locations, is considered most prominent and powerful: it harbors a significant number of main towns in the province: Buea, Limbe and Tiko all fall under its administration.

Culturally speaking, Cameroon's Anglophone provinces are heavily influenced by their Nigerian neighbors: the region is home to tribes from similar backgrounds, with similar cultures, dishes, customs and pidgin English as the common language on the streets. Although the North-West province, directly neighboring Nigeria, is more influenced than the South-West, the influences remain strong and visible.

The dominant religion is Christianity, sometimes combined with traditional religions, although these are mainly practiced in small native villages once people go back there rather than in more "modern" villages where facilities and services are abundant. Although Christianity in itself is the main religion, it still comes in many forms and churches: in even the smallest village, various denominations and even multiple congregations of the same denomination can be found. Main denominations include the Catholics on the one hand, and protestant variations such as full gospel, evangelist, Jehova's witnesses and Presbyterian congregations on the other. Many have a deeply rooted faith, although dogmatism in the sense of church preferences are not as prominent as expected: it is fairly common and socially accepted to switch denominations, as long as one is associated to a church.

Youth in the South-West province

In both research locations and their wider surroundings, it appeared to be common for youths to not only complete their primary education, but to additionally be given the opportunity to follow secondary education. Cameroon's education scores are formally rather good, with just under 80% of primary school enrolment and approximately 35% secondary school enrolment nation-wide in 2008 (UNESCO, 2011). Moreover, the encountered rates of

enrolment seem to be above the national average. Especially teachers indicated that approximately 80-90% of the youths do enroll in secondary education, although not all finish it (T1_Muyuka; T1_Tiko). Even so, enrolment in secondary school generally does indicate the pupil's ability to read and write, but does not necessarily indicate not much more. Participants, including schooling youths, wrote very poor English and appeared to not always be able to grasp questions phrased in basic English. Even if they have obtained their First School Leaving Certificate¹⁰, those who left after primary school sometimes cannot read and write, or do so very poorly. As such, the actual education level should not be overestimated, even though cosmetically, the situation looks promising.

An increasing (and unexpectedly high) share of the youths in Tiko, Muyuka and Buea turned out to be enrolled in higher education, including technical high schools, vocational trainings and universities. From the few available data on tertiary education, it appears that over the whole of Cameroon, 8% of the population was enrolled in tertiary education in 2008 (UNESCO, 2011). The number of youths attending university in the same year amounted to less than one percent of the population based on figures from the government combined with population data from the United Nations (United Nations, 2011; Ministère de l'Enseignement Supérieur, 2011:20). Judging from exclusively observation and discussions, this figure seems to be higher in the chosen research locations.

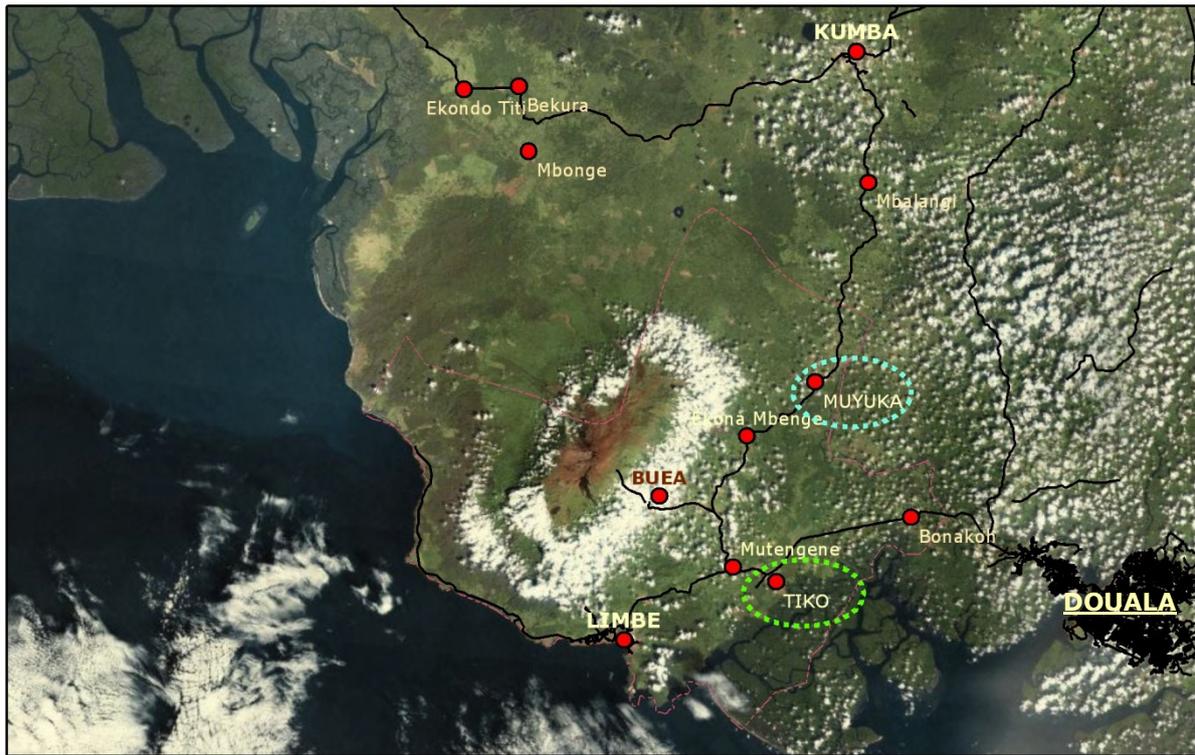
The majority of the youths between 15 and 25 are still living at home: even when young adults are married, have children or if they are fulltime employed, they may still very well live at home or other family members. It appeared to be very common for youths to be sent to live with other family members to facilitate their education (cf. Eloundou-Enyegue and Stokes, 2002). For post-secondary education, they were sent mainly to the bigger towns in the North-West or South-West province, but some even in Yaoundé. Likewise, students from remote villages were often temporarily living with family members in Muyuka and Tiko to facilitate their secondary education. One of my hosts once explained that children are commonly sent to family members. It is not adoption; the children do remain children of their parents, but it is socially acceptable for parents to let another family member take care of their children. True adoption in the sense of permanently transferring the care and guardianship is thereby tactfully circumnavigated, although many situations are not practically much different from adoption.

The rates of unemployment among young jobseekers are alarming. Especially those coming from universities or other tertiary education often cannot find employment which matches their education levels. As such, Cameroon is home to many highly educated farmers and salespeople: more than once, I encountered people with a masters' degree who were working on their parental farms to be able to secure an income. Dissatisfaction with this situation is argued to have driven many into internet fraud ('scamming'). This will be elaborated upon in further detail in Chapter 7.

For the purposes of this study, two research locations were selected from the surroundings of Buea: Tiko and Muyuka (see Map 2). Both locations are discussed in more detail below.

¹⁰ First School Leaving Certificate: certificate for successful completion of the full cycle of primary education.

Research locations and surroundings



Legend

- Populated areas
 - Main roads
 - ▭ Fako Division
 - ▭ Research location 1: Muyuka
 - ▭ Research location: Tiko
- 0 2.5 5 10 15 20
Kilometers



Map 2: Overview of research locations

Map produced by author. Background satellite image: Bing Maps, © Utrecht University 2010.

4.3 | Muyuka

The first half of the study was carried out in Muyuka, a medium-sized rural village in Fako division, and heading Muyuka Subdivision. Although Muyuka is substantially rural and not the biggest of towns within Muyuka Subdivision, it does provide various regional services such as government hospitals, a court, representation of ministries and a post office. Since the beginning of this year, Muyuka has been in transition as a result of the completion of the refurbishment of the national highway, N8, connecting Buea and Kumba. The village is located at a distance of approximately 30 kilometers from the main town of Buea (typically 30-50 minutes by minibus) and approximately 45 kilometers from the other regional city, Kumba. The vast majority of Muyuka's inhabitants (an estimated 90% of the population) are involved in agriculture.

Internet and computer access

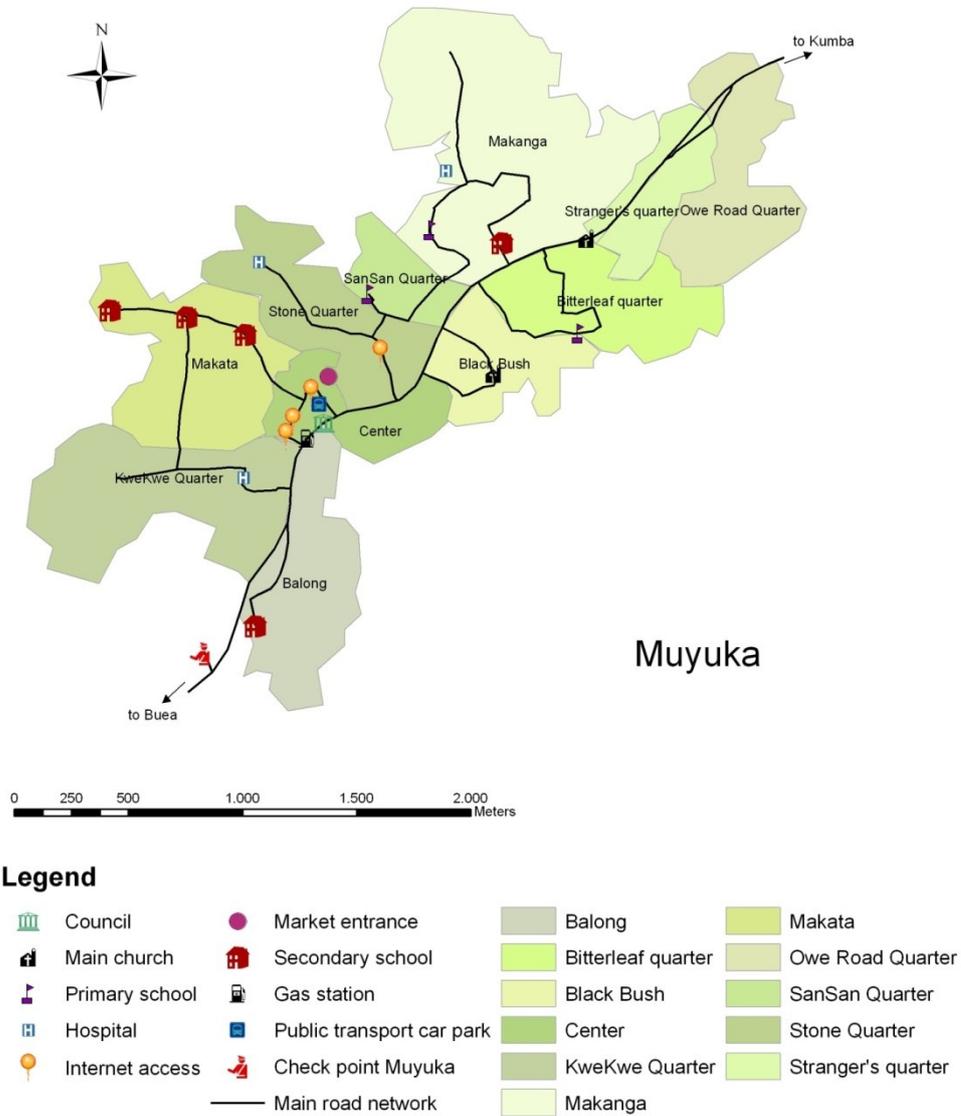
From July to September 2010, Muyuka had three operational cyber cafés, which were all concentrated in the central area of the town. Two of these cyber cafés had only been established less than six months ago, but they were nevertheless frequently fully occupied, especially during the evenings. The total number of available computers with internet connection grew from 31 in July to 40 in late August as a result of capacity expansion within the existing three cyber cafés. Running cyber cafés currently provides good business for those who have some knowledge of computers, although the owners still frequently face problems related to less than optimal infrastructure: the internet connection comes from Buea, which makes the connection vulnerable for interruptions. Another common problem is burglary, due to the high value of computer parts and the sometimes gang-like organizations of 'scammers' (internet criminals).

Muyuka is also home to a computer training center, where youths can follow one-month basic computer training or an extensive 9-month training including touch-typing, knowledge of the Microsoft Office package, and internet use. The center has twelve computers, of which one also provides internet services. Several computers, which are not connected to internet, are also set up in small offices around town. Taken altogether, these computers are estimated to add up to approximately 15 for Muyuka itself.

Population

Estimates of the number of inhabitants in any Cameroonian city vary wildly. As such, it is hard to say how many people really live in the surroundings of Muyuka. Unfortunately, the general government census of 2009 only provided information on the number of inhabitants within Muyuka Subdivision, an area of 1200 km², home to a total population of approximately 100.000 inhabitants. Inferring from this number and given the fact that the majority of the population is concentrated in five towns of which one is bigger than Muyuka, the total population in Muyuka has been estimated to be between 15.000-18.000 inhabitants, spread over approximately 20 quarters within the village. For the purposes of this study, the research population was selected using connections mainly from the village center, cyber cafés and specifically selected locales where farmers' children could be found.

For an impression of Muyuka, see Appendix 5.



Map 3: Muyuka: quarters, facilities and main road network

Map produced by author.

4.4 | Tiko

The second part of the study was conducted in Tiko, a town of approximately 40.000 inhabitants in 2008. Contrary to Muyuka, the main source of employment is in trading and waged labor (Tiko Municipality, 2008). Next to the basic social facilities such as a post office, court and health clinics, Tiko has a large representation of police, special security and government services, because the town is heading Fako Division (ibid).

Tiko has expanded from a small trading town into a conglomeration of various towns and villages. Tiko Town, the central area, is harboring a port, which facilitates business as cargo is frequently shipped from Nigeria. The town used to have one of the most important markets of the region: local business flourished in reselling of imported goods. In March 2010, an all-encompassing fire devastated the complete market, causing a major economic disaster in the town. Virtually all of the 800 stalls and all its stocks went up in flames. Although the town has begun to regain itself, the town is no longer what it used to be. For an impression of the town, see Appendix 6.

Internet and computer access

Tiko's internet sector has increased rapidly: at least four out of the seven present cyber cafés have been opened less than six months ago, and from various informal conversations, I understood that numerous others are also planning to profit from the increased demand for internet access. Cyber cafés are geographically dispersed over town: from nearly everywhere in town, it is possible to reach a cyber café within 20 walking minutes. Taken altogether, the total number of public computers with internet connection is estimated around 70 for Tiko

Employment

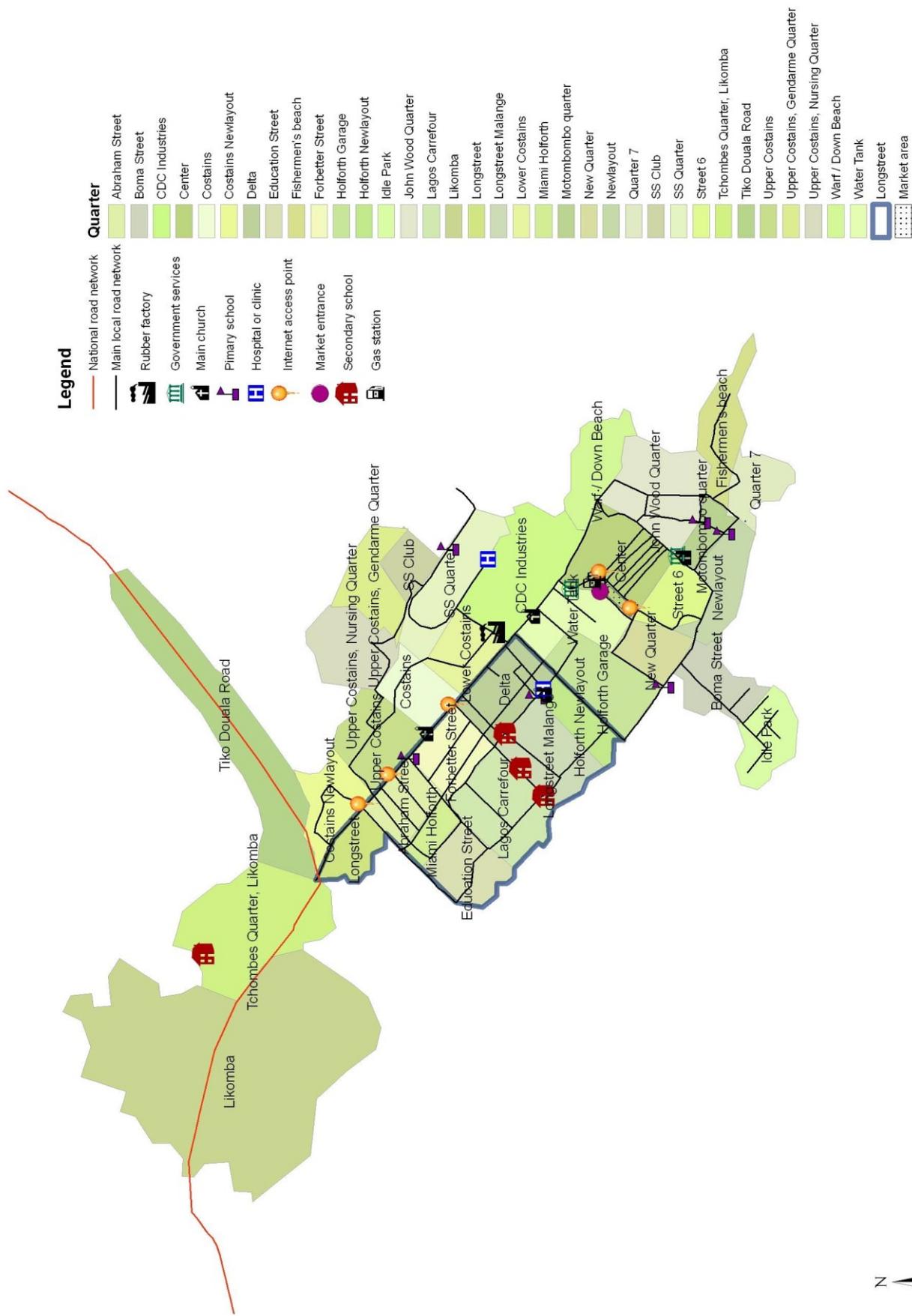
The industrial activities of the Cameroon Development Cooperation (CDC) have a substantial impact upon the everyday life in Tiko. Employing approximately 10,000 people in the plantations around Tiko, CDC is an influential player in the local landscape, running several "workers' camps", a hospital, schools and an entertainment club. Approximately half of CDC's workforce is represented by temporary workers, whereas the other half enjoys permanent employment (M19iE_Tiko cf. M29iFr_Tiko). The widespread availability of part-time and temporary jobs has a substantial impact upon youths in the surroundings: many youths are employed there during summer months. Especially for those who are not doing well in school, dropping out and opting for a job with access to money may be a more attractive alternative than continuing their education (T1_Tiko).

Tiko is situated at approximately 23 kilometers from Buea (20-40 minutes by minibuses and taxis), and approximately 50 kilometers from Douala's market district Bonaberi (1,5 hour by minibus or taxi).

4.5 | Tiko vs Muyuka: a comparison

With its 21.914 inhabitants in 2008, Tiko City is not substantially bigger than Muyuka (est. 15.000-18.000 inhabitants). However, the two locations are distinctly different. Although both locations function as a regional 'hub' for their wider surroundings, Muyuka is clearly more rurally situated than Tiko: Muyuka is the main larger settlement within its direct surroundings, whereas Tiko also serves the two directly adjoining villages of Likomba (15.797 inhabitants) and Mutengene (40.949 inhabitants; Tiko Municipality, 2008). Although Mutengene has a bigger population than Tiko, it is clear that Tiko town has more of a regional function, thanks to its former function as a main trading town and its industries from the Cameroon Development Cooperation (CDC).

These differences are also evident from the maps in Appendix 7: whereas Tiko's direct environment comprises of one smaller village (Likomba, adjacent to Tiko) and three larger cities in its direct surroundings, Muyuka is much more rurally oriented, functioning as the primary access to general facilities such as a post office, for five smaller, highly rural villages.



5. Data

Data were collected during a ten-week fieldwork period in the abovementioned semi-rural villages: Tiko and Muyuka. This chapter provides a brief overview of the data obtained and the methods of analysis applied.

5.1 | Sample characteristics

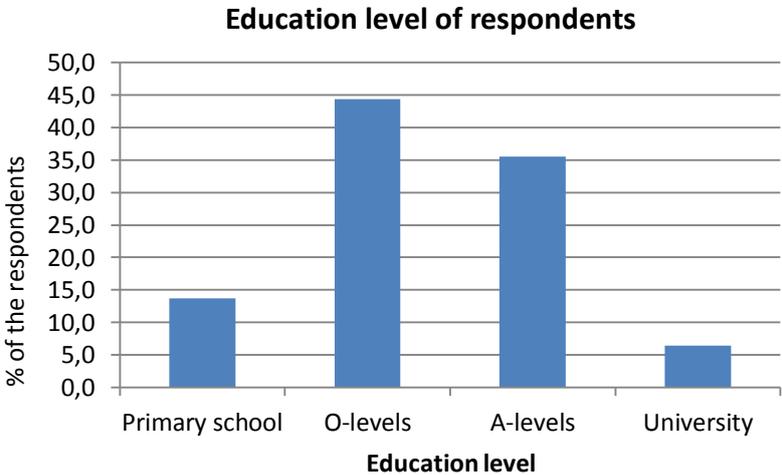
In each of the two research locations, approximately 60 respondents were recruited to participate in the activity diary study. Additionally, the main sample includes a number of questionnaires from people who did not participate in the activity diary research: as a white, young researcher I attracted substantial attention in both villages, which frequently prompted inhabitants frequently to volunteer to assist me in my work, for example by completing a questionnaire. Although I initially politely declined these offers to maintain the focus of the study onto the activity diaries, it slowly started to become evident that the activity diaries were by far less informative than the questionnaire, and that the questionnaire also provided highly valuable information without the diary. Considering this, and keeping in mind time constraints towards the end of my stay, additional individual questionnaires have been collected from Tiko, my second fieldwork location. Finally, specific attention was paid to the youngest potential group of internet users in this survey: secondary school students. Two government high schools, one in each village, kindly assisted me by granting me the opportunity to distribute questionnaires in two fifth grade classes (age group approximately 15-16 years old).

In subsequent writing, the main sample that is referred to excludes the participants from the school questionnaires, because they have been specifically sampled. Moreover, they would disproportionally influence the average age. As such, specific attention will be devoted to this group in chapter 8, combined with an inter-group comparison with the older age group. As such, the characteristics of only the *main* sample are summarized.

Table 1: Sample characteristics, main sample

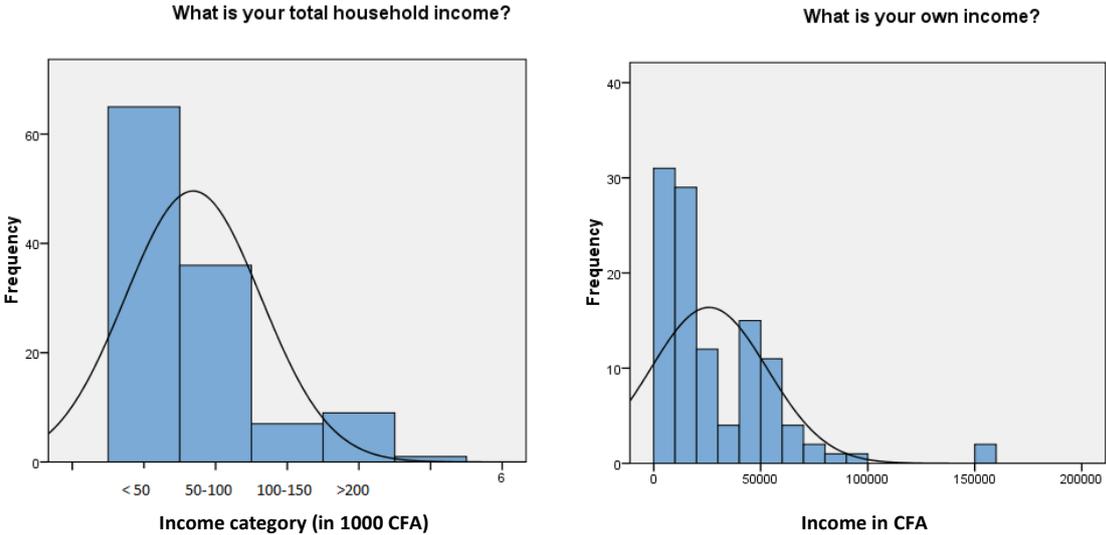
GENERAL SURVEY	
Number of questionnaire respondents	125
Number of activity diaries	89
Number of qualitative interviews	31
% of women in sample	38
% of internet users	50
Age range	15 – 27
average	21,14
% living at home	68
% of respondents with secondary education or higher	86,3%
% of respondents in school	53,6%
% of respondents with a total household income of <100.000 CFA	85,6%

Typically, respondents have obtained secondary education (see Graph 1). The number of university students, although abundantly present in cyber cafés, was limited intentionally to ensure that the sample would be representative for the local population of Muyuka. Although some youths have dropped out of school at an early age, these people were hard to find.



Graph 1: Education level of respondents

Typically, respondents live in households with an aggregate monthly income of less than 100.000 CFA (just over 150 euros). Individual income differences clearly vary between students and workers, but the emphasis is clearly on incomes less than 50.000 CFA.



