The Nile connection : effects and meaning of the mobile phone in a (post)war economy in Karima, Khartoum and Juba, Sudan

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The Nile Connection. Effects and Meaning of the Mobile Phone in a (Post)War Economy in Karima, Khartoum and Juba, Sudan

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Leiden, The Netherlands
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Foreword

This report presents the findings of preliminary research undertaken into the effects and meaning of the mobile phone in Sudan. It was conceptualized as a first pilot study in the framework of collaboration between the telecommunications company Zain and the African Studies Centre in Leiden that started in July 2007. This pilot study is part of a larger research project entitled 'Mobile Africa Revisited, ICT and Society in Africa', which focuses on the relationship between new ICT (especially mobile phones) and society and culture in Africa. The project is intended as a comparative study of various regions on the African continent, with a special emphasis on so-called remote or marginal areas. The study will consider interaction between new ICTs and social relations, especially regarding mobility patterns. The word 'interaction' is crucial here: ICTs are viewed as shaping societies but also as being shaped by societies.

This theme can only be studied meaningfully with a qualitative methodology. In this sense, the study is different from earlier studies that were primarily based on the results of quantitative research.[1] Qualitatively, the project, of which this current study forms part, aims to relate mobile phone use to the wider historical and socio-cultural context of an area and thus achieve a greater in-depth knowledge of the processes involved. Qualitative research engenders a better understanding of people's evaluations of the mobile phone and the meanings attributed to new communication technologies. As the focus is on local people and not on predefined models, the results may be unexpected and novel relations and insights may be explored. The pilot study in Sudan was in this respect a methodological experiment and turned out to hold very exciting prospects for future comparative research.

Points of departure

The main focus of this report is on end-user interpretations of the introduction of the mobile phone, the interface between the mobile phone and socio-economic relations, and the creative uses to which the mobile phone is being put. A second line of study has been business people and mobile phone markets, including (international) trading networks and the problems and successes of the mobile phone market. The mobile phone is framed in the wider context of communication technologies in the history of Sudan. As end-users, people often do not realize the amount of labour involved in constructing, operating and maintaining communication technologies. On the basis of the interviews held in this study with business people and end-users, little can be said on this subject. Additional specific research would need to be devoted to this particular theme.

This research has been inspired by studies on mobile telephony based on observations in Latin America, the United States and Europe. In their approach to 'communication anthropology', Horst and Miller studied the social relations that are being created by the use of the cell phone, and Goggin and Katz offer an interpretation of aspects of mobile phone culture in which the issue of identity is

[1] For example, Leonard Waverman, Meloria Meschi, Melvyn Fuss, 'The impact of telecoms on economic growth in developing countries. Africa: The Impact of Mobile Phones' (Vodafone Policy Paper Series, no. 3, March 2005); Nigel Scott, etc, 'The impact of mobile phones in Africa' (Unpublished paper, Commission for Africa 2004).

central.[2] In their approaches, new communication technologies are not seen in deterministic terms: the introduction of the mobile phone does not automatically dictate changes in society. On the contrary, technology and society are defined in a relationship of mutual appropriation. This has also informed our approach and we strongly argue against the thesis of technological determinism that presumes a causal relationship between technology and society. Processes of such mutual appropriation that occurred in the past may be instructive, and since such appropriation is likely to be related to particular historical, socio-cultural, economic and political contexts, comparative approaches in research, even of single case studies like Sudan, are absolutely fundamental. That is why we have combined the anthropological qualitative approach with historical interpretation in a comparative perspective in this report. Framing communication technologies in their historical context also qualifies the presumed 'information revolution'. After all, 'all media were once new media'.[3]

Given the dynamics indicated above, it follows that we can only meaningfully study communication technologies in their relations to a particular time and context. Instead of universal data, relations will always be specific and context-bound. In this case, it was soon clear that usage of the mobile phone influences and is influenced by the many forms of mobility of Sudanese people. Sudan has always been a central country in the region, trade relations have crossed borders, and transport and communication technologies have played an important in the country's history. The recent political instabilities in the country have increased mobility and added new forms of mobility to the pre-existing forms. In this study, we have paid special attention to people's various forms of mobility and their relationship with ICTs.