Graph 2a and 2b: Respondent income distribution

Left: income per household (in categories), right: own monthly income in CFA.

5.2 | Qualitative interviews

Interviews and informal conversations provided the basis for an initial impression of the themes surrounding internet use in the South-West province, which soon led to the selection of Tiko and Muyuka as research locations. This information included a discussion with four graduates from the University of Buea and interviews with a secondary school teacher from a small village at the outskirts of Buea, two NGOs (Social Development International and Cameroon Youth Communication Forum, both based in Buea) and a headmaster of a school for deaf students (also in Buea).

The most important group of informants were adolescents who participated in the activity diary study. After the study, specific individuals were selected from the group of respondents based on their home situation and on information from informal conversations and asked to participate in an additional, individual discussion. Care has been taken to ensure a relatively diverse group of informants in order to cover the youth population as much as possible. Among the informants were for example high school students from various ages, school drop-outs, young graduates from vocational trainings, the typical internet user in the cyber cafés, university students and those involved in cyber crime. Interviews in both research locations provided very similar results and were continued up to the point that no new information was derived from the individual discussions.

Interviews have also been conducted with key persons in the lives of these youths, including for example high school teachers from both villages, internet pioneers, initiators of computer training centers and owners of cyber cafés themselves. Questions addressed in these interviews mainly revolved around the impression that the informant had regarding internet use and the corresponding impact on its young users. Additionally, respondents were asked to provide an estimate of the percentage of the population between 15 and 25 who were using the internet.

In the analysis, qualitative interview results are referred to with number/letter combinations of the following format: M19iE_Tiko (male respondent, 19 years old, internet user, from Tiko). A key to interview references and an overview of all qualitative interviews can be found in Appendix 8.

5.3 | Activity diaries

The diaries were distributed throughout the research period, depending on the availability of participants. Those who were interested in participation were first instructed in both English and the local dialect, pidgin English (see Appendix 9 for the translation of the presentation) how to use the diary. Additionally, participants were informed that they would have to fill out a final questionnaire to complement the diaries at the end of the trajectory. Respondents registered their first name, age, internet usage and phone number for follow-up appointments. They received one or two text messages or phone calls over the course of their participation to monitor progress.

Table 2: Overview of activity diaries distributed and received

	Muyuka	Tiko
Number of diaries distributed	53 + 9 pilot group diaries	61
Number of diaries returned	46 + 9 pilot group diaries	57
Number of valid cases completed activity diary + questionnaire	43	46

A pilot group of nine participants in Makanga, Muyuka was used to see to what extent the local youth understood the workings of the activity diary when given brief prior instructions. The group consisted of five girls and four boys, aged 16-25. One week after the first meeting, participants were asked to return their completed diaries and to fill in the additional questionnaire. Additionally, they were asked to provide feedback onto the explanations that they had received beforehand. Nearly 90% of the participants had correctly and completely filled in the diary, but the questionnaires turned out to contain numerous questions which respondents did not understand. The preliminary results of this test group were analyzed (both in terms of the activity diary and questionnaires) and translated into improvements concerning explanation and questionnaire content before conducting the research on a larger scale.

The activity diaries from the main sample in both research locations provided disappointing results: many of the results were not sufficiently detailed, or incomplete. As such, many of the diaries had to be discarded in the end, rendering only 71 diaries for the final analyses (the number quoted in Table 2 does not exclude incomplete and unreliable entries). An overview of the precise data derived can be found in Appendix 10.

5.4 | Questionnaires

The questionnaires gradually turned out to be the most inspiring and valuable source of information gathered in the field. Unfortunately, this only became evident over the course of the study, when most time had already been invested in the recruitment of participants for the activity diary research. Questionnaires were completed by participants of the activity diary study, a sample of high school students (see section 5.5) and a number of ‘other’ people. As previously mentioned, many people wanted to “help out” with the study. As such, additional respondents have completed the questionnaire: some people from cyber cafés, a group of young farmers from the village of Ikata (45 minutes from Muyuka by motorbike) and various other individuals.

All participants in the activity diary study were asked to complete the questionnaire upon handing in their diary. In a second stage, participants were also offered the option to answer the questionnaire beforehand or to bring the questionnaire home with them. Some diaries have unfortunately been completed without a valid questionnaire, for example because the respondents would frequently send younger siblings to deliver the completed booklet on their behalf. This prompted me to offer respondents the possibility to complete the questionnaire beforehand or to take it home if they wished to do so. If so, they were instructed not to fill in questions which were unclear to them until they would hand back the questionnaire. Many in fact did make use of this opportunity, although the general opinion

among the respondents was that the questionnaire did not pose very difficult questions. All questionnaires were analyzed using the qualitative analysis program MaxQDA.

5.5 | School questionnaires

Once schools had resumed after the summer holidays, the questionnaire was administered among students of two local government bilingual high schools: GBHS Muyuka, located in Makanga, and GBHS Tiko, located in Likomba, close to Tiko’s municipal borders. In both schools, final-year students for the ordinary levels were selected¹¹. The questionnaires were administered in class with the help of the teachers. Whereas in Tiko, students were given time to complete the questionnaire in class, in Muyuka, students were asked to complete the questionnaire during their break time.

Table 3: Sample characteristics, school sample

SCHOOL QUESTIONNAIRES	Muyuka	Tiko
Number of respondents	101	65
Number of valid questionnaires	81	58
% of women in sample	62 %	48 %
% of internet users in the sample	14,8 %	25 %
Age range	14 – 22	14 – 24
average	(16,51)	(16,40)
% living at home	85 %	98 %
% of respondents with a total household income of <100.000 CFA	78,9 %	80 %

The high number of invalid questionnaires in Muyuka is likely caused by the fact that students were asked to complete the questionnaire during their break time: although all respondents did return their copy, many had filled out less than half of the questions, rendering them useless for the analysis.

This sample of respondents was specifically addressed to explore the extent to which younger people would differ from older ones in their internet use. Although internet use seems to increase with age, differences in other areas turned out to be few. Wherever specific differences were significant and relevant, they have been mentioned in the text. In all other cases, only the main sample was considered for the analysis.

¹¹ Cameroon’s high school system is subdivided into two parts: the ordinary levels (O-levels), taking five years, and the advanced levels (A-levels), which prepare the student for university education, requiring another two years.

6. Access and online activities

Who has access to internet and what do people do online? This chapter provides the first results and discussions of the estimated degree of internet access and disparities therein and explores the range of activities that youths have reported to engage in, or expect to engage in. However, it should be kept in mind that although the degree of access to internet may be influenced, individual users may employ the opportunities of such access in various ways.

6.1 | Internet access

Cyber cafés

Most Cameroonians, and especially most youths, make use of the internet from cyber cafés. Although internet access still cannot be considered ‘cheap’, cyber café mediated access is affordable for the vast majority of the population in both Tiko and Muyuka. Internet access can cost as little as 100-150 CFA for 30 minutes, going up to a better value-for-money deal of 1000 CFA for 6 hours, which can be kept and used over a longer period. This is not unaffordable compared to the price of a typical snack on the streets (50-100 CFA) which are consumed with great frequency.

The availability of internet access tends to decrease with the number of inhabitants of a given region. The main cities in the region, Douala, Buea, Kumba, Limbe and Bamenda are well-serviced when it comes to internet use. Especially the sizeable population of students living in these towns, of whom approximately 90% is estimated to use internet services at least every now and then for research purposes, ensures a good number of potential customers. In the smaller towns and villages with a regional outlook, such as Tiko and Muyuka, one may find a only handful of cyber cafés. Villages in between “connected” places sometimes also have one or two access points, again depending on the size of the town.

Home access

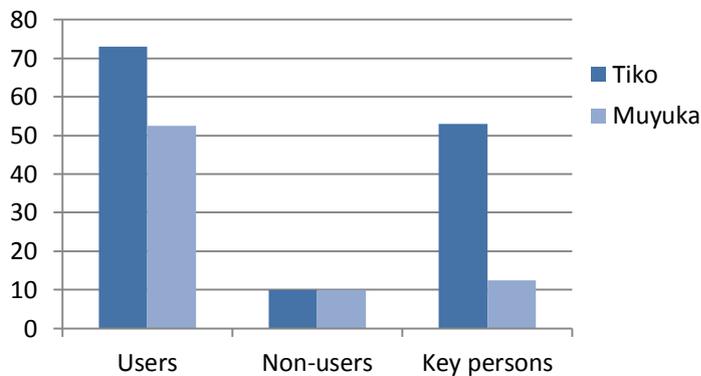
In contrast with internet access through cyber cafés, home internet access is still unaffordable for the Cameroonian middle class, with rates for occasional access from 5.000 per month and rates for continuous access going up from 20.000 CFA per month, not to mention the substantial installation fee of approximately 20.000-40.000 CFA. When comparing these rates to the standard income of for example primary school teachers (40.000-80.000 CFA) or secretaries (20.000-40.000 CFA), it is obvious that such rates are out of reach for the vast majority of the population. Out of the main sample (excluding the school survey) 87,5% of the respondents accessed the internet from a cyber café. It should be noted, however, that home- and mobile phone internet use are higher than expected based on the initial known figure for internet use in Cameroon (less than 4% for all categories combined: ITU, 2010). Combined, home- and mobile internet use account for 11% of the total internet use in the sample.

Table 4: Overview of types of access and occurrence

Type of access	Occurrence
Cyber café	89%
At home, from a personal computer	6%
From a mobile phone	5%

6.2 | Extend of usage

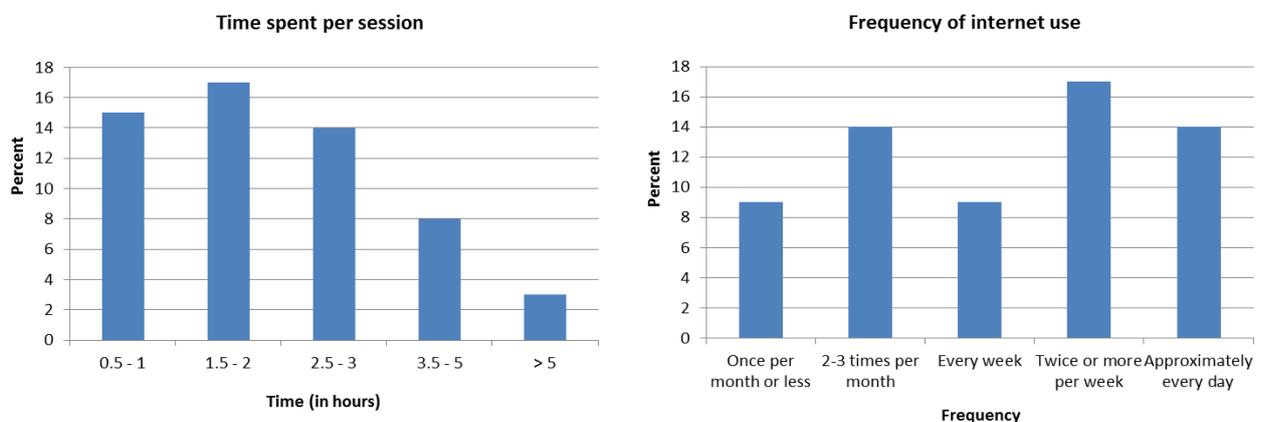
Estimates of how many youths (age 15 – 25) use internet vary wildly with which person is asked to provide the answer. To obtain a somewhat more structured overview of the local situation, informants were asked to estimate the percentage of internet users in town. Overall, internet users tend to provide higher estimates than non-users, which could be indicative of the preference of internet users to associate themselves mainly with other internet users. This ‘community formation’ will be discussed in more detail in section 7.2. Although estimates seem to vary among the two research locations (see Graph 3), it is evident that at least in these locations, the internet penetration rate is likely higher than is commonly assumed. Considering the fact that young internet users and non-users alike are likely to base their estimate of internet use on the degree of internet use in their own social surroundings, the key persons (owners of cyber cafés, teachers etc) are expected to provide the most representative answer considering the fact that their profession allows them to have a bird eye’s view on the developments among youths.



Graph 3: Informants’ average estimate of internet use among youths

Data based on 10 estimates by participants in qualitative interviews

Internet is popular: 89% of the internet-using respondents indicates that using internet is “very important” to them. Moreover, among the non-users in the sample, nearly 90% would *like* to use internet, although they currently do not yet do so. Out of those who are using internet, just over half of the users is using the internet at least once every week. When visiting the cyber café, respondents typically spend 1 – 3 hours online per session.



Graph 4a and 4b: internet use: frequency and time spent per session

Differences between Tiko and Muyuka

The degree of internet use in Muyuka seems to be lower than in Tiko. This is reflected in among others the estimates towards the average number of internet users and the average number of friends using the internet indicated by respondents (see Graph 4a and 4b respectively). Considering the higher number of cyber cafés in Tiko, this is probably correct, emphasizing the idea that internet use is more urban- than rural-based. Although the two research locations differ on this aspect, other findings were very similar and have therefore not been emphasized in the analysis below.

Gender imbalance

According to two cyber café owners, the above figures are fairly representative for the wider population of internet users: visitors tend to be between 15-30 years of age, although they tend to be predominantly male (C1_Muyuka; C2_Tiko). Purposive sampling inhibited this to be shown in the sample because care has been taken to also find some female respondents willing to contribute to the research, to be able to gain insight in how internet use affects their lives. However, most qualitative interviews and personal observation do suggest that the majority of internet users can safely be assumed to be male.

The gender imbalance may have to do with household issues, but it has also repeatedly been suggested to relate to the association of girls engaging in online relationships: "the image of girls wanting to marry whites, or the sexual activities pursued online, are the main reason why girls tend to stay away from internet use" (F25iD_Muyuka, cf. F25iB_Tiko). Parents and even boyfriends may sometimes prohibit girls to use the internet, simply because of their fear that the girl will try to engage in online relationships.

A final aspect which was not frequently mentioned, but does seem to provide a reasonable explanation for the lack of female internet use, is the fear of embarrassment (F26iH_Tiko). Shame seems to be embedded in the Cameroonian social system: for example, I have regularly observed parents correcting their children by making a fool of them, using shame and embarrassment to teach the child not to engage in such activities again. As such, the shame and consequent fear of not meeting up with the required knowledge to manipulate a computer may represent a real and pressing problem for girls.

Table 5: Lack of statistical association between income and internet use

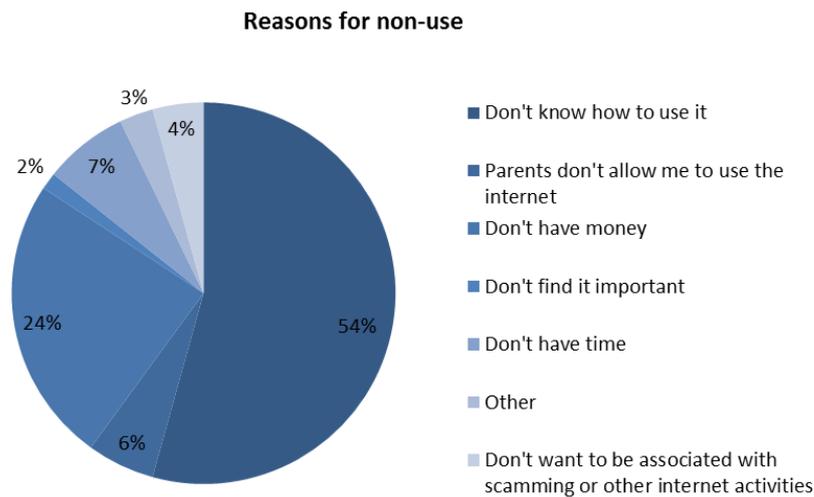
Variable	Mean difference between users and non-users	Significance
Income per head	908.44	.826
Own income	-7750.39	.133
Household income (Mann-Whitney test)	1513.5	.173

Non-use: financially motivated?

Differences in access to internet usually tend to be assumed to be of financial nature (cf. Mercer, 2005). However, the results in this sample suggest that this is not the case: internet use is not significantly associated with income. Although 25% of the respondents indicated money to be the main reason not to use internet, independent sample t-tests based on the

income per capita¹², household income and personal income did not yield significant differences between internet users and non-users (see Table 5).

The majority of the non-users indicates they are not using internet because of a lack of knowledge rather than a lack of financial resources (see Graph 5). Although this is currently an important aspect in social stratification, this is likely to decrease with time, as schools are obliged to start teaching computer skills as of 2010 (CT1_Tiko).



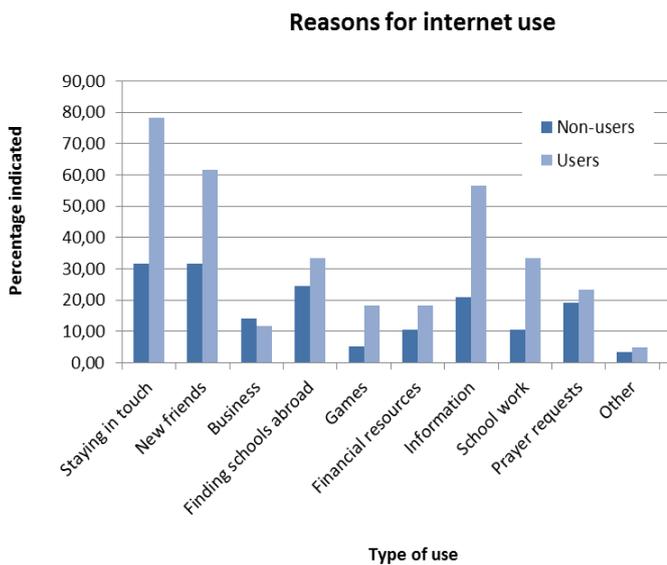
Graph 5: Reasons not to use internet

6.3 | What do youths do online?

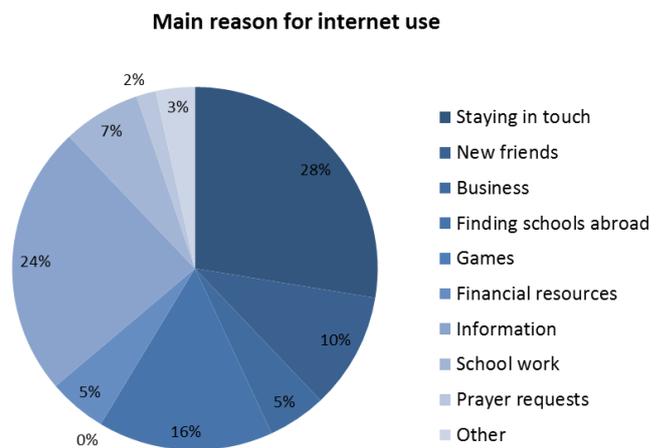
Generally, the population also feels that they don't "deeply" know how to use the internet: many are still in their first phases of discovering the internet and "don't yet know what internet has to offer" (CT1_Muyuka, cf. F26iH_Tiko). Nevertheless, youths are curious and excited to use or start using the internet.

Youths do many things online. Qualitative interviews and informal conversations have been invaluable in obtaining an understanding of the kind of online activities that young internet users engage in. Youths usually communicate online via chat, although many also have their own email addresses and accounts on social networking sites such as Facebook, Hi5 and TAGGED. Apart from their quest for schools abroad, information and school work, they also frequently listen to music, exchange pictures with online friends, and look for the latest fashion (C2_Tiko, F25iD_Muyuka, M22iA_Muyuka, F16iA_Tiko; see also Graph 6 and 7). Finally, internet use is also negatively associated with internet fraud ('scamming') and finding an online spouse; practices which have also turned out to be commonplace among internet users. The next chapter will outline some of these uses and discuss their implications for the individual users and their surroundings.

¹² An indication of the per capita income was calculated using the upper limit of the income category (see questionnaire Q13) divided by the total number of people in the household (Q6).



Graph 6: Reasons for internet use



Graph 7: Main reason for internet use

In sum, with the research method applied, it has proven hard to obtain a reliable estimate of the actual degree of internet use in both villages. These problems occurred mainly because the selected sampling method did not allow for such analysis. However, rather than aiming to determine the degree of internet use, the study aimed to gain insight into the effects on those who were using internet from cyber cafés in both locations; as such, the estimates should only be seen as an indication to facilitate the rest of the analysis. Further conclusions with respect to male dominance and the various reasons for internet use confirm earlier studies by Mercer (2005) and Uimonen (2009). However, in contrast to previous research (e.g. Mercer, 2005), a link between internet use and access to financial resources was not found. This could be due to the fact that the average income in Mercer’s study is substantially lower than the income level encountered among respondents in Tiko and Muyuka, even when accounting for differences in price levels, average household incomes were approximately four times as high. This suggests that a minimum level of income may be required, but that once a minimum level of income for basic life necessities is present, the choice whether or not to use internet mainly depends on knowledge rather than financial position.

7. Impacts, individual and society-wide

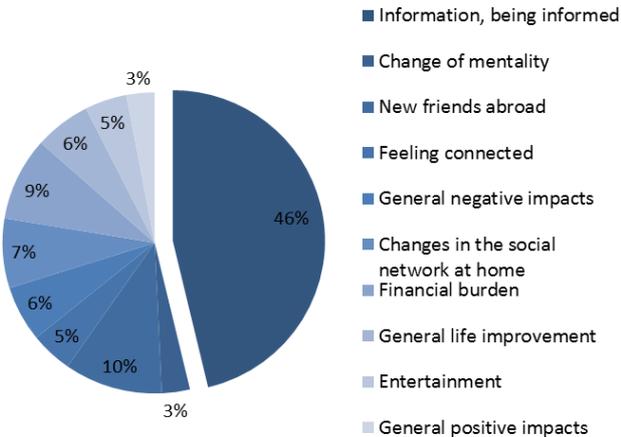
Taking into consideration the results from the qualitative interviews, questionnaires and activity diaries, many aspects of daily life have turned out to be potentially related to internet use. Although the majority of the relations can only be speculated upon due to the exploratory nature of this study, each of these loose ends indicates possible subjects for future research – and indications of which topics may not be worthwhile. This section is subdivided into five subsections: the effects of having access to information, changes in users’ social networks, increased mobility, both in terms of actual mobility and the feeling of having opportunities to travel one day, the perceived mobility. Section four discusses the influence of internet use on norms, values and lifestyle, whereas the final part considers two prevailing aspects which are associated with negative internet use: scamming and pornography.

7.1 | Empowerment through “being connected” and access to information

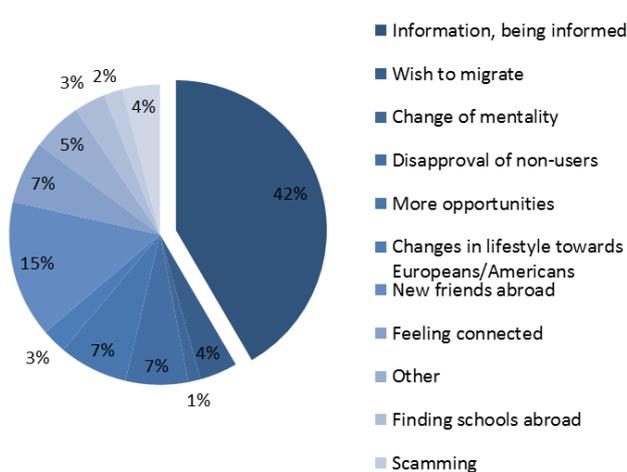
*“I am connected to the world”
(questionnaire remark)*

Access to information is not the first objective for people to use the internet, neither is it the type of use that people draw on most when they are online. Nevertheless, newly acquired information online represents the most important impact on the lives of individual users and a constitutes a main difference between users and non users according to respondents from both groups (see Graph 8 and 9). Thus, although internet users may not always be specifically searching for information, their various online activities do tend to inform them.

Reported impact of internet use on the lives of internet users



Perceived differences between users and non-users combined answers from both groups



Graph 8: impacts of internet use on the lives of internet users (left)

Graph 9: perceived differences between internet users and non-users (right)

Please note: the legend and corresponding colors of this diagram do NOT correspond with Graph 8.

This should be good news for development organizations, as this is among the main reasons for various NGOs and governmental institutions to recognize access to internet as a fundamental human right. However, “information” and “knowledge” are broad concepts, and their interpretation may vary substantially from individual to individual and from place to place. Thus, whereas development initiatives commonly refer to internet as a means of obtaining access to high quality, near-scientific knowledge such as health- and market-related information, online courses and business interactions, young Cameroonians may feel that they benefit a lot from internet without fulfilling those ideals. If they are specifically looking for information in the first place, youths search for information which relates to their own living environment and world views, including biographies of and stories about their favorite football players, details about local and international celebrities, religious quotes, answers to homework assignments and local and international news (e.g. F16iA_Tiko, M22iA_Muyuka, Socioeconomic Officer_Tiko).

This arguably less-than-optimal use of internet is disapproved of by a number of local spectators of internet use among youths. Especially teachers and cyber café owners maintained that young people do not use the internet correctly. One teacher phrased it as being “a waste of time”, because “they are not serious” (CT1_Muyuka, cf. C1_Tiko; C2_Tiko; T1_Muyuka), thereby referring to the opportunities and valuable information that she found online during and after her university degree in computer science in Nigeria, which had a profound impact on her life. Disapproving of the rather limited and non-scientific internet use by youths, she feels that “they are not using the opportunities of internet to the full extent: they only chat, play the American Lottery¹³ and waste their time”. A computer teacher and exploiter of an internet café explains:

“Very few internet users come to seek admission to schools (approximately 25%) or to do assignments, even though those are the right reasons to use the internet. Ladies come to find a boyfriend in the US or a partner just to play with them, or to get money. Boys are usually scamming. They all come for their own interest.”

(C2_Tiko)

All the same, all of the abovementioned “spectators” do feel that internet among youths should be encouraged: it should simply be more coordinated to facilitate youths in discovering what the internet has to offer apart from its role as a rich source of entertainment.

Irrespective of outsiders’ value judgments as to what constitutes “relevant”, “valid” or “useful” internet use, the ability to personally access up-to-date information on virtually any topic provides individual users with a sense of awe, self-esteem and liberty (e.g. M22iA_Muyuka, M29iF_Tiko, M19iE_Tiko). More so than in developed contexts, where ample high quality, recent information was also available before the internet era, in situations such as the Cameroonian one, access to information has changed from hardly anything to virtually any information that one may wish for. As such, use of the world wide

¹³ A lottery which is played through the internet, and costs 1000 CFA each time to play (in comparison: the minimum wage allows 933 CFA per day although this requirement is frequently ignored, a beer (0.65 l) costs 600 CFA and 1000 CFA provides 5-6 hours of internet access).

web empowers individual users to independently search for information and thereby judge information provided to them, which is new for many. A cyber café owner explains:

“Non-users are not very current: if they hear something from... say, ‘Mr. B’, they will believe anything that he tells them. Users, on the other hand, may see for themselves and therefore do not have to believe everything that they are told.”¹⁴

Users also experience this new situation as such: “the big difference is that I can simply check things myself” (M19iE_Tiko). Providing answers to virtually all questions, youths also frequently use internet to resolve debates.

Whereas critical appraisal of information used to be an unfamiliar topic for most Cameroonian youths, they are gradually learning to critically examine things which are told to them. They used to accept things told to them by their “elders” immediately: disobeying or challenging these norms constitutes a major misstep which is disapproved of in the wider community (Discussion university students, C2_Tiko). Although my respondents reassure me that the respect for elders will remain, they do agree that people have become more critical. However, although youths apply their new evaluation skills in their local environment, they are unlikely to judge the information that they find online critically. What is more, online sources are generally regarded as high-quality and reliable sources of information, or even equated with the absolute truth: “only internet can reveal the truth” (M19iE_Tiko, cf. T1_Tiko, CT1_Muyuka).

Even though the degree of acceptance of information can be explained by cultural customs, the widespread awareness about scammers within the local communities should make users aware of the fact that internet remains an open-access platform where literally anybody can share information. Nevertheless, even when confronting young respondents with these facts, they maintained that information online can be trusted, wherever it is found. This lack of criticism makes users vulnerable for incorrect sources of information, scams and, with respect to online contacts, being misled. This issue will be dealt with in section 7.3.

Valuable chats

Chatting may sound as an entertaining, uncomplicated activity, but it should not be underestimated in terms of its informative qualities. An informant explained:

“Youths mostly use the internet to create online friendships with people abroad. In chat conversations, they talk about different issues that concern them, learn about other cultures and exchange ideas with each other.”

(Discussion report university students)

Apart from being a source of entertainment, the exchange of ideas with friends, family and strangers in other locations provides youths with a lot of things to think about. This is especially true for the new friendships which are established online: these friends often come from very different cultures all over the world, including Europe and the United States,

¹⁴ “Being current” is a local expression for being up to date.

but also from other developing countries such as the Philippines, Mauritius and Gabon. As such, chatting may confront the internet user with different perspectives which he/she would otherwise not likely have encountered face to face: although many Cameroonians would love to travel out of the country, financial constraints and visa obstacles are likely to hinder any applications which are not related to family reunion or foreign universities.

Youths are eager to learn about other cultures, find out what life is like in other places, and exchange ideas (e.g. F16nF_Tiko; M23nC_Tiko; often mentioned in questionnaires). These new ideas do not only provide information, but also seem to stimulate creativity: various respondents, both users and non-users, indicated higher levels of creativity among internet users than non-users. As such, chatting has the positive effect of enlargement of the user's horizon, new impressions, ideas and cultural experiences, which are enriching for the candidate.

More intelligent?

For a substantial share of the population, internet use is inextricably linked to intelligence, in various ways. First and foremost, they mention intelligence in relation to the aforementioned differences in access to information, which helps in obtaining good marks for school assignments and expands the general knowledge of the internet user compared to his or her peers. Additionally, increased creativity and internet as a source of new ideas are mentioned, which provide the internet user with a view on the "box" of common assumptions and perceptions and opens up the possibility to think "out of the box". Finally, respondents have mentioned the "changes in reasoning faculty", by which they generally referred to the intelligence of individual users. This prompts an interesting question: does internet use make people more intelligent, or are more intelligent people more likely to use internet? Of course, a certain threshold level of curiosity, guts and skills (i.e. an extent of literacy) is required for successful individual computer- and internet use. The various teachers in the sample have advised me that in their experience, the mechanism has worked both ways: internet users are challenged online, and they expand their general knowledge, which makes them smarter than others (CT1_Muyuka; T1_Tiko). As there seems to be an autodidactic part in discovering how to use internet, it seems that for some it will never be possible to grasp the workings of the technology.

Unfortunately, everything has its good and worse sides and access to school resources online is no exception. Various respondents also mentioned the problems that internet causes for teachers, including students which outsmart their teachers, and, more prominently, the issue of plagiarism. Given the limited resources both at their job sites and at home, teachers typically do not have access to internet (apart from paid connections in cyber cafés). As such, they cannot check to what extent students have truly done their homework themselves, providing ample opportunities for pupils to hand in answers which are completely copied from online sources. Moreover, some secondary school students even remarked that their peers sometimes search for answers online and sell them to classmates who do not know how to use the internet, leading to status differences and uneven power relations. Additionally, the copying of materials disturbs their education in the sense that they may pass their education without really having learned anything. "Some even end up obtaining a university degree using copied materials and bribes", some explain (F26iH_Tiko, cf.

2Males_Muyuka). In the end, this will likely counteract if the student has failed to grasp a sufficient basic knowledge of the topics at hand.

Changing perspectives

Internet use is associated with changing perceptions upon one's country and to a lesser extent also impacted their ideas regarding the wider world: over 70% of the respondents indicate that their ideas about Cameroon have changed. Among these respondents, the vast majority became increasingly aware of the relative development of Cameroon vis-à-vis the rest of the world, which some also indicated as a reason to wish to migrate to a different country. The United States and Europe are commonly considered as paradise-like destinations – it is probably for that reason that internet use changed little in the perception towards these countries (approximately half responded positively). Those who did indicate to have experienced changes tended to point to discoveries in how different, developed or well-organized these locations are, or wishfully compared it to their own situation.

The questionnaires also tentatively suggested that some internet users (12%) have been confronted with delicate information about the level of corruption, government practices and other political information about their country. For example information about the history and development of Cameroon is presented at school in government-approved text books, which are not always confirmed by online sources. In such confrontations, internet users are forced to think about their government and the position of their country, which could – in the end – potentially play a role in political change.

On the whole, it may be concluded that internet is used in ways which match the interests of the user, which may seem rather trivial in the light of the widespread expectations regarding internet's role in providing 'knowledge for development'. This is in line with Mercer's findings (2005). Employing these results, she criticizes the utopian expectations of governments, NGOs and international organizations who have the facilitation of internet access on their development agenda. Notwithstanding the significance of these findings for the development debate, this study also contributes a counter-perspective where "valuable internet use" is concerned: the fact that the type of information retrieved does not correspond with the expectations on development agenda does not mean that the access is useless or information unnecessary. Rather, new sources of information – no matter through which kind of internet use they are obtained – provide a new perspective on the world, providing the 'hole in the wall' that was referred to in the preface. Although this does indeed contribute to an image of a fantastic world 'out there' (Mercer, 2005: 254, cf. Uimonen, 2009, see also section 7.3), it also widens individuals' horizons, providing them with a feeling of increased knowledge, creativity and independence. As such, this 'low-profile' internet use which some despise of does contribute to a better quality of life.

Finally, the results suggest that 'delicate' information may be found online – a finding which proponents of working towards democracy by means of freedom of thinking through internet will welcome (e.g. Tandon, 1996).

7.2 | Changes in social networks

Social interaction among Cameroonians is an important part of everyday life: friends, family members, neighbors and other acquaintances always find time to shake hands and inform about each others' situation. The same is common among youths, who spend most of their time watching television together, discussing on the porch, assisting in household duties, playing football, or – for most people occasionally – having a drink in a bar. However, internet, as a new type of entertainment, claims a substantial amount of time previously spent on these activities and replaces social interactions in the local neighborhood by interaction in the cyber café and on the world-wide web.

Young Cameroonians mainly use the internet for social purposes: nearly 80% of the participants employ internet to stay in touch with family and friends far away, and over 75% create new friendships online (see Graph 7)¹⁵. Moreover, for 38% of the respondents, contacts with friends and the creation of new friendships even represent the **main** reason to use internet, prioritizing the importance of social use over access to information (24%). Given the widespread use of internet for social purposes, this section is devoted to changes in the scale, composition, nature and size of the social network as a result of internet use.

Scale: expanding social networks

Participants were asked about the scope of their social networks using multiple questions in the questionnaire as well as the communication pages in the activity diary. Although participants were free to fill in a place and country, these answers were later classified for the purposes of the analysis, ranging in six (nonlinear) categories from the local scale to contacts outside the African continent. Since the scores on the “scope” could be interpreted in multiple ways, several tests were explored. Out of these options, the Mann-Whitney test seemed to be the most suitable for the sample, given that a difference of means hypothesis had to be tested for two independent samples with non-parametric, ordinal data. However, considering the artificial nature of the ordinal scale, one could also opt for the independent samples t-test of mean. Each of these options was explored with answers pointing in the same direction (see Table 6).

The results from these analyses are crystal clear: internet use is significantly associated with geographically more extended social networks. However, the precise statistical relationship remains unclear: does an extended social network prompt individuals to start using internet, or do internet users expand their social network and thereby obtain contacts over larger geographic distances? Moreover, nearly all respondents have distant family: 98% of the participants have one or more family members living at least one hour away from them, and more than 30% have family members living abroad.

Internet users are associated with geographically more extended networks than those who do not use internet: they are better able to make and maintain connections with people

¹⁵ The latter figure is in contrast to the aforementioned results listed in Graphs 6 and 7. This is correct; the questionnaire enquired twice regarding online friendships: as a partial answer in question 44, and as a separate topic in question 48 (“did you also create online friendships?”). On the latter, 77% of the respondents answered positively. I consider the answer to the specific question more reliable than the partial one.

abroad, both in terms of keeping in touch with family and previous friends and in getting in touch with new friends abroad. In the sample, internet users are on average approximately twice as likely to have family members abroad than non-users (see Figure 3).

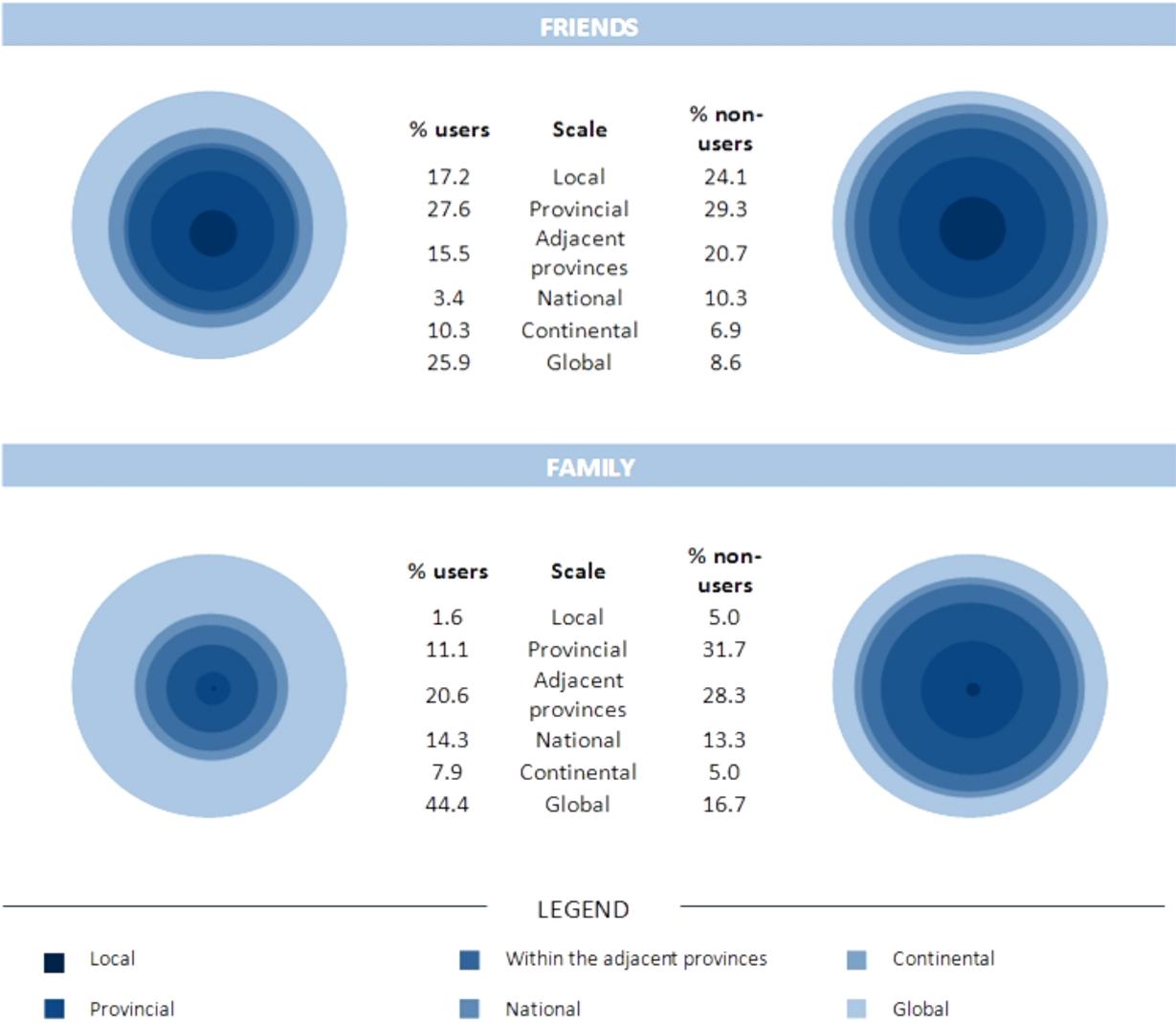


Figure 3: Geographic scale of connections – internet users and non-users
Scaled representation

Surprisingly, the relationship between internet use and the farthest living family member is stronger and more significant than the relationship between internet use and friends in distant places (see Table 6). Although the qualitative interviews do not shed more light on this issue, this suggests that the importance of getting in touch with family likely represents a trigger to start learning how to use the internet. One could imagine that internet is used to get in contact with family abroad, perhaps sponsored by that family member through remittances. Youths probably also start to explore other aspects of the internet once they have been accustomed to its use.

Differences in the scope of friendships, on the other hand, only portray a weak statistical significance: on average, Cameroonians are more likely to have family members abroad than

to be connected with friends abroad (see Table 6). This figure is slightly distorted due to the small number of international compared to regional, national and local contacts. Nevertheless, differences persist between internet users and non-users, with the internet users having over twice as many friends on a worldwide scale than non-users.

Given the above conclusions, it surprising to find that the *means* of communication with family members does not differ significantly between internet users and non-users, whereas this does differ for communication with friends on distant locations. With family, phone contact is preferred over internet use, whereas this is generally not the case for communication with friends. A possible explanation for this result could be that the family member abroad is expected to phone, given the expectations of higher salaries abroad. Such interactions could be aimed at the whole family, possibly including family members who are not (yet) able to use the internet. Friends, on the other hand, are likely to be in the same age category and may not have the funds to bring up the high costs of phoning to other countries, preferring cheaper internet-mediated solutions instead.

Table 6: Significant differences in scope of social networks between internet users and non-users

Test employed	Internet use vs...	Significance	Strength of the relationship	Interpretation
Independent samples t-test	Farthest family member	.000***	Mean difference -1.110	Highly significant, substantial difference: internet users have family connections on a larger scope
	Farthest friend	.112	-.524	No significant difference
	Mobile phone use	.092*	-.290	Weak significance, small difference: internet users are likely to use their mobile phone more than non-users.
Mann-Whitney test	Farthest family member	.000***	Z value -4.156	Highly significant, substantial difference: internet users tend to have family members at a larger geographical scale
	Farthest friend	0.063*	-18.564	Weak significance, moderate difference: internet users tend to have friends living farther away.
	Mobile phone use	0.062*	Z value -18.688	Weak significance, moderate difference: internet users tend to use their mobile phones more than non-users.
	Mobile phone sharing	0.039**	-20.675	Significant, fair difference: internet users share their phones less than non-users.
Chi2 test	Means of communication, family member	.505	Cramer's V 0.425	No significant difference
	Means of communication, friend	.000***	0.523 with p < 0.01	Highly significant, moderately strong relationship: internet users employ different ways to stay in touch with friends compared to non-users

*** Correlation is significant at the 0.01 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

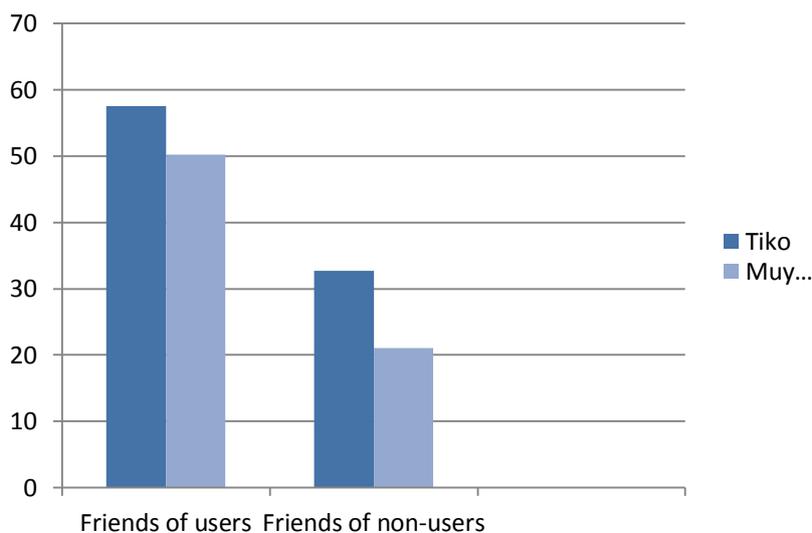
* Correlation is significant at the 0.1 level (2-tailed).

A final interesting finding is that the internet users often have friends living in the same country as the family members. This could be explained by the fact that youths are often searching for ‘friends’ abroad to communicate with, to discover new things and to learn about other cultures and lifestyles. In this respect, contacts are frequently established through others, for example by suggestions from family members. As such, it is no wonder that these two correlate.

Changes in the composition of social networks

Probably even more so than in the developed context, internet use in Cameroon leads to changes in the composition of people’s social networks: as previously mentioned, internet users are eager to engage in contacts with acquaintances which they purely meet online. Moreover, internet users also tend to cluster together offline, building new friendships in the process. As a result of all these new connections, internet users have been reported to neglect previous friends or family. These effects are considered in more detail below.

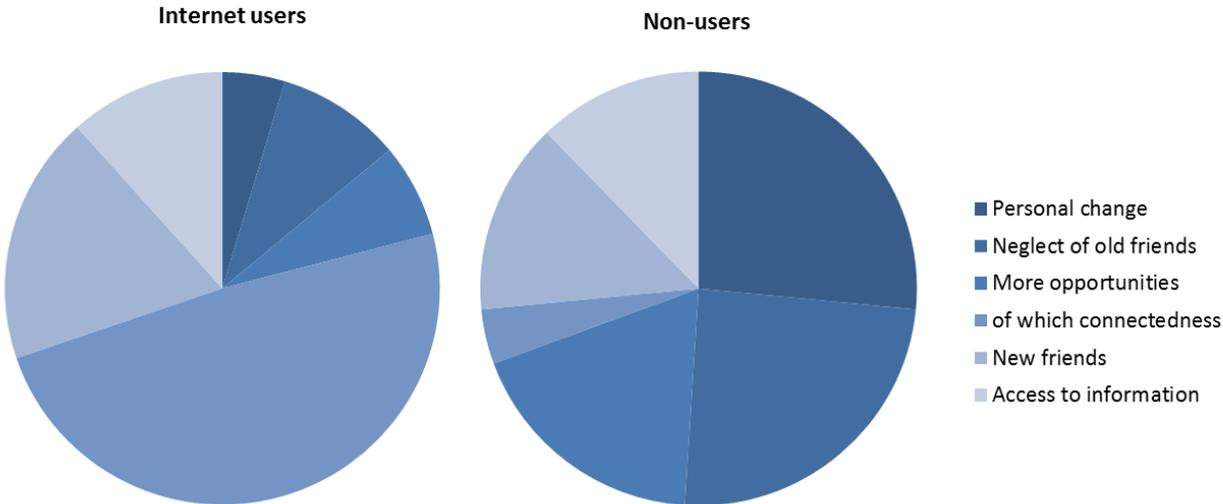
The creation of new social networks and changes therein do not merely occur online: internet using youths increasingly prefer to create friendships with people who are sharing the same level of “knowledge”, who are “current”, and who share similar experiences as they do: fellow internet users (e.g. 2M_Muyuka, Students_UB, M22iD_Tiko, M19iE_Tiko)¹⁶. As such, the cyber café is not merely a place to meet people *online*, but also facilitates *offline* interaction among youths. Cyber cafés also function as meeting places where (potential and accustomed) internet users frequently hang out, even when they are not using the internet or when their “time” has finished (cf. Uimonen, 2004). Moreover, inexperienced internet users learn from their peers at the cyber café. An ex-student who used to have home internet access explained that to check his emails, he would rather stay at home, but that for other things, he preferred accessing the web from a cyber café. From there, he could ask his friends for help, discuss which websites to visit and how to find information: "there I can ask my neighbor to explain me how to do this or that" (Students UB, cf. M25iD_Muyuka).



Graph 10: Degree of internet use among friends

¹⁶ “Current” is a local expression for “being informed” or “up to date”

Group formation among internet users also has impacts upon non-users: an often heard complaint of non-users has been that previous friends who have started to use the internet neglect family and friends who do not use internet in order to spend time online or discuss their online adventures and discoveries with people who are like-minded (see Graph 10). Additionally, some informants have reported decreased willingness to be actively involved in family life or house duties as a result of visits to cyber cafés. Both internet users and non-users indicate that such trend is visible, although internet users mention this aspect less than non-users (see Graph 11).



Graph 11: Impact of internet use on previous friendships

The formation (and acceptance) of ‘internet elites’ is likely a result of novel nature of internet use: internet users are still looked upon in awe because they are able to master the computer and internet applications such that they have access to the increasingly famous online sources which are known to provide access to white friends, information and – in some cases – money. Although opinions vary among individual respondents, some ‘respect’ for the presumed ‘talent’ of having internet skills is certainly present. One respondent illustrated this issue as follows: “they look at you as if you have two heads”, as if you are supernatural... “they perceive it as a big gap, much bigger than I do.” (F26iH_Tiko, cf. M22iA_Muyuka; F25iG_Tiko). Thus, although individual users may not perceive themselves as brighter or more talented than non-users, non-users may still feel that they are, which maintains the ‘status difference’.

Nature of the social network: online or offline?

Internet use also influences the nature of social interactions: instead of face to face conversations, an increasing number of discussions take place online, through chat, email or social networking sites such as Facebook. This is especially true for frequent internet users: those who use internet on a (nearly) daily basis exchange a substantial part of their social interactions in their local living environment for online interactions, either with Cameroonian friends or family abroad or in other areas of the country (cf. T1_Buea). Nonetheless, face-to-

face interactions do remain: online chats are usually complemented with several face-to-face encounters a week (M19iE_Tiko, cf. T1_Buea). Although “offline” interactions are thus ‘adopted’ into the online environment, the reverse is also true: online contact is frequently substituted with telephone communications, even if it concerns people that individuals have purely met online (F25iB_Muyuka; cf. University_Students; questionnaire results).

Although this partially points to the prevailing dominance of the mobile phone, it also illustrates how young Cameroonians truly intertwine their online social networks with their offline habits.

Size of the social network

From the data gathered, it was difficult to obtain a reliable estimate of the size of individuals’ social networks: the question about the number of friends turned out to have produced extremely unreliable answers (with most people mentioning numbers which were inconsistent with the rest of their answers). As such, it is hard to provide an estimate of the size of the social network. Nevertheless, although existing social ties are expected to diminish in strength (because of the common neglect of previous friends), the social network is likely to grow to include new contacts online as well as active contacts with family members previously unreachable. As such, it is likely that internet users do in fact have a larger social network than non-users, even though this cannot be concluded from these results.