The mobile phone in Europe and the US has become an important gadget for individual identities, as it shapes and reshapes social relations. In many African contexts, this conclusion would give rise to comparative questions not only about the histories of individual identities but also the different trajectories of (tele)communication technologies. The history and culture of interaction with these technologies in Africa often draw in the history of imperialism, resistance against colonialism and postcolonial political conditions. In some regions of Africa, mass telecommunication technologies have hitherto hardly played a role and the introduction of the mobile phone signals the first widespread means of mass communication. It is, therefore, important to understand the ways in which the mobile phone relates to these earlier histories of transport and communication and to study earlier processes of appropriation and inscription of communication technologies.

[2] Heather A. Horst and Daniel Miller, *The cell phone. An anthropology of communication* (Oxford 2006); Gerard Goggin, *Cell phone culture, mobile technology in everyday life* (London 2006); James E. Katz, *Magic in the air: Mobile communication and the transformation of social life* (New Brunswick and London 2006).

[3] Lisa Gitelman and Geoffrey B. Pingree (eds), *New media, 1740-1915* (Cambridge 2003) pp. xi, xv.

For our research we formulated research questions that clearly indicate our concern with the interactive relationship between communication technologies and society:

- How has the introduction of the mobile phone affected the economies of the Sudanese in various situations in the country?
- How has the introduction of the mobile phone shaped and reshaped the daily lives of people in Sudan?
- How do new communication technologies influence relations in the widespread, translocal, refugee and migrant communities that are so much part of the social history of Sudan?

For this preliminary research in Sudan we chose three case-study areas that varied in their historical relation to communication technologies in general and to the mobile phone in particular. Karima, Khartoum and Juba each represent a different context within the overall Sudanese framework. As explained in the methodological outline below, we chose to develop the case studies according to their context, namely: 'New social configurations in Karima', 'The mobile phone, modernity and change in Khartoum', and 'War, business and mobile telephony in Juba'.

Mobile telephony is a new field of study and, in the Sudanese case, even general literature on transport and communication is scant. It thus comes as no surprise that, in the course of this research, new elements and aspects of the mobile telephone business in Sudan came up that will require further study in the future. A notable area is Sudan's political context. Its recent history and current political situation informs not only the daily lives of many people, especially in the south and west of the country, but also directly relates to the possibilities and limitations of the development of the telecom industry. In this report we note the effects of the war, especially in terms of the distance relationships that it has created between people and families. Yet, although we mention the policies and politics of the telecommunication companies, the time frame did not allow us to go into this theme in detail.

This study will contribute to the debate on the relationship between ICT and development. New ICTs are often unequivocally expected to lead to positive effects in terms of socio-economic developments in Africa. Optimism reigns regarding the possibilities of new communication technologies reducing poverty, fostering economic opportunities and helping to create a healthy socio-economic climate. Instead of *a priori* supposing this positive relationship between new ICTs and development, it seemed more worthwhile here to study development directions and to describe local evaluations of the mobile phone.

This pilot study was conducted over a five-month period and involved a literature study, fieldwork, the transcription of interviews and observations, the writing of this report and the production of a short film and can therefore only yield preliminary results. It is impossible to come up with comprehensive in-depth and insightful qualitative research on a complex and multidimensional phenomenon as the mutual appropriation between Sudanese societies and ICTs in such a time span. In the conclusion we elaborate on interesting fields that we feel require more in-depth study.

Research methodologies

The pilot study focused on the so-called micro level of research. This does not mean that we only come up with micro-level analysis but in our methodology the emphasis rests on the analysis of cultural and social processes that are in play at the level of family life and social networks in relation to the introduction of the mobile phone.