Summary and discussion: effects on social networks

Taken altogether, internet seems to have the most pronounced impact on social networks: ‘average’ internet users tend to experience increases in their social network, report increased access to opportunities to communicate and generally do communicate more than non-users. These results are in line with the findings regarding the positive social effects of internet use of among others Soen (2009), Coget et al (2002), Shah et al (2001) and Wellman et al (2001). Nevertheless, decreased well-being and social isolation has been mentioned sparsely in relation to problematic internet use, especially in relation to scamming, but also in terms of frequent users who neglect friends and family in exchange for internet (e.g. F22nC_Muyuka, F22iB_Muyuka, M22iD_Tiko, cf. Mesch, 2006; Aslanidou and Menexes, 2008). Status differences as described by Mercer (2005) were addressed by the respondents, although evidence for such differences only derived from information from the qualitative interviews.

Internet users also create *new* social ties, a finding which confirms the results of Soen (2009) and Mercer (2005). Moreover, this study also finds that contacts take place over a more extended geographical scale compared to non-users. Whereas Matei and Ball-Rokeach (2001) and Chen and Wellman (2009) suggest that newly formed ties remain within ethnicities, rarely crossing them, these results indicate otherwise: internet is mainly used to engage in contacts with ‘whites’ (e.g. C2_Tiko) and others from a wide range of countries (Students_UB). This result could be specific to the Cameroonian (or perhaps ‘African’) situation: there is a substantial element of discovery in contact with people from other cultures - something which was previously impossible. One could imagine that those who do have such opportunities for exchange would not be as interested in contacts across cultures or ethnicities.

7.3 | Increased (perceived) mobility

Internet use is partially associated with increased mobility: internet users make significantly more journeys outside the South-West province than non-users. Additionally, although the extent of success is unknown, internet users perceive the internet as a means to achieve their dream of going abroad somehow. They feel better informed and also expect to have better chances of ending up “out there” (questionnaire results).

Other relationships between internet use and travel behavior, such as the association between internet use and intra-provincial travel frequency, are not as apparent. Therefore, principal component analysis was employed to study the relationship between several transport-, communication- and internet related variables, which led to the results in Figure 4. Using principle component analysis (a method comparable to factor analysis), the software program SIMCA-P+ was employed to reduce the selected variables to a set of two components, which are projected as the horizontal and vertical axes of the diagram.

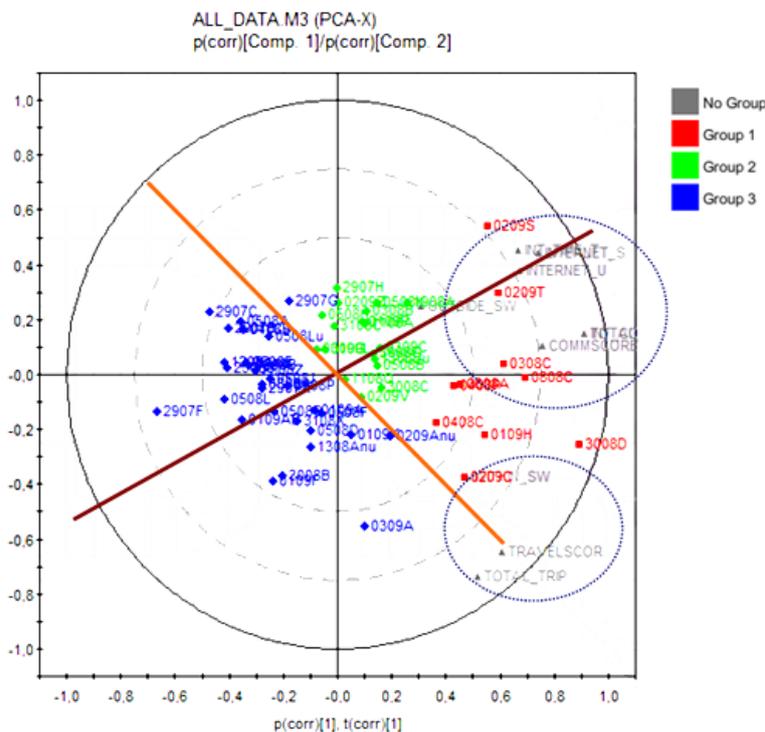


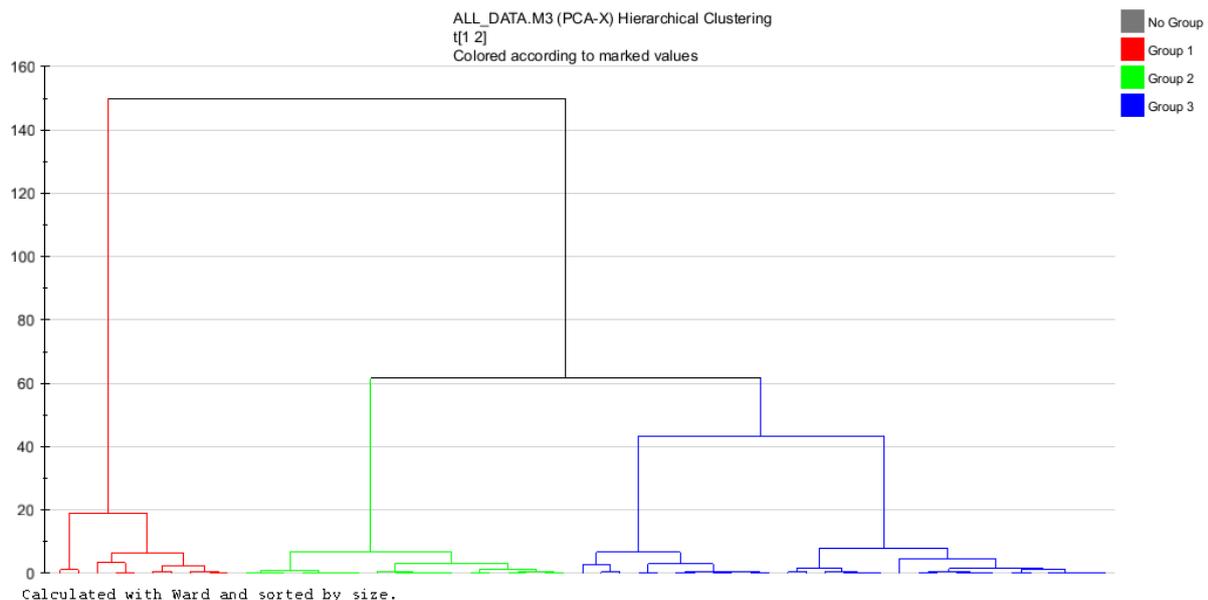
Figure 4: Loadings bi-plot showing the distribution of variables and observations

In this type of projections, variables *and* respondent scores which are close to each other are associated with one another. Opposites on a line through the origin of the diagram indicate a negative relation, whereas mutually perpendicular variables are not related. The association between internet use (indicated with the variables INTERNET_USE; INTERNET_TIME and INTERNET_SCORE) and the frequency of travels outside the South-West province (indicated as OUTSIDE_SW in this figure) for example is visible in terms of the small distance between the variables. Likewise, internet use is associated with increased communication (COMM_SCORE). On the other side of the diagram and virtually unrelated to scores on internet use is the degree to which people travel: the total number of trips is strongly related

to the number of travels within the South-West province (a logical result, reconfirming the fact that most travels are conducted on a local or inter-provincial scale).

Rather than testing if predefined groups could be found in the sample, a Ward's least distance dendrogram analysis was used to let the program calculate which observations differ least from each other in terms of the scores on each of the components (see Figure 5). Starting at N observations, the combination of variables with the least distance is paired, continuing the process with N-1 samples. From the dendrogram, three groups stood out and were therefore selected and compared in the above figure. Surprisingly, these groups represented the group of non-users (represented in blue on the diagram: rather far from internet use and also far from travel scores), a group of internet users which were rather similar to the non-user group (in green; closer on the line towards internet use indicators, but no closer to the travel-related variables), and a group of respondents which differed substantially from the others: those who travel a lot, communicate frequently and/or spend substantial amounts of time online. All but one of these observations were internet users. As such, it should be concluded that although internet use in itself is not necessarily associated with increased travel, the reverse, *is* true: those who travel frequently do tend to be internet users.

Figure 5: Dendrogram (Ward's selection method)



Migration

Respondents do not merely mention changes in travel behavior in relation to increased or decreased travel. Rather, they perceive a sense of increased mobility, even if practically, doors remain closed: internet use is expected to provide better chances to go abroad. It was to be expected that internet use would trigger or intensify young people's wish to leave the country. After all, young people, frequently without perspectives on a job in their field of training, are confronted with a completely different world, which in some cases was even described as "paradise".

It should be emphasized the vast majority of the respondents has never been abroad in their life, and although many have traveled out of the province to for example the bigger towns of Douala or Bamenda, hardly anyone has visited the arid north of the country, for example. As such, their virtual journey online is their first – and perhaps only – encounter with different cultures, locales and habits; their first contact with a world ‘abroad’. Many youths have described Europe and the United States as “paradise”, where houses are made out of stone, roads are paved, skilled jobs are abundant and the government is reliable. Perhaps actual travel is not yet a possibility, but the virtual encounter makes young people aware of the condition of their own country and for at least a handful enhances their desire to leave. “Those who are using the internet are even more eager and determined to leave the country. Many also feel that one way or the other, internet will facilitate this process”, the teacher from the computer training center in Muyuka contends (CT1_Muyuka). Youths pursue various strategies to operationalize their hope to travel abroad: through interpersonal connections, by marrying a ‘white’, and by applying to international schools and universities. Each of these is discussed below.

Strategy 1: Connections

*“Using internet will give me the opportunity to meet new friends
and so if they might help me one way or the other.”*
(questionnaire remark)

Cameroonian youths do have a true interest in and curiosity towards the chat partners from different countries that they meet online. Nevertheless, there is the barely suppressed hope that such connections will one day facilitate the individual in leaving the country. This emphasis became apparent from mainly qualitative interviews, characterized by remarks such as the remark above this section: individuals admitted that they are hoping that their online friends will help them one day. Similarly, non-users feel the urgency to “connect” because they expect such friendships to lead to migration: “they [internet users] have friends and travel out” (questionnaire remark).

Although for me as a western researcher, this emphasis on “finding the right people” initially caused a sense of unease with the intentions of such friendships, it was only later that I realized that this is an important cultural difference. Whereas in my own context, it is considered impolite to ask for favors or services, this is not the case in Cameroon: money and material benefits are part and parcel of friendships, because “being a good friend” also means a partial financial or material responsibility for the well-being of the particular friend. As such, the behavior of the respondents comes naturally from the logical assumption that friends do certain things for each other: there is an expectation of culturally equal behavior from ‘whites’ in terms of what friendship entails. Considering that ‘whites’ are perceived as rich, they are expected to easily be able to share part of their fortune to assist their friend in Cameroon. As such, this behavior is much better explained in the local culture than Westerners may naturally be inclined to understand.

Strategy 2: Looking for an international spouse

“Sometimes [finding white men online] seems to be the only thing that they are interested in”
(F25iB_Tiko)

A special way in which the hope of using contacts to travel abroad is operationalized is the use of internet to engage in (serious) relationships with foreigners. This issue is well-known and it was already addressed by Johnson-Hanks (2007) in her work on the internet practices of successful young women who were marketing themselves for marriage online. In Tiko and Muyuka, little concrete evidence of such practices was found: the number of young women using the internet was substantially less than the representation of their male counterparts, and due to the sensitive nature of the topic, only few admitted to be actively involved in such activities, obstructing insight into the true scope of the matter. Nevertheless, the practices are clearly perceived as problematic in the community of Tiko as well as Muyuka, and both male and female respondents mentioned this as a common activity among female internet users (CT1_Muyuka, T1_Tiko, C1_Tiko, C2_Tiko, T1_Muyuka, F25iB_Tiko and others). One respondent explained why: “girls simply assume that once they marry a white, everything will automatically be alright” (CT1_Muyuka).

This type of internet relationships is frequently supplemented with a financial compensation for the girl if she engages in internet sex (F25iH_Tiko, F25iB_Tiko, C2_Tiko, M22iA_Muyuka). It is mainly this aspect, combined with the ideas of contract marriage and marrying a complete stranger, which is objected to: many Cameroonians would in principle love to marry a white, and they do not consider it to be a problem to marry someone who is from a different background¹⁷. Rather, it is commonly perceived as an honor for the whole family if one of their daughters would marry a white. However, the sexual favors that are frequently part of internet relationships run counter to all cultural norms of decency and self-preservation. Other aspects which are culturally difficult are the concept of “contract marriage”, which seems to be mostly used in the United States, and involves a temporary rather than eternal commitment to each other, after which the contract can be renewed or (one-sidedly) ended. Such idea of marriage is unacceptable within Cameroon, where (formal) divorces are uncommon, and marriage is expected to be for life. Finally, the idea of marrying someone who the family has just seen once, without having an opportunity to visit the family and inquire about the family roots, is in stark contrast with the traditional ways of establishing whether the daughter’s choice is an appropriate future husband.

As such, girls who are involved in online relationships are at the same time looked at in great awe and condemned for their behavior. The mere possibility of finding an online “special friend” is frequently perceived as a treat to the community, as it can leave a girl unmarried for too long because she is hoping to still marry someone that she has never seen in real life, and who is living on the other side of the world (T1_Tiko). Alternatively, married women are also suspected of trying to find a better life “out there” by keeping a white boyfriend online,

¹⁷ One of the statements used in the questionnaire was “I will not marry someone who is from a different background than I am”. On a scale of 1 – 5, where 1 represented “Strongly disagree” and 5 represented “Strongly agree”, the mean score was 1.74, indicating that most youths do not object against marriage with someone from a different background.

thereby cheating their partners and frequently neglecting their household responsibilities, making their local marriage unstable (T1_Tiko, F22nC_Muyuka, CT1_Muyuka).

Regardless of whether or not these practices are approved of in their wider social surroundings, girls in these situations are exposed to a substantial risk of betrayal and consequent risks: various informants have assured me that girls completely believe their communication partners and would not likely hesitate to leave the country if offered a means to go abroad (e.g. F25iG_Tiko, F25iB_Tiko, T1_Tiko, M22iC_Muyuka, CT1_Muyuka). When betrayed, girls risk being forced into prostitution and other forms of human trafficking. Since few stories came up in conversations about this topic, the problem is not likely a substantial one in this area, although stories could also remain untold out of the fear of embarrassment. Either way, internet-mediated exposure of young, perhaps rather naïve girls does represent a risk of trafficking, which may need to be addressed in future research.

Strategy 3: Application to universities abroad

A third, and by far the most successful way in which youths have secured their possibility to travel abroad, is by following higher education abroad. Students typically aim for countries which have good political relationships with Cameroon (i.e. Germany) and universities where application fees are low (i.e. Belarus, Russia, Hungary, Belgium) or scholarships are available. Although this option is only available for those who have obtained their A-levels or a university degree, many youths perceive this as their best option to leave Cameroon, even if their academic performance is substandard. As such, internet may have a positive effect onto its users: motivated by the hope of having a chance to travel abroad, youths try harder in school (cf. CT1_Muyuka).

Although the increased efforts are a beautiful side-effect, corruption has also penetrated educational institutions: in universities and to a lesser extent in high schools, teachers may suddenly make a student pass with flying colors if provided sufficient financial incentives. Consequently, students are no longer stimulated to perform well academically, and additionally, educational institutions abroad have become critical towards degrees from Cameroon knowing the degree of corruption in the system. This may inhibit excellent but poorer students from obtaining the scholarships for which they might otherwise have been eligible. Finally, although students may perceive their opportunities abroad as purely positive, Cameroon as a whole may suffer substantial 'brain drain' – loss of highly qualified people – as a result of increased emigration.

Summary and discussion: effects on mobilities

In line with the inconclusive findings of previous research, no hard conclusions can be drawn concerning the effects of internet use on mobilities. In contrast to evidence from among others Mokhtarian (2002), Hjorthol (2009) and Farag et al (2006), no indications of increased mobilities can be derived from the activity diary study. However, this should not directly be interpreted as an indication that no such relationship exists: the activity diaries were not always fully completed and frequently lacked accuracy. As such, the mobility indicators employed are rather basic and thus may not reflect the actual situation. Nevertheless, internet use *did* turn out to be significantly associated with more travels outside the South-West province. This could be indicative of an increase in long-distance travel, although no conclusive evidence could be obtained on this matter either.

Perceived rather than actual mobility provides a more interesting perspective onto the mobilities aspect of internet use: internet users feel that their online activities change their travel behavior in the sense that users feel *more prepared* to travel to different places, as a result of the information they are able to obtain (cf. Mercer, 2005; Uimonen, 2009). Moreover, the internet is perceived as a facilitating factor in achieving a mission to travel out, one way or the other. Whereas this was also addressed to some degree by the aforementioned scholars, this study additionally provides better insight into how such missions are operationalized: through the creation of new friendships, by attempting to marry a 'white' (cf. Johnson-Hanks, 2007) or through universities (cf. Mercer, 2005).

7.4 | Social transformations

*“When doing something often, one starts to develop different habits,
so also when it comes to the influence of chatting online”.*
(F22iB_Muyuka)

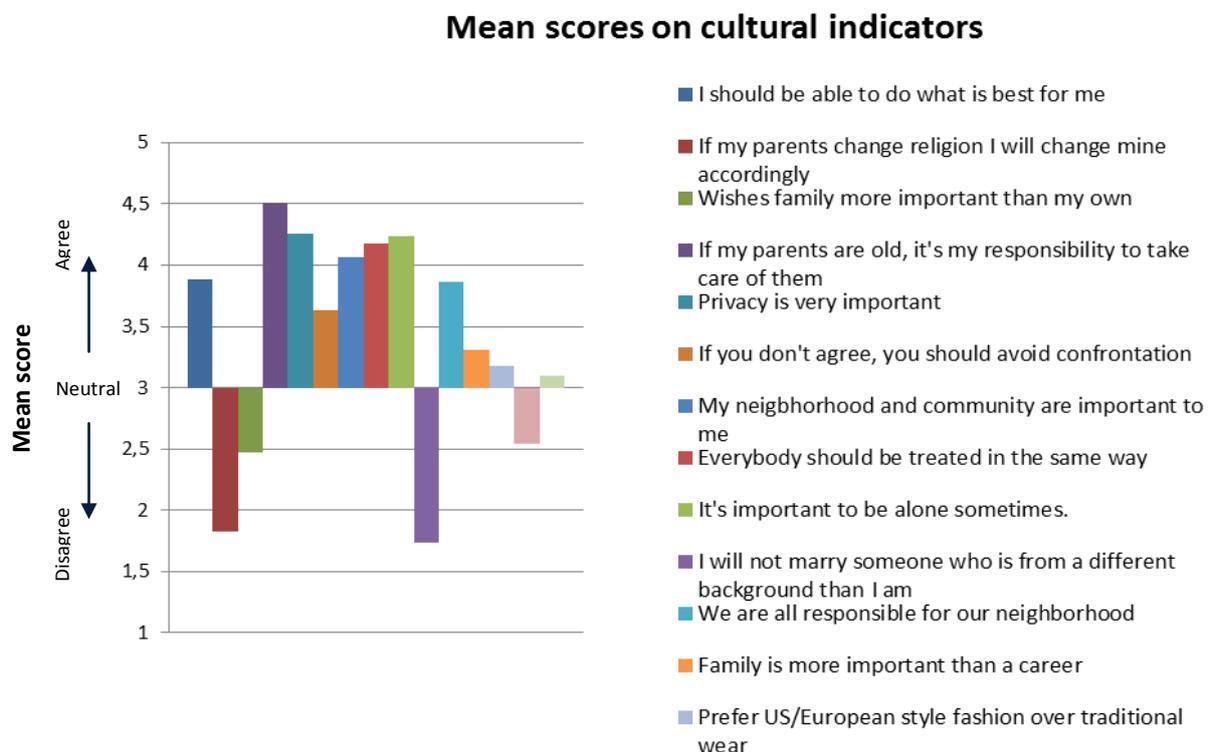
Individualism/collectivism scores

Motivated by the elaborate writing of scholars such as Zygmunt Bauman (2000) about the association between increasing modernity, internet use and increasing individualism, part of the questionnaire was devoted to a tentative measurement of the degree of individualism (or collectivism). In the light of the analysis, a Spearman's Rank correlation among all statements was conducted, which indicated a very strong but sometimes hardly explicable internal cohesion (see Appendix 11). Additionally, statements which were assumed to reflect a more individualist choice, for example the need to be alone, emphasis on personal rather than family interest and the need for privacy¹⁸ appeared to be part of the normal cultural associations, as the mean scores indicated nearly unanimous opinions in favor of these issues. Additionally, they were more than once correlated with other statements which (at least in Hofstede's scale) would rather be interpreted as collectivist. Although the three last questions which explicitly referred to preferences for Cameroonian or European culture, fashion and values did portray solid internal correlation and were a rather isolated group of correlated variables, the (highly significant) correlation with the responsibility to take care of parents remains hard to explain.

An additional complication was that not all respondents seemed to have completely understood the idea of using all numbers on the scale, only making use of “strongly disagree” and “strongly agree” instead. However, the most complicating issue is that these extremes could have represented the actual answers of the candidates. During most interviews, additional explanation regarding these statements was provided. Additionally, numerous respondents had used the mid-range options only once or twice, otherwise using the extremes, thereby suggesting that they had understood the scale, but continuously found their answers on the extremes of the scale. Enquiry from a few respondents confirmed this idea.

¹⁸ These statements refer to question 74/56, 78/60 and 82/64 in the questionnaires for users/non-users and are based on the work of Geert Hofstede (2001).

The statements seem to have been phrased so generally that the statements at hand could be considered general truths, with nearly 90% of the respondents agreeing or disagreeing on some statements, providing near-unanimous scores (see Graph 12)¹⁹. Judging from their near-unanimous responses, the statements could almost immediately be considered redundant. This was also reflected in the distributions: positively skewed, negatively skewed and leptokurtic distributions were encountered, but hardly any of the scores provided a normal distribution. As such, the statistical analysis was conducted using the non-parametric Mann-Whitney test, which does not assume normal distributions. These tests revealed no significant differences between internet users and non-users on all of the statements.



Graph 12: Mean scores on (hypothesized) cultural indicators

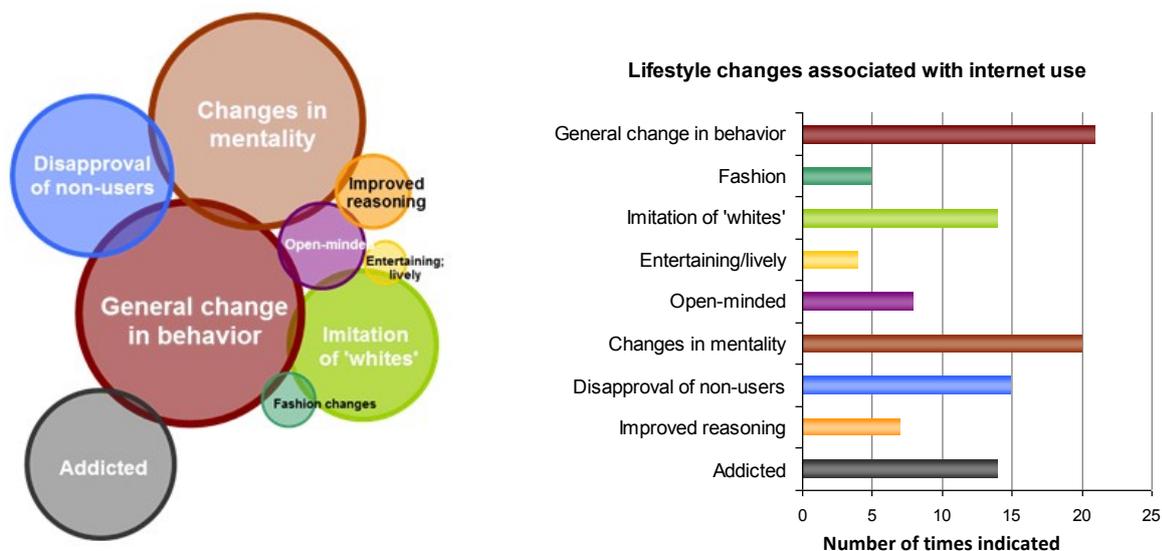
Although the scores on this set of statements could not be used as an appropriate set of indicators for the degree of collectivism or individualism, individual scores and significant correlations with other variables (such as the interesting correlation between privacy and scamming) have been useful throughout the other sections. Moreover, the lack of predictive capacity of this set of statements does not imply that internet use is not associated with changes in lifestyle. On the contrary: results from the qualitative interviews as well as the qualitative parts of the questionnaire do suggest that this is the case.

¹⁹ In terms of the scale applied, this combines the categories 4/5 (agree/strongly agree) and 1/2 (strongly disagree/disagree).

Lifestyle changes

Through their online interactions, internet-using youths get accustomed to different cultures, customs and beliefs. Although each individual experience is different, virtually all qualitative interviews indicate that changes start to develop as online exchange increases. Informants such as cyber café owners and teachers were also able to provide a good bird eye’s view on the range of changes they have witnessed in young internet users over the past years (C1_Tiko, C2_Tiko, CT1_Muyuka, T1_Tiko). Moreover, over 25% of the non-users indicate that personal change as a result of internet use has impacted their friendships with internet users. Although these data do not provide definite insight into the significance and degree of these changes, they do provide interesting aspects for NGOs to consider, and potential grounds for future research.

In response to the qualitative aspects of the questionnaire, respondents, both internet users and non-users, mentioned differences in their own lifestyles and perceived changes in lifestyles of others. In total, changes in lifestyle accounted for 8,3% of the total number of qualitative answers in the questionnaire: not an alarming score, but considering that these results represent answers to *open* questions, it does indicate that youths do perceive changes, both in themselves and in others.



Figures 6a and 6b: Changes in lifestyle associated with internet use

Figure [left] is a scaled representation of the data presented in figure [right]

N.B. Similarities in coloring with Graph 12 are coincidental.

It should be noted that the above associations of lifestyle change are mostly neutral or positive: this reflects the aforementioned increase in social status of internet users compared to non-users.

Changes in lifestyles can be interpreted both positively and negatively: on the one hand, there is the hope that individual users may transform their knowledge about other cultures and lifestyles into tools to understand the needs and requirements of for example international companies, increasing their chances on the labor market. Additionally, Westernization of ideas about how to raise a child and division of workload between men

and women would likely be welcomed by various advocacy groups for better children's- and women's rights. On the other hand, new cultural ideologies, awareness of new forms of freedom or merely the confrontation with the range of opinions, cultures and choices could also put the internet user in a difficult position with respect to his or her own culture. The two cases below are provided to illustrate this concept.

Case 1: "I feel like a stranger in my own country"

Alex is 22 years old and has been using the internet for approximately three years²⁰. When his family refused his education, he left the house and lived on the streets for several months. Step by step, he built up a new life through hard work on the market. Upon losing all of his newly rebuilt capital due to the all-devastating fire in Tiko's market, he turned to scamming.

Initially, Alex used to celebrate his earnings with friends, spending his money on girlfriends and parties. However, he gradually started to spend more time online, developing friendships with people from all over the world. His experiences with these people changed his life dramatically: "my experiences online have changed everything about me: my way of reasoning, behaving, the way I approach people.... Through the internet, I have met people and learned to understand different ways of behaving. One of the main things that I learned is that you don't need to share all that you do, you should keep things to yourself." Alex also got involved in an American church service which sends him his weekly bible reading schedule, with online preaches and questions for reflection. Alex has been in touch with this community and feels that he is an appreciated member of their congregation.

His online experiences made Alex think differently. He has become critical towards his own people, which has resulted in the fact that he feels increasingly less at home in Cameroon, or even Africa: "I need to move to a place where people think the same way as I do. I have come to think like an American, like a European, but I am stuck here".

Case 2: Homosexuality

According to a substantial number of studies, internet plays an important role in the lives of homosexual youths by providing a platform where they can experiment and share their worries or concerns in an anonymous (and therefore 'safe') environment. Likewise, it has widely been used to promote gay acceptance, extending its sphere of influence well beyond the developed world. Although from a Western perspective, this may be welcomed as a healthy development, this is by no means the case in countries such as Cameroon, where same gender sex is a criminal offense by law. According to one of the respondents (C1_Tiko), youths – mainly males – are frequently confronted with gay chat partners who tell them about their coming out, feeling liberated from the pressure of social expectations. He explains:

"Youths are encouraged to "discover their feelings" in chat conversations with whites. They say things like "your government is uncivilized because you can't do it" and take pride in being gay. Youths are especially vulnerable for role models taking on such activities: one boy once explained that "medical doctors do it too, so it can't

²⁰ The real name of the respondent has been changed for the sake of privacy.

be bad". The gay community has many international contacts and they think they can convert the whole world to homosexuality, as if it is so liberating. Well, I am not interested in men (looking disgusted). I've had numerous requests from boys coming to the cyber proposing me to go out... It's a sin, God doesn't like homosexuality."

As such, homosexual Cameroonian youths may feel supported by the online gay community, but may on the other hand perceive increased problems or even prosecution in their local environment.

Although the above examples represent rather extreme cases of increasing disparities between the internet-mediated lifestyles of internet using youths and their local surroundings, this presents a solid example of the previously discussed differences in perceived and conceived spaces: although internet users may adopt a cultural identity from an online source, they are still grounded in their local context (perceived space), which is unlikely to change as fast as they do. In some cases, this may lead to identity problems with the associated frustration of such situation.

Summary and discussion: social transformations

The degree of social transformation turned out to be extremely hard to measure. Although changes in degree of individualism had been predicted by for example Nyamjoh (2003) and Hackett (2009), these notions remained undefined and thereby posed the necessity to improvise along the standards of Hofstede (2001). This experiment failed in the sense that virtually all indicators turned out to be correlated, also among presumed indicators of individualism and collectivism. As such, no conclusions could be drawn from these data. The results did however suggest tentative evidence for social transformation in the sense of 'modernization', or 'westernization' more specifically: internet use was frequently associated with changes in lifestyle or mentality. Moreover, attempts to seem more "European" were quoted by various informants from qualitative interviews. These findings confirm and substantiate findings of Mercer (2005) in terms of the association of internet use with increased 'modernity'.

7.5 | "Negative" internet use: scamming, pornography and e-dating

Internet use is not only associated with positive aspects in Cameroon: scamming, pornography and e-dating put substantial pressure on the common perception of internet use. Since the latter has already been discussed at length in section 7.3, this section will first pay attention to the pornography issue and then turn to the practices of scamming.

Pornography

Studies from developed countries have suggested that watching 'sexually explicit internet materials' is associated with higher degrees of sexual uncertainty and casual sex (Peter and Valkenburg, 2008), but also with obsession with sex and feelings of shame and guilt (Mishna et al, 2009: 113). The availability and watching of pornographic content online is perceived negatively by many Cameroonians: it violates norms of self-preservation and decency and is also disapproved of based on religious grounds. When taking into consideration the additional sensitivity of the issue among the Cameroonian public, watching porn may have both effects of discovery and liberation from public constraints with respect to sexual norms

and values, but on the other hand, effects of watching porn may be even more pronounced than in developed contexts given the degree of social disapproval.

Pornography is watched in cyber cafés by young boys (age 15 – 18, C2_Tiko). This interest among young boys was also evident from the differences between the main sample and the school sample: whereas in the main sample, only 8% of the respondents mentioned pornography as a problematic aspect of internet use, 31% of the secondary school pupils mentioned this aspect. Since the introduction of scamming, however, the number of youths watching porn has decreased, a cyber café exploiter explains me: “they know they can get a real girl instead of just watching one if they make money through scamming” (C2_Tiko, cf. PS1_Tiko).

Scamming

In contrast to the expected positive impacts of internet use, the first thing most informants wish to mention is the issue of internet fraud, commonly referred to as “419” or scamming. The main objective of these practices is to obtain money illegally through the provision of false information. Especially the problem of scamming, and to a lesser extent also the use of pornographic materials, tends to overshadow the positive aspects of internet use, especially for those who are not yet using internet. Many individuals were eager to explain me the “dark practices” youths would frequently get involved in when using the internet, in the hope that the issue will come to the attention of the international public. Due to the sensitive nature of the topics for its practitioners, it was ethically, practically and safety-wise impossible to openly start asking potential scammers about their involvement in scamming practices. Therefore, the information provided in this section is based on a relatively limited number of interviews with actual scammers, whose names have been changed to conceal their true identity:

- Peter: university graduate, 24 years old, professional scammer from Tiko. Peter is one of the few scammers who has been successful to the extent that he could build himself a house from the gains of his activities;
- A group of scamming youths from Muyuka who openly discussed their practices with me when the internet café had a power outage;
- Alex: 22 years old, followed a few years of high school before he was forced to stop his education due to financial constraints. He currently lives on his own and has internet access from his own house.

Although the group is small, the discussions were lengthy and in-depth. Moreover, impressions from these interviews were confirmed by other informants, for example cyber café owners who have a good impression of the daily dynamics of its practitioners. This section aims to provide some insight into the type of internet fraud, estimated extent of the problem, the impacts of scamming on individual lives and scammers’ role in the local communities.

Scamming approaches

The degree of ‘scamming’ – a word unknown to me before I set foot in Cameroon – represents the most surprising finding of this study. Scamming refers to a broad spectrum of fraudulent online activities which all involve misleading others for the sake of money.

Whereas Nigeria and Kenya are known all over the world for their '419' internet fraud, so far Cameroon has not been pointed to in academic literature on this matter. Therefore, it was a surprise to find that so many Cameroonians are worried about the practice, both because it is considered to destroy youths and to adversely affect the credibility of the country, especially if scammers manage to obtain a 'big deal'.

The first and most common type of scamming in Cameroon involves the selling of expensive types of pets: pedigree dogs, cats and exotic species. Through online advertisement against a price far below the normal resellers' prices, scammers attract potential customers to come into contact. As soon as an enquiry is placed, a selection of information is nearly immediately sent back, including a picture of the pet, its name, weight and other specifications which have been copied from online sources and which now circulate throughout the scammers' communities.

The customer is subsequently reassured that the buying process will be perfectly arranged so that the pet will be at the buyer's house in a matter of days or even hours. Flight schemes are known, which facilitates credibility. Additionally, fake shipping letters are sent detailing all kinds of information about the delivery. Once the first transaction has been made, carefully redirected to a Cameroonian Western Union account because "the manager is currently traveling" all kinds of excuses to obtain more money are presented, ranging from pet's life insurance requirements, temperature-stabilized transportation cages to the death of the pet and subsequent possibilities to sue the transportation company (for which money is required again). Scammers will go as far as they feel they can manage and stop the contact once the "customer" is no longer paying. These scams usually deal with amounts between 500 – 5000 euros. For unknown reasons, Cameroonian scammers are mainly focused on the Spanish market: they write their correspondence, copy them into Google Translate²¹ and send the result to their 'customers'. Interestingly, youths do pick up fair amounts of the Spanish language in this way – a surprising and unexpected effect.

The second, more advanced and more encompassing type of internet fraud is scamming on a business level. Through advertisements of extremely cheap raw materials, orders of large quantities are arranged, involving tens of thousands euros each time. With the cooperation of banks, courts and other official institutions, fake shipment confirmations are issued which are subsequently used to collect the money which is protected by a letter of credit. The buyer is continuously kept up-to-date regarding the GPS position of their cargo, but at some point they are informed that the ship has been attacked by pirates. The 'company' asks the buyer for their understanding and support: they inform the buyer that their money will be returned and ask for financial help to sue the cargo company. Of course, this additional money is collected until the buyer stops to give more. At that point, the contact is cut off.

This type of scamming is exclusively possible because of the high level of corruption within the Cameroonian system: courts, police, banks and high officials all provide their protection against a share of the revenues. It is mainly this type of scamming which is potentially

²¹ Google Translate: a free translation application by Google, which instantly provides rather accurate translations of any textual input.

harmful for the Cameroonian economy, since bad experiences with such frauds will discourage international companies from making small-scale deals with individual producers.

Who and how many are involved?

From interviews with youths involved in scamming, the current number of active scammers has been estimated at approximately 200 boys in Tiko (PS1_Tiko) versus roughly 50 in Muyuka (C3_Muyuka). Girls tend not to be involved in scamming; 95% of the scammers are boys. Young males are attracted to scamming because it provides access to “quick” money. Especially those who dropped out of school and those who are unemployed are prone to engage in these activities, because it seems a promising source of income.

Among respondents, the issue is widely known and discussed, both among users and non-users. When asked about the impact of internet use on their society, 36% of the internet users and 34% of the non-users in the sample specifically mentioned scamming as a problematic aspect²². Among the participants, 40% knows at least one scammer and 11% of the respondents even know more than 20 people who are involved in internet fraud. In the school sample, this number was even higher: over half of the respondents indicated scamming as a negative impact upon their society. Nevertheless, there was no significant difference in the number of scammers known with the main sample. From earlier estimates, internet use in Tiko appeared to be more common in Tiko than in Muyuka. This is also true for the number of scammers that individuals know: this number is significantly higher in Tiko compared to Muyuka.

Scamming is a sensitive topic among especially internet users: youths fear association with scammers, especially when they are using the internet themselves. Therefore, the abovementioned results should be treated with caution. Informants from qualitative interviews frequently appeared to provide answers in the questionnaire which conflicted with the information provided in the previous discussions, pretending to know less about scamming than they actually did. A scammer himself, for example, openly revealed his strategies and tactics, but nevertheless refused to acknowledge that he searched for money online, that internet use had impact on his financial situation and that he knew any scammers at all. When confronted with such facts, respondents argued that they did not want acknowledge the information about scammers (or their own activities) in writing out of fear of being caught. As such, these figures can only be seen as indicative: the problem is likely to be bigger than these figures suggest.

The scamming community

In both villages, groups of boys involved in internet-fraud, typically aged 18-30 have developed into a close-knit social network of ‘scammers’. Such ‘communities’ carefully protect its members, for example if anyone should end up in jail. Incoming money tends to be celebrated with this group of friends as well. Contacts with previous friends usually deteriorate because of long “working” hours and because there is not much left in common (PS1_Tiko, Youthcommunity_Muyuka, C2_Tiko).

²² This share is all the more significant because it concerned an open question.

Social impact

Cameroon's social infrastructure is fairly conducive of scamming: its widespread (and open) corruption, the status associated with money and the open display of donations all contribute to a favorable environment for scammers. Scamming was an activity initially mainly the focus of university graduates, who were dissatisfied with the lack of job opportunities at their own level. However, the obvious immediate richness of successful scammers led many others to aspire similar goals. Scamming is peer-taught and therefore spreads quickly: peers of young scammers join their friends to the cyber café to learn the practices. The fruits of successful scams are typically spent among friends, as the money typically has to be spent quickly to conceal it from the eyes of the surroundings. As such, nightlife is no longer the scene of rich businessmen and politicians, but is increasingly shared by rich scammers and their friends – many benefit from the fraudulent money.

Scamming is seen as the most prestigious profession in Tiko according to the informant. Scammers are high in social status because of the money that they can spend, i.e. they can buy themselves into the social structure. In the wider community, scammers are highly valued indeed because they throw substantial parties (sometimes involving over half a million CFA on a single evening) and always contribute substantial sums of money during celebrations (it is common here to contribute openly and financially during official celebrations such as weddings, birthdays, meetings and other get-togethers). Even the churches do not turn them away in order not to miss out on the financial promises scammers bring, turning a blind eye to the fact that their practices do not correspond with the beliefs of the church (PS1_Tiko).

According to Peter, one of the leaders of the scamming community in Tiko, most parents do become aware that their children are engaged in internet fraud. Normally, this is initially received very negatively, but once parents start to profit from the financial benefits of their children's activities, they tend to cease their resistance. Peter does not know of people who have been permanently disowned or exiled from their families as a consequence of their scamming activities. The youngest scammers are 15-16 years old and still study in secondary school. These children generally do not tend to tell their parents what they are doing. Some have even been reported to skip their classes, although Peter is eager to deny this.

Individual implications

Because they feel rich, they think that they don't need to go to school anymore – as if it is a business!
(C2_Tiko)

In scamming lures an attractive promise: mountains of gold beyond imagination, without having to work for it, exclusive parties, cars, houses... the life of a rich man. However, life as a scammer is not always a happy one: competition among each other is fierce, the income is unstable and, especially after a while, future perspectives are rather bleak. Although those who are involved in large scale scamming do tend to work hard over time, they are not pursuing any kind of career since it would be impossible to explain a potential employer what kind of "work" the scammer was involved in. As such, especially after a long period of

scamming, the scammers get cut off from possibilities to find good employment, while at the same time becoming increasingly used to having access to substantial amounts of money. As such, these youths are trapped in their activities, whether they want to or not. Moreover, internet addiction seems to be a risk for this group of people – all informants mention to some extent that they feel “very bad and restless” if there is no internet connection, for example when there is a power failure (PS1_Tiko, cf. M22iD_Tiko, Youthcommunity_Muyuka).

Finally, scamming takes its emotional toll. Although experienced scammers may not need to worry about getting caught anymore (e.g. PS1_Tiko), feelings of guilt, embarrassment towards God and loneliness are not always easy to deal with (PS1_Tiko, M22iD_Tiko, Youthcommunity_Muyuka). Moreover, scammers do remain part of society: family members expect them to take their responsibility in terms of financial responsibility for younger siblings, friends may expect them to throw parties with money that they have ‘earned’ (ibid). As such, scammers may face substantial difficulties in their living environment, coping with the social expectations and managing the insecure and relatively stressful source of income.

8. Conclusions

Having discussed the most prominent impacts that this study found, one may wonder ‘what is next’? This section discusses the most important implications of the findings for development organizations, critically reviews the research process and finally provides a number of suggestions for future research.

In today’s world, internet is rapidly gaining foothold in virtually all countries, rendering it a beloved subject for research. Whereas studies into the applications of internet in achieving development objectives are many, the effects of internet use on the individual user have hardly been addressed in academic literature targeting the African context. Exploring these unpaved roads, this thesis aims to provide insight into the extent to which internet use impacts the everyday lives of youths in semi-rural Cameroon.

Given the minimal amount of previous academic work on this matter, a broad setup was adopted to allow for a maximal amount of openness towards the various expected and unexpected ways in which internet use could influence youths’ everyday lives. Therefore, three broad focal aspects were defined which guided the preparatory literature search and development of research materials used in the study. These aspects - personal mobility, social networks and social transformation - were translated into the following research questions:

To what extent does internet use, in the sense of browsing the world wide web through a public computer, impact the daily lives of 15-25 year olds in semi-rural Cameroon?

- *To what extent is internet use associated with differences in mobility? Do internet users differ from non-users in terms of the scope and frequency of activities undertaken?*
- *To what extent does internet use influence the nature, scale, size and composition of users’ social networks? To what extent do such impacts also affect the social surroundings of internet users?*
- *To what extent does internet use influence users’ cultural identities, as reflected in their norms, values and lifestyles compared to their non-internet using peers?*

In what follows, each of the sub-questions will be addressed, subsequently combining them to make a number of concluding remarks towards the main research question.

First, there is the aspect of mobilities. Among the three focal areas, the available literature on this issue is most unbalanced: whereas a wealth of studies have documented the impacts of internet use on personal mobility and travel patterns in developed settings, the very topic of mobilities – without reference to internet – is only just starting to gain attention in studies targeting the African context, let alone any literature on such aspects in relation to internet use. As such, inspiration for the examination of effects of internet use on mobilities within the African setting had to be drawn from studies addressing the (substantially different)

developed context. The use of activity diaries emerged as a method to obtain a rich understanding of individuals' everyday lives from studies in the developed context.

The activity diary method proved not to be fully apt for the Cameroonian situation: diaries were frequently incomplete, lacked the required level of detail for proper analysis, coincided with Cameroon's holiday- and rainy season, were dependent on clock time (which is not commonplace in Cameroon), and, finally, turned out to influence people's daily behavior. Especially the latter was problematic, as roughly 10% of the respondents spontaneously remarked that the diary "helped to plan" their lives – an unexpected and undesirable outcome. Even though some of the above considerations were calculated risks, the combination of these aspects does pose serious challenges to the validity of the outcomes. As such, one may conclude that activity diaries do not represent the ideal research method in this context.

Nonetheless, a number of conclusions towards the effects of internet use on individual mobility could be drawn based on combined data from the questionnaires and activity diaries. First, internet use is not significantly associated with differences in the number of journeys undertaken in a given week, neither could any evidence be provided towards differences in the scope and frequency of activities undertaken. However, as mentioned above, this lack of statistical significance could derive from the problematic nature of the data, and should therefore be treated carefully in drawing conclusions about the relationship between internet use and travel. Second, in terms of intra-regional travels, internet use is significantly associated with a higher number of journeys outside the South-West province, in which both research locations are found. Finally, an inverse relationship was found between travel and internet use: people who travel frequently are likely to be internet users, but internet users do not necessarily travel frequently.

A more prominent aspect of 'mobilities' in the lives of Cameroonian youths turned out to be what I have referred to as 'perceived mobility'. In the virtual environment, geographical scales become simultaneously more *and* less pronounced: access to internet makes users world citizens with its unlimited opportunities to virtually discover that world, whereas on the other hand, the very information, stories from online contacts and the common perception that life "out there" is better than in Cameroon tends to make internet users aware of their relative state of development, deepening their wish to leave the country but confronting them with their relative immobility. In pursuing their objectives, they employ various strategies in order to increase their chances of traveling 'out': applying to schools abroad, searching for 'white' husbands, playing the 'American Lottery' and trying to connect to new 'friends' online which are – rather undisguised – hoped to facilitate their dreams of traveling one day. As such, internet users tend to perceive their online activities as an opportunity to increase their mobility compared to non-users, even if this initially remains limited to the hopes to travel in the future.

In sum, although the use of activity diaries is discouraged, mobilities – especially in relation to its perceived link with migration – may reveal interesting relations with internet use. However, additional research is necessary to be able to draw more substantiated conclusions.

The second and most specific sub-topic of this study was the aspect of changes in social networks. Some studies on this matter targeting the African context were available, although most of these posed remarks about social internet use 'on the side', functioning as an illustration in the address of a different issue. Nevertheless, combined with a multiplicity of sources from the developed context, these sources provided a fairly complete image of the potential aspects that one could study with respect to changes in social networks as a result of internet use, which were summarized as changes in the nature, scale, size and composition of social networks. Each of these will be considered in turn.

The impact of internet use was most pronounced on the scale of social networks: through the internet, users may re-establish relationships with family or distant friends and even create new friendships with people who are living in different physical, social and cultural environments. As such, internet users have access to a more geographically extended social network which ranges across countries, continents and – in contrast to previous research – ethnicities, as internet users are especially eager to connect to 'whites', both for the sake of 'discovery' and for the abovementioned less romantic motive of financial hope.

Considering the fact that internet users frequently create new friendships online, one would expect their social network to be more sizeable than those of non-users. However, although the results and previous research alike provide ample reasons to believe this is the case, this could not be substantiated with the available data. Likewise, changes in the nature of social networks are hard to evaluate. Although the majority of the online interactions complement face to face interactions, there are indications that especially among frequent internet users, face to face or phone-mediated interactions are replaced by online communication. Whereas offline interactions are broad into the online environment, users have also been reported to exchange phone numbers with individuals who were initially online contacts, thus adopting their online contacts into their offline world. As such, the nature of interactions seems to become an intertwined combination of online and offline communication for all members of the social network.

A final but pronounced impact of internet use is the change in composition of social networks: in their online as well as offline environments, internet users experience changes in their social networks. Online, many engage in friendships with unknown people, extending their social scope. Offline, however, internet users tend to cluster together, creating new 'communities' of those who are 'informed' and 'up to date', transforming cyber cafés in 'places to be' or spaces to hang out (cf. Mercer, 2005; Uimonen, 2009). On the other hand, these new contacts may imply that previous friends which have not yet familiarized themselves with the wonders of the virtual world are neglected. In line with previous studies (e.g. Mercer, 2005), the results indicate that disparities in internet access currently create social stratification through community formation and increased social status. Interestingly, these new "internet elites" do not necessarily correspond to the existing socio-economic elites and therefore represent a new "class". However, this 'elite' is likely to diminish once a larger share of the population is accustomed to internet use: whereas internet users are now looked at in awe, they will not likely enjoy such privileges anymore once people have grown more accustomed to the world wide web.

Nonetheless, non-users are currently disadvantaged in several ways: they have less access to information, putting them in an unequal position towards their peers. Moreover, many non-users feel 'left out' of the internet community as former friends no longer visit them or have little time for and/or interest in those who are not "up to date" and cannot share their online experiences. One could imagine this to have adverse effects on non-users' self-confidence and social interactions.

Thus, although social internet use generally should be associated with increased social interaction, it does put a strain on the interactions of internet users with the wider society – although such potential difficulties are likely of temporary nature.

The third and final sub-question addressed was to what extent internet use impacts users' cultural identities as reflected in their norms, values and lifestyles. This represented the most elusive and ambitious, yet fascinating aspect of this study: claims regarding social transformation tend to remain theoretical because of the difficulties in defining and measuring appropriate indicators. Nevertheless, it is only by exploring the aspects of such changes that one could formulate potential factors which could contribute to such 'vague' processes. Therefore, a tentative attempt has been undertaken to explore these concepts in relation to internet use.

Employing the work on differences between individualist and collectivist cultures by Hofstede (2001), a set of statements which were presumed to indicate a larger or lesser extent of 'individualism' were tested, but failed to function as a reliable indicator of individualism. Nevertheless, both qualitative and quantitative results indicated that changes in lifestyles, norms and values should be taken into consideration when speaking about the effects of internet use upon youths. Whereas previous research has mainly addressed the issue of 'modernization' (Mercer, 2005), the results provide a tentative contribution to these findings, adding that the majority of changes reported are in the area of general 'behavior' and 'mentality', representing among others attempts to resemble Europeans or Americans in many aspects of life. Future research will be necessary to substantiate these indicative aspects of potential cultural change.

This said, let us return to the main research question: to what extent does internet use impact the lives of young users? The outcomes of this study suggest that the answer should be positive: it does, in many respects. Although not specifically targeted in as a research question on its own, internet's most substantial impact upon youths seems to be the widening of the individuals' horizons. Internet use helps individuals to experience a sense of independence and liberty through the possibility to search, check and communicate information on any given topic. Moreover, the retrieved information and the social exchanges during chat conversations and emails often represent a first encounter with an unknown world, which is described with words such as "creative", "discovery" and "new", signaling the widening of the individual's horizon resulting from these virtual experiences. Users enjoy contacts with strangers online, showing their openness to new ideas and their willingness to learn. Non-users, on the other hand, are not necessarily less open-minded or less willing to learn. Many of them are just as eager to go online, but most of them are inhibited by the difficult constraint of knowledge: many still do not know how to operate a computer, let alone how to use the internet.

Internet use does not represent an exclusively positive impact in the wider society: various problematic uses of internet have been encountered, including most importantly the practices of internet fraud ('scamming') and online grooming. These aspects do not only negatively influence the wider perception of internet use, but also have adverse effects on the individual user. Girls engaging in virtual relationships may be sexually abused online. Moreover, in case of real-life encounters with their online partners, they would be vulnerable for human trafficking. Boys, on the other hand, are at high risk of getting involved in scamming practices, especially considering the way that internet use is taught from peer to peer. Although some manage to use the money to increase their living standards, most scammers are at risk of becoming addicted to the scamming business with the consequent difficulties of finishing an education, finding a job or keeping up the financial living standards that they have become accustomed to.

Taking into consideration all of the abovementioned aspects, it becomes even more surprising that scholars have turned the target group of young, African (current and future) internet users a blind eye in analyzing the impacts of internet use. Considering these findings, there is ample space for future research on each of these aspects. However, these recommendations will be discussed at the very end of this chapter. First, the development debate will be briefly revisited, followed by a series of reflections upon the research process.

A final note on the development debate

What light do these findings shed upon the efforts of development organizations promoting internet use? First and foremost, it places 'internet for development'-programs into the perspective of the individual user, portraying the opportunities and threats bestowed in access to the world wide web. Secondly, in line with Mercer (2005), this thesis finds that the internet is mainly used for social purposes and leisure rather than 'serious' research. Even though such use may have the positive effect of widening individuals' horizons, it should be noted that firstly, such widening may have the side-effect of an increased wish migrate to the 'greener pastures' encountered online, and secondly, this may not be the type of 'valuable' internet use which is expected to contribute to development (ibid: 253).

Given these findings, a few practical lessons may be extracted for development organizations working on internet provision in developing countries. First, the potential effects of internet use on individuals' daily lives are different for every individual, and are mainly determined by the way internet is used. By ensuring that young people have a good grasp of risks and opportunities of internet use, a substantial share of the abovementioned risks, especially with respect to naivety and peer-to-peer transfer of fraudulent practices, could likely be diminished. As such, the Cameroonian government's efforts to introduce computer- and internet classes in school are a step in the right direction: guided, structured approaches to internet use may help individuals to make informed choices about their internet use.

Additionally, internet use could potentially be subtly 'directed': many internet users do not (yet) know what type of resources can be found online, and how to access these. By providing a fixed 'home page' which assembles reliable, informative and interesting sources as well as search options, 'undirected' surfing could perhaps be minimized by offering alternatives.

Reflections

This study has attempted to touch upon as many potential influences upon internet users' daily lives as possible. This has resulted in a wide range of findings and turned out to be a blessing in disguise when it came to the activity diaries, providing ample opportunities to work around the challenges encountered. However, the downside of such broadness is the lack of space to explore specific details further. Whereas the assembled research materials do provide ample opportunities for in-depth analyses of the sub-topics encountered, one should – unfortunately – also take into consideration the limitations of a masters' thesis: once the main research questions have been answered, no additional challenges should be taken on anymore, no matter how interesting they are.

Secondly, the study would have likely benefited from a somewhat more detailed measure of socio-economic status: this was established through three rather straightforward, money-oriented questions. Although such data were requested from the local municipalities, these were unavailable in both research locations. Other socio-economic aspects, such as the condition of the house, the availability of running water in the house and similar indicators would have likely provided a more reliable impression of the relative socio-economic status of the participant.

Third, the use of snowballing as sampling method did produce a large number of participants, but consequently could not yield a random sample. Considering the community formation among internet users, this may have been reflected in the sample. Additionally, the nature of the sample required the use of non-parametric tests which do not assume a random sample. Such tests are subject to the downside of lesser explanatory power, but were required given the sampling method.

Finally, the systematic literature review was theoretically useful in providing a thorough overview of available knowledge on the aspects of internet use in Africa, but also had the downside of providing such dazzling numbers of articles that it was hard to study all sources thoroughly. Unfortunately, one of the most prominent sources on this matter – the study by Mercer (2005) – was overshadowed by other sources until the very end of this work. To learn that a more all-encompassing study, better than the one I have just presented here, has already been conducted which also holds the key to some additional studies on internet use from cyber cafés (sources which had not been retrieved by the literature review), was disturbing and disappointing, but teaches on a lesson: a systematic literature review, no matter how systematic, is still subject to human mistakes.

Future research

This study has answered some questions, but gives rise to even more: given the widespread changes in lifestyles, for example, to what extent are these changes characteristic for internet users, or do they represent a wider social trend? How does the widening of people's horizon reflect in new perspectives on their own living environment? Or, considering the widespread expectations among the respondents that internet use will facilitate social and economic mobility or even international migration, to what extent are these expectations realistic? In conclusion, these findings provide food for thought and incentives for future research: development organizations and policymakers alike may gain inspiration for new ways to adapt projects to the wide range of opportunities that internet use has to offer, while avoiding the traps of its threats to social well-being.

9. Consulted literature

Note: this list also contains uncited literature which has been consulted to obtain a general overview of the knowledge on this matter, or which was retrieved in the systematic literature review. More information towards the latter can be found in Appendix 1.

- Akhtar, S., Song, S. (1998) The Internet in Africa: global forces, African challenges. *African Development Review* 10 (1):162-172.
- Alden, C. (2003). Let them eat cyberspace: Africa, the G8 and the digital divide. *Millennium-Journal of International Studies* 32 (3):457-476
- Alexander, B., Dijst, M., Ettema, D. (2010), Working from 9 to 6? An analysis of in-home and out-of-home working schedules. *Transportation* 37 (3): 505–523.
- Alexander, J. (2002). "Behind the Mask": An African Gay-Affirmative Website. *International Journal of Sexuality and Gender Studies* 7 (2-3):227-234.
- Alzouma, G. (2005). Myths of digital technology in Africa: Leapfrogging development? *Global Media and Communication* 1 (3):339-356.
- Anderson, B., Tracey, K. (2001). Digital Living: the Impact (or Otherwise) of the Internet on Everyday Life. *American Behavioral Scientist* 45 (3): 456-475.
- Aniebonam, M.C. (2003) The Future Generation of Global Information and Communication Technology (ICT): Can Africa Meet the Challenge? *Chimera* 1 (2):19-24.
- APC (2009). APC Internet Rights Charter. Available at <<http://www.apc.org/en/node/5677>>. Accessed February 7, 2009.
- APC (2011). About APC. Available at <http://www.apc.org/en/about/>. Accessed 7 Februari 2011.
- Aslanidou, S., Menexes, G. (2008). Youth and the Internet: Uses and practices in the home. *Computers and Education* 51 (3):1375-1391.
- Barber, B.R. (1995). *Jihad vs. McWorld*. New York: Ballentine Books.
- Bauman, Z. (1998). *Globalization, the Human Consequences*. Columbia University Press: New York.
- Bauman, Z. (2000). *Liquid Modernity*. Polity Press: Cambridge.
- Beck, U. (1992). *Risk Society. Towards a New Modernity*. Sage Publications: London.
- Benotsch, E.G., Stevenson, Y.L., Sitzler, C.A., Kelly, J.A., Makhaye, G., Mathey, E.D., Somlai, A.M., Brown, K.D., Amirkhanian, Y., Fernandez, M.I. and Opgenorth, K.M. (2004) HIV Prevention in Africa: Programs and populations served by non-governmental organizations. *Journal of Community Health* 29 (4): 319-336
- Berger, H.A., Ezzy, D. (2009). Mass media and religious identity: A case study of young witches. *Journal for the Scientific Study of Religion* 48 (3):501-514.
- Bertelsmann Stiftung (2009). *BTI 2010 — Cameroon Country Report*. Gütersloh: Bertelsmann Stiftung.
- Binsbergen, van, W. (1998). Globalization and Virtuality: Analytical Problems Posed by the Contemporary Transformation of African Societies. *Development and Change* 29: 873-903.
- Boeijs, H., 't Hart, H., Hox, J. (2005). *Onderzoeksmethoden*. Amsterdam: Boom Lemma Uitgevers.
- Bradley, K. (2005). Internet lives: social context and moral domain in adolescent development. *New directions for youth development* (108):57-76, 11-12.
- Brignall III, T.W., Van Valey, T. (2005). The impact of Internet communications on social interaction. *Sociological Spectrum* 25 (3):335-348.
- Bruhn, J.G. (2005). *The Sociology of Community Connections*. Kluwer Academic/Plenum Publishers: New York.
- Bussiek, H. (2005). Pipes without water - And where are the pipes? Information and communication technologies in Africa. *Internationale Politik und Gesellschaft* (3): 97-107+188.
- Capurro, R. (2008). Information ethics for and from Africa. *Journal of the American Society of Information Science and Technology* 59 (7):1162-1170
- Castells, M. (1996). *The Information Age, Economy, Society and Culture. Volume I: The Rise of the Network Society*. Oxford: Blackwell Publishers.

- Castells, M. (2001). *The Internet Galaxy. Reflections on the Internet, Business and Society*. Oxford: Oxford University Press.
- Chen, W., Wellman, B. (2009). Net and Jet: The internet use, travel and social networks of Chinese Canadian entrepreneurs. *Information, Communication & Society* 12 (4):525-547.
- Chéneau-Loquay (2007) From networks to uses patterns: the digital divide as seen from Africa. *GeoJournal* 68 (1): 55-70
- Chivhanga, B.M. (2000). An evaluation of the impact of the Internet in Africa. *Aslib Proceedings* 52 (10):373-383.
- Clark, L.S. (2003). Challenges of social good in the world of Grand Theft Auto and Barbie: A case study of a community computer center for youth. *New Media and Society* 5 (1):95-116.
- Coget, J-F., Yamauchi, Y., Suman, M. (2002). The Internet, Social Networks and Loneliness. *IT & Society* 1 (1): 180-201.
- Cronje, J.C., Burger, D. (2006). Learning from a free-access digital information kiosk in Africa - An objectivist - constructivist investigation. *ASLIB Proceedings* 58 (3):218-236.
- Daly, J.A. (2000). Studying the impacts of the Internet without assuming technological determinism. *ASLIB Proceedings* 52 (8):285-300.
- DiMaggio, P., Hargittai, E., Russel Neuman, W., Robinson, J.P. (2001) Social Implications of the Internet. *Annual Review of Sociology* 27:307-336
- Djite, P.G. (2008) From liturgy to technology Modernizing the languages of Africa. *Language Problems and Language Planning* 32 (2):133-152.
- Durham, M.G. (2001). Adolescents, the Internet, and the Politics of Gender: A Feminist Case Analysis. *Race, Gender & Class* 8 (4):20-41.
- Eldeleklioglu, J. (2008). Gender, romantic relationships, internet use, perceived social support and social skills as the predictors of loneliness. *Egitim Arastirmalari - Eurasian Journal of Educational Research* (33):127-140.
- Elias, N., Lemish, D. (2009). Spinning the web of identity: The roles of the internet in the lives of immigrant adolescents. *New Media and Society* 11 (4):533-551
- Eriksen, T.H. (2007). Nationalism and the internet. *Nations and Nationalism* 13(1): 1-17.
- Farag, S., Krizek, K.J., Dijst, M. (2006). E-shopping and its relationship with in-store shopping: empirical evidence from the Netherlands and the USA. *Transport Reviews* 26 (1), 43-61.
- Fauvelle-Aymar, F.X. (2002). Birth of a Black nation - Multimedia, globalization and new forms of solidarity. *Homme* (161):75-89 [in French].
- Featherstone, M. (ed) (1990) *Global Culture. Nationalism, Globalization and Modernity*. London: Sage.
- Fukuyama, F. (1999). *The Great Disruption. Human Nature and the Reconstitution of Social Order*. The Free Press: New York.
- Gannon, S. (2008). 'Twenty-four seven on the computers': Girls, ICTs and risk. *Gender and Education*, 20 (4):361-373.
- Gardner, K. and Lewis, D. (1996) *Anthropology, Development and the Post-modern Challenge*. Pluto Press, London.
- Giddens, A. (1991). *Modernity and Self-Identity. Self and Society in the Late Modern Age*. Polity Press: Cambridge.
- Goldstein, J. (2008) Embracing "Open Access" in East Africa: A common Internet infrastructure policy agenda for human security and economic development. *Journal of Public and International Affairs* 19:139-150.
- Gough, K.V. (2008): "'Moving around": the social and spatial mobility of youth in Lusaka', *Geografiska Annaler: Series B, Human Geography* 90 (3): 243-255.
- Graham, S. (1998), 'The End of Geography or the Explosion of Place? Conceptualising Space, Place and Information Technology', *Progress In Human Geography* 22 (2): 165-185.
- Gross, E.F. (2004). Adolescent Internet Use: What We Expect, What Teens Report. *Applied Developmental Psychology* 25 (2004):633-649.

- Gross, E.F., Juvonen, J., Gable, S.L. (2002). Internet use and well-being in Adolescence. *Journal of Social Issues* 58 (1):75-90.
- Guzzetti, B., Gamboa, M. (2005). Online journaling: The informal writings of two adolescent girls. *Research in the Teaching of English* 40 (2):168-206.
- Hackett, R.I.J. (2009). The new virtual (inter)face of African Pentecostalism. *Society* 46 (6):496-503.
- Hall, M. (1999). Virtual colonization. *Journal of Material Culture* 4 (1):39-55.
- Hamel, J., Dufour, S., Fortin, D. (1993). *Case study methods*. Newbury Park, CA: Sage Publications.
- Hamelink, C.J. (1994). *The Politics of World Communication*. London: Sage.
- Harris, A. (2008). Young women, late modern politics, and the participatory possibilities of online cultures. *Journal of Youth Studies* 11 (5):481-495.
- Haythornthwaite, C. (2001). Introduction: the Internet in Everyday Life. *American Behavioral Scientist* 45 (3):363-382.
- Haythornthwaite, C. (2005). Social Networks and Internet Connectivity Effects. *Information, Communication & Society* 8 (2):125-147.
- Heinrich, V.F. (2001) The Role of NGOs in Strengthening the Foundations of South African Democracy. *Voluntas: International Journal of Voluntary and Non-profit Organizations* 12 (1): 1-15.
- Hjorthol, R., Gripsrud, M. (2009). Home as a communication hub: domestic use of ICT. *Journal of Transport Geography* 17 (1): 115-123.
- Hjorthol, R.J. (2009). Information searching and buying on the Internet: travel-related activities? *Environment and Planning B: Planning and Design* 36 (2): 229-244.
- Hlebec, V., Manfreda, K.L., Vehovar, V. (2006). The Social Support Networks of Internet Users. *New Media & Society* 8 (1):9-32.
- Hofstede, G. (2001). Individualism and Collectivism. In: *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. Pp. 209-279. Sage: London.
- Horton, R. (2000). North and South: bridging the information gap. *Lancet* 355 (9222):2231-2236.
- Howard, P.E.N., Rainie, L. and Jones, S. (2001) 'Days and Nights on the Internet: The Impact of a Diffusing Technology'. *American Behavioral Scientist* 2001 45 (3): 383-404.
- Idowu, AO; Idowu, PA; Adagunodo, ER. (2005). Empirical study on information and communication technology and youth in a developing country: Nigeria as a case. *International Journal of Information Technology & Decision Making* 4 (2):297-309.
- ITC (2010). Country Profile Cameroon. Available at <<http://www.intracen.org/organics/Country-Profile-Cameroon.htm>>. Accessed 27 November 2010.
- ITU (2010b). *Monitoring the WSIS Targets, a Midterm Review*. Geneva: International Telecommunications Union.
- ITU (2009). *Information Society Statistical Profiles 2009*. Geneva: ITU.
- Jacobs, S. (2007). Big brother, Africa is watching. *Media Culture & Society* 29 (6):851-868.
- Jennings, M.K., Zeitner, V. (2003). Internet use and civic engagement a longitudinal analysis. *Public Opinion Quarterly* 67 (3):311-334.
- Johnson Osirim, M. (2001) Making good on commitments to grassroots women: NGOs and empowerment for women in contemporary Zimbabwe. *Women's Studies International Forum* 24 (2): 167-180
- Johnson-Hanks, J. (2007). Women on the market: Marriage, consumption, and the internet in urban Cameroon. *American Ethnologist* 34 (4):642-658.
- Journal of Industrial Ecology, Vol. 6, 43-57.
- Kabha, M., Erlich, H. (2006). Al-Ahbash and Wahhabiyya: Interpretations of Islam. *International Journal of Middle East Studies* 38 (4):519-538.
- Katz, J.E., Rice, R.E., Aspden, P. (2001). The Internet, 1995-2000: Access, Civic Involvement, and Social Interaction. *American Behavioral Scientist* 45 (3):483-404.
- Kavanaugh, A.L., Reese, D.D., Carroll, J.M., Rosson, M.B. (2005). Weak ties in networked communities. *Information Society*, 21 (2): 119-131.
- Kelly, D.M., Pomerantz, S., Currie, D.H. (2006). "No boundaries"?: Girls' interactive, online learning about femininities. *Youth and Society* 38 (1):3-28.

- Kenyon, S. (2006). The 'accessibility diary': Discussing a new methodological approach to understand the impact of Internet use upon personal travel and activity participation. *Journal of Transportation Geography* 14 (?):123-134.
- Kenyon, S. (2010). Impacts of internet use on activity participation and travel: Results from a longitudinal diary-based panel study. *Transportation Research Part C* 18 (1): 21-35.
- Kenyon, S., Rafferty, J., Lyons, G. (2003). Social exclusion and Transport in the UK: A Role for Virtual Accessibility in the Alleviation of Mobility-Related Social Exclusion? *Journal of Social Policy* 32 (3): 317-338.
- Kingsbury, P., & Jones III, J. P. (2009). Walter Benjamin's Dionysian adventures on Google earth. *Geoforum* 40 (4):502-513.
- Kole, E.S. (2001). Appropriate theorizing about African women and the internet. *International Feminist Journal of Politics* 3 (2):155-179.
- Kuate-Defo B. (2004). Young people's relationships with sugar daddies and sugar mummies: what do we know and what do we need to know? *African journal of reproductive health* 8 (2):13-37.
- L'Essentiel (2010). Dossier spécial Cameroun. *L'Essentiel* 31: 43-109
- Langevang, T. and Gough, K.V. (2009) 'Surviving through movement: the mobility of urban youth in Ghana', *Social & Cultural Geography* 10 (7): 741-56.
- Lee, L. (2005). Young people and the Internet: From theory to practice. *Young* 13 (4): 315-326.
- Livingstone, S. (2008). Learning the lessons of research on youth participation and the internet. *Journal of Youth Studies* 11 (5):561-564.
- Livingstone, S., Bober, M., Helsper, E.J. (2005). Active participation or just more information? Young people's take-up of opportunities to act and interact on the Internet. *Information Communication and Society* 8 (3): 287-314.
- Loges, W.E., Jung, J.-Y. (2001). Exploring the digital divide: Internet connectedness and age. *Communication Research* 28 (4): 536-562.
- Lynch, M. (2007) Young Brothers in cyberspace. *Middle East Report* 37 (245): 26-33.
- Lyons, G. (2002). Internet: investigating new technology's evolving role, nature and effects on transport. *Transport Policy* 9 (4): 335-346
- Maczewski, M. (2002). Exploring identities through the internet: Youth experiences online. *Child and Youth Care Forum* 31 (2):111-129.
- Madell, D., Muncer, S. (2005). Are internet and mobile phone communication complementary activities amongst young people? A study from a 'rational actor' perspective. *Information Communication and Society* 8 (1):64-80.
- Marek, E.S. (2003). Technology in Africa. *Chimera* 1 (1): 9-11.
- Matei, S., Ball-Rokeach, S.J. (2001). Real and Virtual Social Ties: Connections in the Everyday Lives of Seven Ethnic Neighborhoods. *American Behavioral Scientist* 45 (3): 550-564.
- Mbarika, V., Jensen, M.; Meso, P. (2002). Cyberspace Across Sub-Saharan Africa. *Communications of the ACM* 45 (12):17-21.
- McArthur, J.A. (2009). Digital subculture: A geek meaning of style. *Journal of Communication Inquiry* 33 (1):58-70.
- McCaskie, T. C. (2007). The life and afterlife of Yaa Asantewaa. *Africa* 77 (2):178-179.
- Mcmillan, S.J. and Morrison, M. (2006). 'Coming of age with the internet: A qualitative exploration of how the internet has become an integral part of young people's lives' *New Media Society* 8 (1): 73-95
- Mekuria, F., Sutherland, E. (2006). Future networks and services in Sub-Saharan Africa. *Unpublished*. Retrieved from The Selected Works of Ewan Sutherland. [Online] <<http://works.bepress.com/ewan/16/>>. Consulted 11.12.2009
- Mercer, C. (2004). Engineering civil society: ICT in Tanzania. *Review of African Political Economy* 31 (99):49-64.
- Mercer, C. (2005). Telecentres and transformations: Modernizing Tanzania through the internet. *African Affairs* 105 (419):243-264.

- Mercer, M.A. and Liskin, L. (1991) The role of non-governmental organizations in the global response to AIDS. *AIDS Care* 3 (3): 265-268
- Mesch, G.S. (2003). The Family and the Internet: The Israeli Case. *Social Science Quarterly* 84 (4):1038-1050.
- Mesch, G.S. (2006). Family characteristics and intergenerational conflicts over the Internet. *Information Communication and Society* 9 (4):473-495.
- Ministere de l'Enseignement Superieur (2011). Annuaire Statistique 2008 de l'enseignement superieur du Cameroun. Donnees pour un systeme d'information universitaire plus efficient. Available at http://www.minesup.gov.cm/index.php?option=com_content&task=view&id=479&Itemid=74. Accessed 25 January 2010.
- Mishna, F., Mcluckie, A., Saini, M. (2009). 'Real-world dangers in an online reality: A qualitative study examining online relationships and cyber abuse'. *Social Work Research* 33 (2): 107-118.
- Mokhtarian, P. L., 2002, Telecommunications and travel: The case for complementarity.
- Mol, A. and de Laet, M. (2000) The Zimbabwe Bush Pump: Mechanics of a Fluid Technology. *Social Studies of Science* 30 (2): 225-263
- Mushengyezi A. (2003) Rethinking Indigenous Media: Rituals, 'Talking' Drums and Orality as Forms of Public Communication in Uganda. *Journal of African Cultural Studies* 16 (1):107-117.
- Mutula, S.M. (2003). Cyber cafe industry in Africa. *Journal of Information Science* 29 (6):489-497.
- Myers, G. (1993) 'Electronic health information services: A review'. *Electronic Library* 11 (4-5): 283-287.
- Neustadt, A., Robinson, J.P. (2002). Social Contact Differences between internet users and non-users in the General Social Survey. *IT & Society* 1 (1): 73-102.
- Nie, N.H. (2001). Sociability, Interpersonal Relations, and the Internet: Reconciling Conflicting Findings. *American Behavioral Scientist* 45 (3):420-435.
- Nie, N.H., Erbring, L. (2002). Internet and Society: a preliminary report. *IT & Society* 1 (1): 275-283.
- Nie, N.H., Sunshine Hilligus, D. (2002). The impact of internet use on sociability: time-diary findings. *IT & Society* 1 (1):1-20.
- Nyamnjoh F.B. (2003) Globalization, Boundaries, and Livelihoods: Perspectives on Africa. *Philosophia Africana* 6 (2):1-18.
- Ogbu, O., Mihyo, P. (2000). *African Youth on the Information Highway: Participation and Leadership in Community Development*. International Development Centre: Ottawa.
- Olurunisola, A.A. (2000). African Media, Information Providers and Emigrants as Collaborative Nodes in Virtual Social Networks. *African Sociological Review/Revue Africaine de Sociologie* 4 (2):46-71.
- Ott, D. (1998). Power to the people: The role of electronic media in promoting democracy in Africa. *First Monday* 3 (4). [Online]. <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/588/509>. Consulted 11.12.2009
- Oyelaran-Oyeyinka, B. (2006). Systems of innovation and underdevelopment: An institutional perspective. *Science, Technology and Society* 11 (2):239-269.
- Oyelaran-Oyeyinka, B.; Lal, K. (2005). Internet diffusion in sub-Saharan Africa: A cross-country analysis. *Telecommunications Policy* 29 (7):507-527.
- Parker, D., Song, M. (2009). New ethnicities and the internet: Belonging and the negotiation of difference in multicultural Britain. *Cultural Studies* 23 (4):583-604.
- Peter, J., Valkenburg, P.M. (2006a). Adolescents' exposure to sexually explicit online material and recreational attitudes toward sex. *Journal of Communication* 56 (4):639-660.
- Peter, J., Valkenburg, P.M. (2006b). Adolescents' exposure to sexually explicit material on the internet. *Communication Research* 33 (2):178-204.
- Peter, J., Valkenburg, P.M. (2008). Adolescents' exposure to sexually explicit Internet material, sexual uncertainty, and attitudes toward uncommitted sexual exploration: Is there a link. *Communication Research* 35 (5):579-601.

- Pfister, R. (1999). Africa's right to information - A review of past developments and future prospects. *Social Science Computer Review* 17 (1):88-106.
- Porter, G. (2010) 'Transport planning in sub-Saharan Africa III : The challenges of meeting children and young people's mobility and transport needs'. *Progress in Development Studies* 10 (2): 169-180.
- Porter, G., Hampshire, K., Mashiri, M., Dube, S. and Maponya, G. (2010) 'Youthscapes' and escapes in rural Africa: education, mobility and livelihood trajectories for young people in Eastern Cape, South Africa. *Journal of International Development* 22:1090–1101.
- Powell, M. (2001). Knowledge, Culture and the Internet in Africa: A Challenge for Political Economists. *Review of African Political Economy* 28 (88):241-260.
- Pronovost, G. (2002). The Internet and time displacement: a Canadian perspective. *IT & Society* 1 (1): 44-53.
- Putnam, R.D. (2000). *Bowling Alone*. Simon & Schuster: New York.
- Radloff J., Primo N. (2002). Net gains for women in Africa. *Development* 45 (4):41-48.
- Rheingold, H. (1995). *The Virtual Community. Finding Connection in a Computerized World*. Secker & Warburg: London.
- Richards, A.C. (2006). *Generation X people's development of cyberspace culture: a psychological perspective*. Pretoria: University of Pretoria.
- Robinson, J.P., Martin, S.P. (2009). Social attitude differences between internet users and non-users: evidence from the General Social Survey. *Information, Communication & Society* 12 (4): 508-524.
- Robinson, J.P., Shanks, J.M. (2002). Sex, church, and the internet. *IT & Society* 1 (1): 103-119.
- Roycroft, T.R.; Anantho, S. (2003). Internet subscription in Africa: policy for a dual digital divide. *Telecommunications Policy* 27 (1-2):61-74.
- Salman, A., Hasim, A.S. (2009). Sustainability of internet usage: A study among Malay women in a sub-urban setting in Malaysia. *European Journal of Social Sciences* 9 (3): 433-447.
- Samin, N. (2008). Dynamics of internet use: Saudi youth, religious minorities and tribal communities. *Middle East Journal of Culture and Communication* 1 (2):197-215.
- Sasaki, K., Nishii, K. (2010). Measurement of intention to travel: Considering the effect of telecommunications on trips. *Transportation Research Part C* 18:36-44.
- Schwanen, T., Dijst, M., Kwan, M-P. (2007). Introduction—The internet, changing mobilities, and urban dynamics. *Urban Geography* 27 (7):585-589.
- Shah, D.V., Kwak, N., Holbert, R.L. (2001). "Connecting" and "disconnecting" with civic life: Patterns of internet use and the production of social capital. *Political Communication* 18 (2):141-162.
- Shannon, D. (2008). Online sexual grooming in Sweden-online and offline sex offences against children as described in Swedish police data. *Journal of Scandinavian Studies in Criminology and Crime Prevention* 9 (2):160-180.
- Shrum W. (2005) Reagency of the Internet, or, how I became a guest for science. *Social Studies of Science* 35 (5):723-754.
- Slater, M.D. (2003) 'Alienation, aggression, and sensation seeking as predictors of adolescent use of violent film, computer, and website content'. *Journal of Communication* 53 (1): 105-121.
- Soen, D. (2009). From the Espresso Era to the Internet Era – high school students and online chat. *Journal of Humanities and Social Sciences* 3 (1): 1-12.
- Sonaike, S.A. (2004). The Internet and the Dilemma of Africa's Development. *Gazette* 66 (1): 41-61.
- Sooryamoorthy, R., Paige Miller, B., Shrum, W. (2008). Untangling the technology cluster: mobile telephony, internet use and the location of social ties. *New Media Society* 10 (5):729-749.
- Stern, S.R. (1999). Adolescent girls' expression on web home pages: Spirited, sombre and self-conscious sites. *Convergence* 5 (4):22-41.
- Stoneman, P. (2008). Exploring time use: a methodological response to 'web-use and net-nerds'. *Information, Communication and Society* 11 (5): 617-639.
- Tandon, Y. (1996) Reclaiming Africa's agenda: Good Governance and the Role of the NGOs in the African Context. *Australian Journal of International Affairs* 50 (3): 293-303

- Thapisa, A.P.N. (1996). The impact of global information on Africa. *Internet Research-Electronic Applications and Policy* 6 (1):71-78.
- Thompson, H.G.; Garbacz, C. (2007). Mobile, fixed line and Internet service effects on global productive efficiency. *Information Economics and Policy* 19 (2):189-214.
- Transparency International (2011a). Corruption Perceptions Index 2010 Results. Available at <http://www.transparency.org/policy_research/surveys_indices/cpi/2010/results>. Accessed 22 January 2011.
- Transparency International (2011b). Global Corruption Barometer 2010 report. Available at <http://www.transparency.org/policy_research/surveys_indices/gcb/2010/results>. Accessed 22 January 2011.
- Triandis, H.C. (1995). *Individualism & Collectivism*. Westview Press: Boulder.
- Tripp, A.M. (2003) Women in movement: Transformations in African political landscapes. *International Feminist Journal of Politics* 5 (2):233-255.
- Uimonen, P. (2009). Internet, arts and translocality in Tanzania. *Social Anthropology* 17 (3):276-290.
- UNESCO (2011). UIS Statistics in brief. Education in Cameroon. Available at <http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=121&IF_Language=eng&BR_Country=1200>. Accessed 23 January 2011.
- United Nations (2011). 'Compositions of macro geographical (continental) regions, geographical sub-regions, and selected economic and other groupings'. Available at <<http://unstats.un.org/unsd/methods/m49/m49regin.htm>>. Accessed 20 January 2011.
- Urry, J. (2003). *Global Complexity*. Polity Press: Cambridge.
- Valkenburg, P.M., Schouten, A.P., Peter, J. (2005). Adolescents' identity experiments on the internet. *New Media and Society* 7 (3):383-402.
- Venables, E. (2008). Senegalese women and the cyber café: online dating and aspirations of transnational migration in Ziguinchor. *African and Asian Studies* 7 (4): 471-490.
- Venter, D. (2003) An Eclectic Selection of Internet Resources for the Study of Globalisation. *Society in Transition* 34 (2): 370-382.
- Verran, H. (1999) Staying True to the Laughter in Nigerian Classrooms. In: J. Law and J. Hassard (eds) *Actor Network Theory and After*. Blackwell Publishers: London, pp. 136-155
- Verran, H. (1999), 'Staying True to the Laughter in Nigerian Classrooms', pages 136-155 in *Actor Network and After*, Oxford and Keele: Blackwell and the Sociological Review.
- Wang, R., Bianchi, S.M., Raley, S.B. (2005). 'Teenagers' Internet use and family rules: A research note'. *Journal of Marriage and Family* 67 (5): 1249-1258.
- Weeks, A.D. (2003). Closing the digital divide. Reality may not be so rosy. *BMJ (Clinical research ed.)* 326 (7397):1035.
- Wellman, B., Boase, J., Chen, W. (2002). The Networked Nature of Community Online and Offline. *IT&Society*, 1 (1): 151-165.
- Wellman, B., Quan Haase, A., Witte, J. Hampton, K. (2001). Does Internet increase, decrease or supplement social capital?: Social networks, Participation and Community Commitment. *American Behavioral Scientist* 45 (3):436-455.
- World Bank (1998). Knowledge for Development: World development report 1998/99. Oxford University Press: New York.
- Ya'u, Y.Z. (2005). Globalisation, ICTs, and the New Imperialism: Perspectives on Africa in the Global Electronic Village. *Africa Development* (1&2):98-124.
- Zook, M. (2007). Your urgent assistance is requested: The intersection of 419 spam and new networks of imagination. *Ethics, Place and Environment* 10 (1):65-88.
- Zuckerman, E. (2008). Meet the bridgebloggers. *Public Choice* 134 (1-2):47-65.

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10. Appendices

Appendix 1: Approach systematic literature review

Overview of past research in the African context

To create insight into the voluminous body of research which is associated with internet use in Africa, an elaborate systematic literature research was conducted based on the research methodology proposed by Fink (2009). The main question addressed was “what is known about the effects of internet on society in Africa in the widest sense of the word?” Numerous searches were performed using both Web of Science and Scopus, with a range of key terms.

Initial key terms were kept as wide as possible, using ‘internet AND Africa’ as the sole restriction on the number of articles retrieved. To account for possible additional sources, the process was repeated with the term “ICT” instead of internet in a second search. Initially, the search with ‘internet AND Africa’ yielded over 900 results. These were first reduced using only relevant subject areas from the social sciences as well as economics and computing²³. This selection reduced the number of articles to just over 300. The mere drop in the number of articles provides an indication of the research attention focusing on health care and physical challenges of internet provision in Africa, which both contributed substantial numbers of articles to the body of literature on African internet use.

Considering the scope of this thesis, criteria for relevance were subsequently established. The title and abstract of the output of these queries were subsequently manually selected based on the following criteria:

- The article’s primary concern is either internet *use* in Africa, or the sub-topic at hand (i.e. societal change, youth, communities, religion, mobilities, or development);
- The main target group of the study is not (part of) an organization, such as a university, library, business or government organ;
- The article has to address an issue within the African context;
- The article should not be a case study which is particular to South Africa because of the highly specific history of the country;
- The article should be available in English, Dutch, German or French through the university of Utrecht or Lancaster.

These criteria could overlap in some cases: for instance, one article could be excluded on the basis of not being a study within the African continent, but at the same time discuss a highly relevant issue about religious practices of youth. In these situations, a decision was made based on the overall potential relevance of the article to the thesis in general.

The selection of 300 articles was therefore subjected to a search which attempted to incorporate at least one of these criteria: concerning a representative share of the overall population in terms of education, dealing with young people, or specifically targeting the effects of internet use in everyday situations, with special attention for social change. This led to the following sub-topics, for each of which a separate search was conducted:

²³ In this respect, the queries for Web of Science and Scopus have been different, because the possibilities to refine the results were different. For a precise overview of the subject areas which were in- and excluded, please see Table 2.

Table 1: subtopic key search terms

Sub-topic	Main keywords ²⁴
Societal change	Globalization, modernization, “social change”, individualism, collectivism, transformation
Youth	Youth, adolescence, puberty, generation
Communities (online and ‘offline’)	Community, society, civil society
Religion	Religion, spirituality, morals, norms, Christianity, Hinduism, Islamism, Boeddhism, natural religions, belief
Mobilities	Mobility, mobilization, activities, travel, journey
Digital divide & ICT for development	Digital divide, progress, development, improvement
Restrictions (all topics)	Library, education, e-learning

The remaining articles did provide a reasonable picture of the current state of internet access in Africa and its applicability, but still only revealed 56 articles of which less than 20 were actual case studies.

Table 2

Search engine	Included	Excluded
Scopus	Social Sciences Psychology Computer Sciences Multidisciplinary Undefined	All others.
Web of Science	Ethics, Geography, Computer Science, Information systems, Communication, Political science, Demography, Multidisciplinary sciences, Sociology, Ethnic studies, Psychology, Software engineering, Interdisciplinary applications, Social sciences, Anthropology, Planning & Development, Social issues, Philosophy, Applied psychology.	All others.

²⁴ In all searches, the selections were restricted in order to avoid results from educational institutions.

Appendix 2a: Topic list qualitative interviews, non-users

Topic list case study interviews non-users

Family situation

- Married, children, household composition?
- Parents?
- Extended family: living near/close, contact frequency? How do you stay in touch with them?
- What is an ideal family? Now? Later on?

Education, work, income

- Average day
- Work satisfaction
- Work pressure
- Income difficulties – hard to get by?
- Regular income?

Neighborhood

- Neighborhood satisfaction
- Contact with neighbors
- Commitment to neighborhood

Everyday life

- Evaluation of the past five years
- Which things have changed for you
- What are the most important changes for you?
- Which things do you think have changed in your local environment
- What do you see as the most important reasons for these changes?

Internet use

- Most important reason not to use the internet: personally/generally
- Internet use in personal environment?
- Expectations considering internet use?
- Do you feel that the internet influences others around you who do use the internet?
- If so: how?
- Internet vs mobile phone?

Social outlook

- Community life
 - Feelings about community life: important/unimportant
 - Role of individual vs groups
- Most important constituents of your identity?
- Direct confrontation or harmony?
- What kind of ways should you behave with respect to others? And to family?
- Role of religion?
- Role of science? Importance?

Appendix 2b: Topic list qualitative interviews, internet users

Topic list case study interviews Internet users

Family situation

- Married, children, household composition?
- Parents?
- Extended family: living near/close, contact frequency?
- What is an ideal family? Now? Later on?

Education, work, income

- Average day
- Work satisfaction
- Work pressure
- Income difficulties – hard to get by?
- Regular income?

Neighborhood

- Neighborhood satisfaction
- Contact with neighbors
- Commitment to neighborhood

Everyday life

- Evaluation of the past five years
- Which things have changed for you
- What are the most important changes for you?
- Which things do you think have changed in your local environment
- What do you see as the most important reasons for these changes?

Internet use

- Use of the internet? If so: when? Frequency?
- Which expectations did you/do you have about the internet?
- Do many people around you use the internet? Which approximate share?
- What does it mean to you to have access to internet?
- What do you use the internet for?
(continue with deeper questions if possible → use of which websites? Most important reason to use the internet? Able to find the right information?)
- Do you feel that the internet influences you (or: others around you who do use the internet)?
- If so: how?
- What do you see as the most important reason for people not to use internet?
- Internet vs mobile phone?

Social outlook

- Community life
 - Feelings about community life: important/unimportant
 - Role of individual vs groups
- Most important constituents of your identity?
- Direct confrontation or harmony?
- What kind of ways should you behave with respect to others? And to family?
- Role of religion?
- Role of science? Importance?

Appendix 3: Final version of the questionnaires (users and non-users)

Dear participant,
 Thank you for your interest in my research. I greatly appreciate your help! This questionnaire is designed to get a better understanding of what your life is like. Please fill out as much as possible. If you should feel uncomfortable answering a question, please write "N/A".
 Please note that all your answers will be handled **completely confidentially**. Nobody, including myself, will be able to relate your answers to you as an individual. My research may be published, but it will not contain any names without prior permission. Thank you!

Profile questions

1. What is your age? _____
2. Are you male or female? Please select:
 a. Male _____
 b. Female _____
3. In which village/quarter do you live? _____
4. Is your first official language English or French? _____
5. Do you still live with your parents or caretakers?
 a. Yes _____
 b. No, I moved out _____
6. How many people live in the house where you live? _____

Travel opportunities

The following questions address your regular travel behavior. If you are currently in a holiday period, please think about your normal daily schedule. Please tick **yes** answer unless stated otherwise.

7. What is the **highest** level of education that you have **completed** or which you are **currently** following? _____
8. What is your **main** daily activity (school, work, both, ...) outside holiday periods? _____
9. If you are in school: which school do you attend?
 I go to: _____
 Location: _____
 I work as a: _____
 Location: _____
10. If you are working: what kind of work do you do?
 Location: _____
11. Which additional activities do you do next to your main job or your school?
 Working in a farm
 Selling credit or snacks (boiled egg, cake, groundnuts...)
 Cracking squish, peanuts etc.
 Something else, please specify: _____
12. What is/are your source(s) of income?
 I live with my parents, they support me
 I get an allowance from my parents or a family member
 I have a paid job
 I am self-employed (i.e. your own shop/farm/selling)
 Other, please specify: _____
13. What is your total household income (in CFA)?
 Less than 50.000 in total/month
 Between 50.000-100.000/month
 Between 100.000-150.000/month

Please state your respondent number here: _____
Questionnaire model US.1.1

Friends and family

Below you will find a number of questions regarding your friends and family members. Please consider only those friends and family members with whom you are in touch at least once every three months.

25. With whom do you spend **most** of your free time?
 I am usually alone
 My children, husband or boy/girlfriend
 Other family: parents, grandparents, siblings or extended family
 Friends
 Neighbors
26. If you go for a drink, with who do you usually go?
 I never go for a drink
 I go alone
 With my husband or partner
 With family members
 With friends
 With neighbors
27. How many friends do you have? Please give an estimate of those people that **you** consider your friends.

28. Do you have **friends** who live more than one hour away from you? If you do not have friends living at such distances, please continue with question 32.
 Yes
 No

29. If **yes**, in what kind of place did you get to know this friend/these friends living far away from you? *i.e. in church, in school, on the internet, through an NGO...*

30. Where is the one who lives farthest based? Please mention the nearest big city and the country if the city is not in Cameroon. *i.e. if your friend lives in Egipt, write down "Egipt, close to Memle". If your friend lives in New York, write down New York, United States.*

31. How do you keep in touch with these friends?

32. Do you have family members who live more than one hour away from you?
 Yes
 No
33. If yes, where is the one who lives farthest based? Please mention the nearest big city and the country if the city is not in Cameroon. *i.e. if your uncle lives in Egipt, write down "Egipt, close to Memle". If your family lives in New York, write down New York, United States.*

34. How do you keep in touch with this family?

35. How satisfied are you with your social life? Please give a mark between 1-20, like in school. *1 = extremely unsatisfied; 20 = extremely satisfied. You can also give for example 8, 14 or 18! Any mark in between 1 and 20 will do.*

Mobile phone use

Please tick **one** answer unless stated otherwise.

36. How often do you use a mobile phone?
 Never
 Less than once a month
 1-3 times per month
 Weekly
 More than twice a week
37. Whose mobile phone do you use?
 My own phone
 Family member
 The mobile phone of one of my friends or a family member
 I use phones from a phone booth at the side of the road (paid)
 Other, please specify: _____
38. This question is about your own mobile phone. If you do not have a mobile phone, please skip this question. Do you share your phone with others?
 Yes, with friends
 Yes, I self airtime
 No
39. Did your mobile phone use change since you started using the internet?
 No
 Yes, I now use it more
 Yes, I now use it less
 Other, please specify: _____

Internet use

The following questions address your **average** internet use. Please tick **one** answer unless stated otherwise.

40. Which share of your friends uses the internet? approximately _____ %
41. How often do you use the internet?
 Once per month or less
 2-3 times per month
 Every week
 Twice or more per week
 Approximately every day
42. How important is the internet for you?
 Very important
 Not important, not unimportant
 Unimportant
43. From which place do you usually access the internet?
 In an internet café or community center
 At home, on a personal computer
 From a mobile phone
 Other, please specify: _____



 Please be reminded that all your answers are **completely confidential**. Nobody, including myself, will be able to relate your answers to your name or other personal information!

Please feel free to voice your ideas and experiences, it will help me to learn and understand your situation better.

Please state your respondent number here: _____
Questionnaire model US.1.1

44. For which reasons do you use the internet? (more answers possible)
- Staying in touch with family/friends
 - Meeting new friends
 - Searching for new business contacts
 - Finding schools abroad
 - Entertainment (i.e. playing games)
 - Seeking financial resources
 - Searching for information
 - School assignments
 - Prayer requests/religious support
 - Other, please specify: _____

45. From the reasons you listed above, which is the **most important** reason for you to visit the internet?
- _____
46. Do you feel that your internet use has impacted your previous friendships?
- Yes
 - No

47. If **yes**, how has it influenced your friendships?
- _____
48. Did you also create online friendships?
- Yes
 - No

49. If **yes**, where do you find these friends?
- _____
50. How would you describe the intensity of your online friendships? My online friendships are...
- More superficial than my normal friendships
 - Comparable to my normal friendships
 - More intense than my normal friendships

51. How connected do you feel with your online friends compared to your "normal" friendships?
- I feel closer to my normal friends than to my online friends
 - I feel equally close to my online friends as to my normal friends
 - I feel closer to my online friends than to my normal friends.

52. Do you feel that there is a difference between people who do and people who do not use the internet?
- Yes
 - No
53. If **yes**, what differences do you see?
- _____
- _____

54. Has your internet use changed your life?
- Yes
 - No

55. If **yes**, how has your internet use changed your life?
- _____
- _____

56. Has your internet use has changed your ideas about Cameroon?
- Yes
 - No

57. If **yes**, how did it change your ideas about Cameroon?
- _____

58. Has your internet use changed your ideas about other places like the United States or Europe?
- Yes
 - No

59. If **yes**, how has it changed your ideas about these countries?
- _____

60. Has your internet use changed your financial situation?
- Yes
 - No

61. If **yes**, how did it change your financial situation? i.e. more/less financial resources? From which source?
- _____

62. What impact does your internet use have on your **svestovný život**?
- Positive impact
 - Negative impact
 - Both positive and negative impact
 - It does not have any impact on my life

63. Please explain your answer to the previous question
- _____

64. What impact do you think internet has on your society?
- Positive impact
 - Negative impact
 - Both positive and negative impact
 - It does not have any impact on the society

65. Please explain your answer to the previous question
- _____

66. Has internet use influenced your travel behavior?
- Yes
 - No

67. If **yes**, how did it impact your travel behavior?
- _____

68. How much time do you usually spent online when you use the internet?
- _____ hour(s)
69. How many people do you know who are involved in scamming?
- None
 - Less than 5 people
 - 5-10 people
 - 10-20 people
 - More than 20 people

Please state your respondent number here: _____
Questionnaire model US.1.1

Cultural orientation

The following questions ask about your ideas towards your culture. This helps me to get an idea of how you think about certain values.

70. What do you think about traditional religions?
- _____

71. How do you feel about traditional medicines?
- It should be sustained
 - It should be abolished
 - Other, please specify: _____

72. Please explain your answer to question 72: because _____

73. If you need information, which resource do you turn to **most often**? Please select only **ONE** answer.
- Friends and family
 - Important people such as teachers, the Chief or pastor
 - Books and publications, library
 - Internet
 - Other (please specify): _____

For the following questions, please use the example below:

EXPLANATION

The following questions use a scale from 1 = 5. The scale runs from strongly disagree to strongly agree, with the middle parts referring to the various in-between options. Please refer to the following example:

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

In this example, the statement is "The Netherlands should have won the finals of the World Cup instead of Spain"

→ If you **strongly agree** with this statement, circle 5:
Strongly disagree 1 2 3 4 5 Strongly agree

→ If you **just don't agree**, but not very strongly, circle 2 (disagree).
Likewise, if you **don't really mind**, you circle 3 (neutral). If you **agree but not strongly** you circle 4 and if you **strongly agree** you circle 5.

Now, for each of the statements below, please indicate to what extend you agree.

74. I should be able to choose what I feel is best for me rather than for my family.
- Strongly disagree 1 2 3 4 5 Strongly agree

75. If my parents change their religion, I will change mine accordingly.
- Strongly disagree 1 2 3 4 5 Strongly agree

76. The wishes of my family are more important than my own wishes.
- Strongly disagree 1 2 3 4 5 Strongly agree

77. When my parents are older, it is my responsibility to take care of them.
- Strongly disagree 1 2 3 4 5 Strongly agree

78. Privacy is very important.
- Strongly disagree 1 2 3 4 5 Strongly agree

79. If you do not agree with someone, you should avoid confrontation.
- Strongly disagree 1 2 3 4 5 Strongly agree

80. My neighborhood and community are important to me.
- Strongly disagree 1 2 3 4 5 Strongly agree

81. Everyone should be treated in the same way.
- Strongly disagree 1 2 3 4 5 Strongly agree

82. It is important to be alone sometimes.
- Strongly disagree 1 2 3 4 5 Strongly agree

83. I will not marry someone who is from a different background than I am.
- Strongly disagree 1 2 3 4 5 Strongly agree

84. We are all responsible for our neighborhood.
- Strongly disagree 1 2 3 4 5 Strongly agree

85. Family is more important than a career.
- Strongly disagree 1 2 3 4 5 Strongly agree

86. I like to wear European/US-style fashion instead of traditional dresses.
- Strongly disagree 1 2 3 4 5 Strongly agree

87. I prefer European culture over African traditions.
- Strongly disagree 1 2 3 4 5 Strongly agree

88. Skinny women are more beautiful than fat women.
- Strongly disagree 1 2 3 4 5 Strongly agree

THANK YOU FOR YOUR COOPERATION!!!

Please state your respondent number here: _____
Questionnaire model US.1.1

Dear participant,

Thank you for your interest in my research. I greatly appreciate your help! This questionnaire is designed to get a better understanding of what your life is like. Please fill out as much as possible. If you should feel uncomfortable answering a question, please write "N/A".

Please note that all your answers will be handled **completely confidentially**. Nobody, including myself, will be able to relate your answers to you as an individual. My research may be published, but it will not contain any names without prior permission. Thank you!

Profile questions

1. What is your age? _____
 More than 150.000/month
2. Are you male or female? Please select:
a. Male _____
b. Female _____
3. In which village/quarter do you live? _____
4. Is your first official language English or French? _____
5. Do you still live with your parents or caretakers?
a. Yes _____
b. No, I moved out _____
6. How many people live in the house where you live? _____

7. What is the **highest** level of education that you have **completed** or which you are **currently** following? _____

8. What is your **main** daily activity (school, work, both, ...) outside holiday periods? _____

9. If you are in school: which school do you attend?
I go to: _____
Location: _____

10. If you are working: what kind of work do you do?
I work as a: _____
Location: _____

11. Which additional activities do you do next to your main job or your school?
 Working in a farm
 Selling credit or snacks (boiled egg, cake, groundnuts...)
 Cracking eggusi, peanuts etc.
 Something else, please specify: _____

12. What is/are your source(s) of income?
 I live with my parents; they support me
 I get an allowance from my parents or a family member
 I have a paid job
 I am self-employed (i.e. your own shop/farm/selling)
 Other, please specify: _____

13. What is your total household income (in CFA)?
 Less than 50.000 in total/month
 Between 50.000-100.000/month
 Between 100.000-150.000/month

Friends and family

Below you will find a number of questions regarding your friends and family members. Please consider only those friends and family members with whom you are in touch at least once every three months.

25. With whom do you spend **most** of your free time?
 I am usually alone
 My children, husband or boyfriend/friend
 Other family, parents, grandparents, siblings or extended family
 Friends
 Neighbors

26. If you go for a drink, with who do you usually go?
 I never go for a drink
 I go alone
 With my husband or partner
 With family members
 With friends
 With neighbors

27. How many friends do you have? Please give an estimate of those people that **you** consider your friends.

28. Do you have **friends** who live more than one hour away from you? If you do not have friends living at such distances, please continue with question 31.
 Yes
 No

29. If **yes**, in what kind of place did you get to know this friend/these friends living far away from you?
I.e. in church, in school, on the internet, through an NGO...

30. Where is the one who lives farthest based? Please mention the nearest big city and the country if the city is not in Cameroon. I.e. if your friend lives in Epou, write down "Epou, close to Mamfe". If your friend lives in New York, write down "New York, United States".

31. How do you keep in touch with these friends?

32. Do you have family members who live more than one hour away from you?
 Yes
 No

33. If yes, where is the one who lives farthest based? Please mention the nearest big city and the country if the city is not in Cameroon. I.e. if your uncle lives in Epou, write down "Epou, close to Mamfe". If your family lives in New York, write down "New York, United States".

34. How do you keep in touch with this family?

35. How satisfied are you with your social life? Please give a mark between 1-20, like in school.
1 = extremely unsatisfied; 20 = extremely satisfied. You can also give for example 6, 14 or 18! Any mark in between 1 and 20 will do.

Mobile phone use

Please tick **one** answer unless stated otherwise.

36. How often do you use a mobile phone?
 Never
 Less than once a month
 1-3 times per month
 Weekly
 More than twice a week

37. Whose mobile phone do you use?
 My own phone
 The mobile phone of one of my friends or a family member
 I use phones from a phone booth at the side of the road (paid)
 Other, please specify: _____

38. This question is about your own mobile phone. If you do not have a mobile phone, please skip this question. Do you share your phone with others?
 Yes, with friends
 Yes, I sell airtime
 No

39. Did your mobile phone use change since you started using the internet?
 No
 Yes, I now use it more
 Yes, I now use it less
 Other, please specify: _____

About internet use

You have informed me that you are **not** using the internet. However, you may have friends who use the internet, or you may hope to use the internet one day.



Please be reminded that all your answers are **completely confidential**. Nobody, including myself, will be able to relate your answers to your name or other personal information!

Please feel free to voice your ideas and experiences, it will help me to learn and understand your situation better.

40. Which share of your friends uses the internet? approximately _____ %

41. What is your main reason **not** to use the internet at the moment? (more answers possible)

I don't know how to use it
 My parents do not allow me to use the internet
 I don't have money to pay for internet
 I don't find it important to visit the internet
 I don't have time to visit the internet
 I do not want to be associated with scamming or other internet activities
 Other, please specify: _____

42. Would you **like** to use the internet yourself?
 Yes
 No

Please state your respondent number here:
Questionnaire model No.1

Cultural orientation
 The following questions ask about your ideas towards your culture. This helps me to get an idea of how you think about certain values.

43. If **yes**, what do you expect to do online?
 Staying in touch with family/friend s
 Meeting **new** friends
 Searching for new business contacts
 Finding schools abroad
 Entertainment (i.e. playing games)
 Seeking financial resources
 Searching for information
 School assignments
 Prayer requests/religious support
 Other, please specify: _____

44. Do you feel that there is a difference between people who do and people who do not use the internet?
 Yes
 No

45. If **yes**, what differences do you see?

46. Have you experienced changes in friendships once people started to use the internet?
 Yes
 No

47. If **yes**, what changes have you noticed?

48. Do you expect internet use to change your life?
 Yes
 No

49. If **yes**, **how** do you expect it to change your life?

50. What impact do you think internet has on your **society**?
 Positive impact
 Negative impact
 Both positive and negative impact
 It does not have any impact on the society

51. Please explain your answer to the previous question

52. How many people do you know who are involved in scamming?
 None
 Less than 5 people
 5-10 people
 10-20 people
 More than 20 people

58. If my parents change their religion, I will change mine accordingly.
 Strongly disagree 1 2 3 4 5 Strongly agree

59. The wishes of my family are more important than my own wishes.
 Strongly disagree 1 2 3 4 5 Strongly agree

60. When my parents are older, it is my responsibility to take care of them.
 Strongly disagree 1 2 3 4 5 Strongly agree

61. Privacy is very important.
 Strongly disagree 1 2 3 4 5 Strongly agree

62. If you do not agree with someone, you should avoid confrontation.
 Strongly disagree 1 2 3 4 5 Strongly agree

63. My neighborhood and community are important to me.
 Strongly disagree 1 2 3 4 5 Strongly agree

64. Everyone should be treated in the same way.
 Strongly disagree 1 2 3 4 5 Strongly agree

65. It is important to be alone sometimes.
 Strongly disagree 1 2 3 4 5 Strongly agree

66. I will not marry someone who is from a different background than I am.
 Strongly disagree 1 2 3 4 5 Strongly agree

67. We are all responsible for our neighborhood.
 Strongly disagree 1 2 3 4 5 Strongly agree

68. Family is more important than a career.
 Strongly disagree 1 2 3 4 5 Strongly agree

69. I like to wear European/US-style fashion instead of traditional dresses.
 Strongly disagree 1 2 3 4 5 Strongly agree

70. I prefer European culture over African traditions.
 Strongly disagree 1 2 3 4 5 Strongly agree

71. Skinny women are more beautiful than fat women.
 Strongly disagree 1 2 3 4 5 Strongly agree

For the following questions, please use the example below:

EXPLANATION
 The following questions use a scale from 1 = 5. The scale runs from strongly disagree to strongly agree, with the middle parts referring to the various in-between options. Please refer to the following example:
 1 = strongly disagree
 2 = disagree
 3 = neutral
 4 = agree
 5 = strongly agree
 In this example, the statement is
 "The Netherlands should have won the finals of the World Cup instead of Spain"
 → If you **strongly agree** with this statement, circle 5:
 Strongly disagree 1 2 3 4 5
 → If you **just don't agree**, but not very strongly, circle 2 (disagree).
 Likewise, if you don't really mind, you circle 3 (neutral). If you agree but not strongly you circle 4 and if you strongly disagree you circle 1.

Now, for each of the statements below, please indicate to what extend you agree.

57. I should be able to choose what I feel is best for me rather than for my family.
 Strongly disagree 1 2 3 4 5 Strongly agree

Appendix 4: Recruitment flyer activity diary research

SURVEY: Internet use and everyday life

I am a student from Utrecht University, Utrecht, the Netherlands (Holland). I am looking for people who are willing to help me with my research into the effects of internet use on everyday life.

During one week, you will be asked to keep track of your activities and you will be asked some questions. You will receive some financial compensation for your help.

Are you **between 15-25 years** of age and would you like to participate? Then please contact me for more information!*

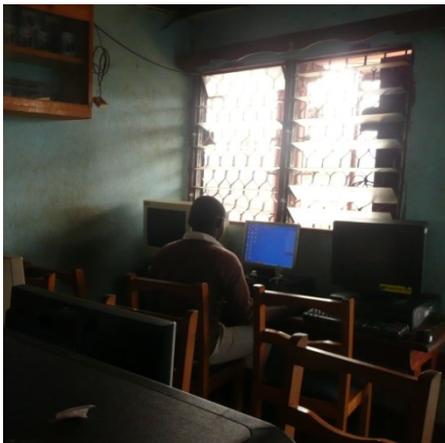
People who do NOT use the internet MAY ALSO participate!

*Please note that suitability to participate is established during the first interview.

CONTACT
Phone: 76292624
researchcameroon@gmail.com



Appendix 5: Tiko - an impression



Cyber café - Tiko



Motor taxis - Tiko



Outlook over burnt market square - Tiko



Cyber café - Tiko

Appendix 6: Muyuka - an impression



Cyber café - Muyuka



Children selling snacks - Muyuka



Main road - Muyuka



Muyuka - market area



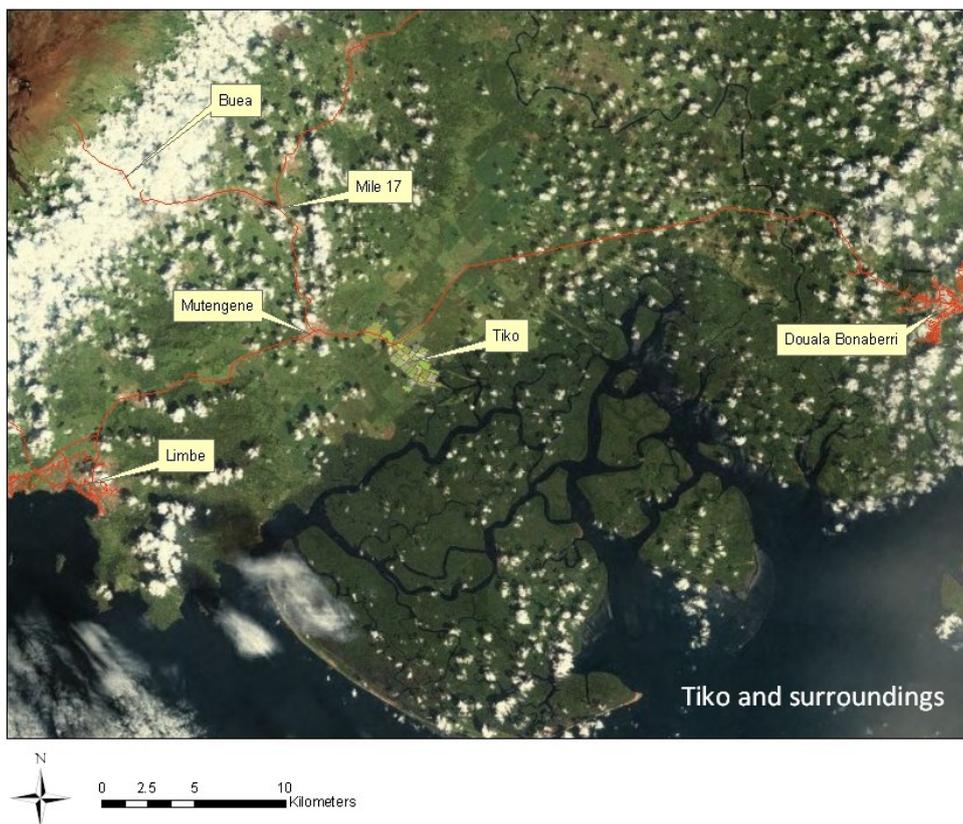
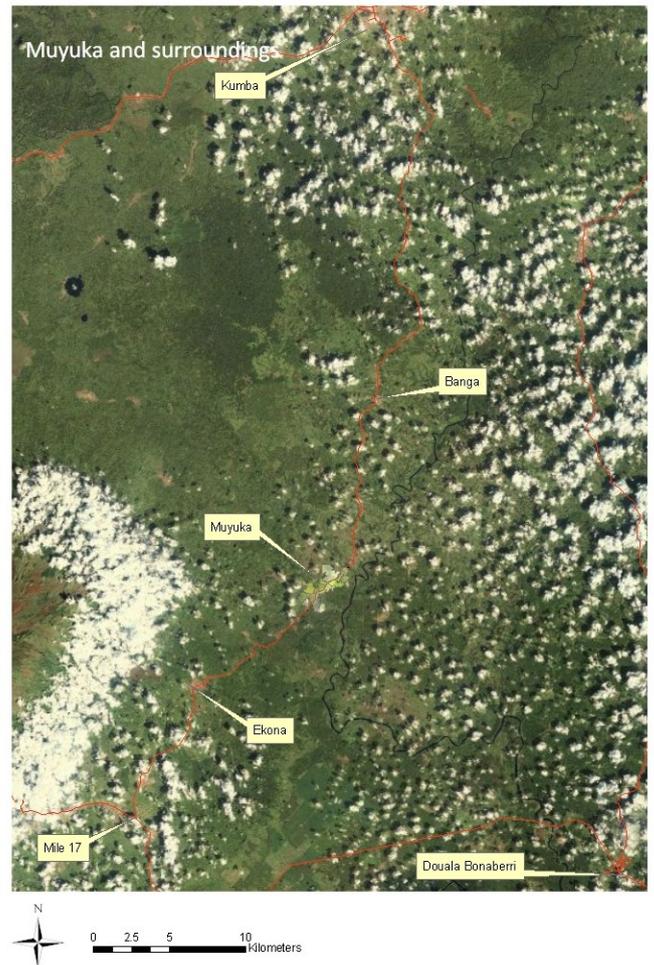
Makanga road - Muyuka



Market - Muyuka

Appendix 7: regional situation of Muyuka versus Tiko

Map produced by author. Background satellite image: Bing Maps, © Utrecht University 2010.



Appendix 8: Overview qualitative interviews

All interviews were conducted between July - September 2010.

The interview code is composed of an indication of the sex of the respondent (M/F), the age of the respondent, whether or not the respondent uses internet (i = internet user, n = non-user), a letter ID (A-H) and the name of the research location (Muyuka/Tiko). Key informants or groups are indicated differently, with C referring to cyber café owners, T indicating teachers and CT representing computer teachers.

#	Interview code	Informant	Summary
1	T1_tiko	Secondary school teacher Tiko	The informant corrected the 2010 national government exams (GCSE) with a question about the impact of computer use on the lives of Cameroonians. Mentions of scamming, webmarriage, cults, conversions resulting from internet use.
2	C1_Tiko	First interview cyber café owner Tiko	Mainly scamming, webmarriage/webcamming, school drop-outs, online courses
3	C2_Tiko	Interview with other cyber café owner Tiko	Respondent has studied in Russia! Mention of scamming, webmarriage, affected values, pride to be befriended with whites, non-users not up to date about life, imitation of Americans, school drop-outs after scamming, main share unproductive internet use, homosexuality promoted online
4	C3_Muyuka	Cyber café owner Muyuka	Scamming, internet use estimates, webmarriage briefly mentioned
5	T1_Muyuka	Secondary school teacher Muyuka	Low estimate of internet users, no perceived impact on daily lives, mention of scamming and webmarriage
6	M22iD_Tiko	Highly religious scammer, addicted to internet, lonely	Online subscription to religious information, complete change of identity, describes learning process from whites, necessity to engage in scamming.
7	F16iA_Tiko	High school student who just started to use internet	No changes in friendships yet, but online friends less interesting. Main reason to use the internet is to communicate with family. Hopes to find a job online in the future (abroad). Feels that internet will help to go abroad. White friends are necessary to find sponsoring for migration.
8	F25iB_Tiko	Cyber attendant, started from bottom by dry-cleaning	Internet has been good in her life, but some friends are too interested in marrying whites. Inside information in the behavior of whites, not much change in personality noticed.
9	M23nC_Tiko	CDC worker with only hear-say-stories about internet	Wants to use internet desperately, believes that it will change one's lifestyle and degree of 'advancedness'. Users more lively than non-users, technological advancement = national advancement. European culture preferable over African culture, because it's richer.
10	M19iE_Tiko	Temporary worker at CDC, has A-levels	Interesting interview with a lot of information. A.o. impact on friendships at home, impact from friends abroad, one of his friends converted to Buddhism. Mention of scamming, no mention of webmarriage.
11	M22iA_Muyuka	Farmer's child, internet user, did computer course	Travels to use the internet! If farming is too busy => no time for the internet. Using internet is modern, users more informed, easier to find a job. Internet as a way to go abroad through bible schools, girls online to look for husbands, walking with white = change in status, scamming = money
12	F25iD_Muyuka	Highly frequent female internet user; rarity!	Sees internet as a true community, very active on networking sites. Meets many new people and even phones/visits them, doesn't trust people easily but easier through internet, 95% of young male internet users scammers, webmarriage issue for girls, resolving

			arguments online, local neighbors fear internet. Did online course.
13	F22nC_Muyuka	Nurse from Muyuka, non-user	Interesting perspective on what non-users think of users. Negative idea about uncontrolled internet use, still highly in favor of introducing it in the country more widely. Mainly worried about women seeking men online and scamming.
14	F22iB_Muyuka	School drop-out, follows computer training	Tailoring and hairdressing low status, but computer high status. Likes to be online, users plan time more and tend to neglect nonline friends. Travel increases because of larger social network; parental internet use control at home, wish to leave Cameroon, change of status when going to the internet.
15	Youth community	Five youths in cyber café	Discussion around scamming practices and its consequences.
16	2Males_Muyuka	One user (20), one non-user (21)	The respondents are good friends. Non-user frequently joins user to internet, but can't yet use the net himself. User has different lifestyle than user: non-user chats more with friends in neighborhood, user spends most time online. Expectations and activities online in interview.
17	University students	One drop-out, one current student and one graduate	Many students don't find employment after graduation, which provides reasons for scamming. Internet use absolutely necessary in university; 95% also using it in university.
18	Additional remarks pilot group	After-discussion with participants of the test group	Interesting remarks about lack of change from internet use and impact of activity diary itself in their life.
19	CYCF	Discussion with two employees from the Cameroon Youth Communications Forum	Risks for youths to engage in scamming, domination of internet by whites, value of internet in having access to information about HIV/AIDS and in education.
20	SDI	Director of an all-round NGO, Social Development International, in Buea	Insights into scamming practices, criminal consequences, youth behavior.
21	PT_Buea	Headmaster of the Buea School for the Deaf	Perspective on internet use in the lives of deaf people.
22	Students UB	First discussion with university students; informal	Youths are very excited to use internet but don't see the need to use it "responsibly". Youths look for schools, information, search for jobs and try to stay in touch. Internet use mainly urban; scamming.
23	T1_Buea	Secondary School teacher in Bokova, Buea	Impact of internet on social networks, internet replaces face to face interaction but does increase the frequency of contact with existing friends. Youths are at risk of scamming; many are interested in quick money. Does see differences between users and non-users in his school.
24	Tiko Council	Informant from the Socio-economic council	Makes use of internet for email, music, pictures. Youths also frequently use it for scamming. School drop outs often consequence of scamming. Internet at home not uncommon but very expensive; easy access to information, accessible, job search, did online course.
25	F16nF_Tiko	Doesn't use internet, but has ideas about what she wants	Aims to look for pen friends online, no mention of scamming, hears good stories about being online. Also hopes to find information about her idols; feels that no good thing can come from the 'farmers' who live next door, because they "only see the farm all day long", so they are not her friends.
26	F25iG_Tiko	Cyber attendant promoted to secretary	High estimate of internet users, mainly male users online in her cyber, in-depth information about girls engaging in contact with men.
27	F26iH_Tiko	Cyber attendant, uses	Internet makes work/life easy. Youths use the net mostly for

		internet herself. Trained in Bamenda	chatting, to share pictures, make new friends from other countries. Girls are more interested in Facebook than men, not many look for husbands in her opinion. Intelligence connected to internet use, scamming has a specific, special language, but users/non-users otherwise quite comparable. Internet has strengthened friendships with people living far away, and created the wish to go abroad. Internet use = status. Main idea internet = connections abroad, going abroad, money. Addiction widespread.
28	M29iFr_Tiko	Francophone male, used internet for long, overview of employees	CDC people mix with others, great share cannot read/write, not many potential users. Internet only installed 2 months ago in CDC offices; differences in ways of being for internet users. Main share of the websites in English, which provides some language problems. But: internet = more informed and changes behavior.
29	F19iK_Tiko	Used to be school dropout, now back in school, uses the intern.	Boyfriends may refuse their girlfriend to visit the internet, internet users more intelligent, information availability, differences in friendships, computer is the way out for some who did not receive education.
30	CT1_Muyuka	Lady owning a computer training center, trained in Nigeria	Interesting, wise lady with a good bird's eye view on internet use in young people's lives. Surprise of a lady computer expert, social status, differences between users and non-users pronounced, include perseverance, addiction, ambitious, wish to leave Cameroon. American Lottery, scamming, some people scared to use the computer.
31	PS1_Tiko	Professional scammer; university graduate	Insight into the world of scamming, the community that the crime brings along and the tactics of incorporation of all layers of the society.

Appendix 9: Presentation of the activity diary in pidgin English

I get small diary, wona go fillam wit some small informations. Wona go fillam eeevery day eitha three times, or two times.

(Activity)

For here, na you go write any tin you doam eevery half houah. For here, any tin we I doam you writam for that time we I doam. Even if na sleep, you writam, idi chop rice, you writam, idi play, you writam. A-ny-tin.

(Type of activity)

For this one you go write, all these activities, whetha na planned activity, regular activity, or, impulsive activity. So you getta na R stand for regular activities: any tin we e doam every day the saaaame way. P stand for any tin you planna for doam. Like you plannam you di go Buea, but you nidi go Buea every day. Na planned activity da. I stand for some tin you nova expectam. Like you gettup for morning, you hear say you neighbor done die. E go disturb your activity for that day. So I stand for something you neva knew e go happen. Anota example ya friend if he come e say won a salut a friend we no well, da one I no plannam, idi "impulsive" activity, so you put I. Na for any one of that activity we di doam you choose ya own we you di doam, for any of those lettas.

(Transportation)

So transportation any place weh you waka dah day weta you waka wit ya foot, or you use machine, or bicycle, or writam for here. E you no use transport, you leavam, no write any tin.

(I am doing this with...)

You be di do this tin wit who. If na with eitha ya partna, boyfriend, or, girlfriend, ya parent or ya pikin you circle na P-C. Then na A stand for otha families you circle A. Eita ya cousin, brotha, sista, ya auntie, uncle, you put A. Then F stand for ya Friend. Then C stand for colleague or man we you an he de work one ting. Na ya colleague. If na he, you circlam. For aaany otha person, you put O. If you be de wit plenty people, you circle one, one. So if you be de wit ya aunt, ya friend and someone else, you di select na A, F an O. But if no man, you cross all.

(Communication page)

For every day, e di get one page for person we you an ye talk. You write time when you get communication, or, you di talk.

(I communicated with...)

Eita ya brotha, or ya mamie, ya papa, you writam. Like previous one, PC na stand for ya parent, ya pikin, ya boyfriend. A stand for otha family: ya brotha, sista, uncle, auntie, grandmotha. F na stand for ya... friend. N stand for neigh-bor. Na O for any otha person.

(This person is in...)

E be de na for Douala, or na for Makanga, or na for Limbe we e be di talk wit am, I no mean say you go Douala before you communicate wit da man, or for Limbe. You write the place we that man be de before you call ye.

(Means)

Na for means, you write means we you be usam for talk with in. Eitha for phone, or, for internet, or, face to face.

(Objective)

Na for last colum, you go writ weti we you talk wit he. Weta you wan beg money, or you wan beg permission for go some place, or, some man be di sick. Na ya objective this.

Then, if you forget for write for one day, you go for back here, you indicatam. And then you try for rememba weti you we be doam and the date. Then, for first page, you write startin-date. E be de date when you startam, ya startin-date. If you get any problem, you call me. Then me I go na send you message one or two times for one week.

Appendix 10: Note regarding activity diary materials

After the analysis, the following could be concluded about the functioning of the activity diaries:

1. In the instructions, participants were told to keep track of everywhere they went and everything they did. Nevertheless, this was not always properly understood or continued throughout the diary.
 2. The activity diary asked about people's activities, the type of activity, mode of transportation and the person they were doing this with. A brief description of each of these categories:
 - Activities were fairly well filled out, although the entries more often than not were unspecific, i.e. "travelling" instead of "travelling to Buea", and not containing the location of the activity. This hampered the interpretation of the materials.
 - The second column inquired about individuals' planning and the way the activities would fit into their lives. This aspect was added to the research in the hope to obtain some insight into the degree of planning in individual lives, as internet use could require and lead to increased levels of organization in the individual lifestyles. However, as the concept turned out to be too hard to understand for most participants, this information had to be discarded. An additional complication revealed itself in the fact that a substantial number of participants indicated that participation in the activity diary research had changed their daily life patterns, too.
 - The mode of transportation was often filled out correctly, although many did also forget to mention small trips (i.e. mentioning going to the market, but forgetting to put where and how they went). When no mode of transportation was mentioned, this was inferred from the distance and the answers from the questionnaire. Usually, transportation by foot was opted for, since this is the most common form of transportation.
 - The idea of the final column which asked about the individual's company was meant to test the social network of the participant (combined with other questions from the questionnaire)
 3. The results have been used to establish the following indicators in the SPSS database:
 - Number of travels per day
 - Total number of travels
 - Mode of transport used
 - Number of long-distance travels
 - % of total time spent on travelling
 - An improvised measure of travel scope, calculated as the total number of hours of travel using a given mode of transport multiplied by a factor representing the scope that the means of transportation allows:

Walking	1
Motor cycle	2
Public taxi	2
Public bus	2.5
Private transport	4
- Using this method, an estimate of the total distance coverage could be made where other means to evaluate distance were non-existent.
- Number of communications/day
 - Number of phone calls/day
 - Number of internet contacts/day
 - Time spent on internet/day
 - Communication score: total number of communications multiplied by the scope of such communications.