The qualitative methods used in this study were mainly the in-depth interview with open-ended questions and observation of mobile phone use and the integration of the mobile phone in daily life. The open interviews were conducted by all the members of the team. Two Sudanese researchers – both resident in Khartoum, one familiar with the Juba context, the other with Karima – carried out interviews for about three weeks in Juba, Khartoum and Karima. Most of these were held in colloquial Arabic and transcribed into English. The two Dutch researchers each went to Sudan for two weeks to supervise the two Sudanese researchers, carry out their own interviews and become acquainted with the research situation in the country.[4] A list of the interviews held can be found at the end of this report.

The case studies each called for a unique approach, leading to different directions of inquiry. The case study in Karima entitled 'New social configurations in Karima' concerns a small town in the northern state of Sudan where the mobile phone has been introduced only relatively recently. It reveals the relationship between the mobile phone and the fluctuating dynamics of the overall transport and communication sector. The research team followed a family and their daily lives and observed their ordinary usage of the mobile phone; thus allowing a perspective 'from below' on mobile phone usage and seeing the appropriation processes in connection with life in a small town with its own rhythm and connections. In the capital Khartoum, which forms the second case-study area, mobile phones have been present now for almost a decade. Here the emphasis is on mobile phone culture and the debate surrounding this new communication technology. As these debates concern adolescents in particular as an important and innovative group of end-users, we chose to focus on the student population and its various networks. In the Juba case study, we considered the mobile phone in view of the legacy of the war and the economic prospects and problems connected with the post-war context. The emphasis was therefore placed on interviews with business people who creatively struggle with the particular disadvantages and possibilities of the Juba market.

Special attention is paid to the historical context of communication in Sudan. This aspect of the research is based on a literature review of the history of communication in Sudan as well as on oral history, especially interviews with older people. The short research period did not allow time for any archival research. Qualitative research requires research relations that are built on trust and long-term observation, and in-depth knowledge has not yet been built up because of time constraints. This report should thus be considered as preliminary and indicative only of the possible directions in which the relationship between mobile phones and society in Sudan may develop.

[4] Inge Brinkman went for two weeks from July 18 to august 4 2007, she visited Juba and Khartoum; Mirjam went in September (20-29), Khartoum and a visit on Sept 24 with Zain staff to O'Beid and El Fasher) and from November 20 to December 2, 2007 (Khartoum, Karima, Juba). The production of the film was done during this period together with Sjoerd Sijsma. Inge met Hisham and Peter and started the research, Mirjam's visits had the character of follow-up and supervision. These visits were in close collaboration with Hisham and Peter.

Main findings

This report is based on preliminary research and the main findings should be read as guidelines for future research rather than as final conclusions.

- Mobile phones have become the most important means of communication in Sudan: between people from different regions, between people who live outside Sudan and even within towns. For some regions in Sudan this new means of communication constitutes a drastic change in comparison to the recent period of war that led to a vast reduction in communication possibilities for civilians. At the same time, the legacy of war still looms large and many of the present problems in transport and communications are related to this history of warfare and political tension.
- The introduction of the mobile phone has led to various developments in the economic sector: a new market has emerged around the technology itself with (re)new(ed) international linkages (mainly to Dubai, Egypt and Saudi Arabia) and complex chains of distribution and services ranging from multinational companies to market stalls. In addition, the mobile phone has become a device to assist in the organization and expansion of various types of commercial enterprises, including small-scale, informal business.
- In the relationship between the genders, the mobile phone has become a crucial catalyst for change. Many (especially young) people see the mobile phone as a device that helps them pursue their own chosen path in life and opens up possible new contacts and opportunities. This naturally has consequences in an Islamic society for gender relations where new opportunities are being created, especially for (young) women. This is leading to intense debates on morality and sexuality.
- The mobile phone is used in many creative ways, and has become, particularly in regions where it is well integrated (like in Khartoum) a marker of identity within the realms of a mobile phone culture. In remote areas where people are displaced over long distances as a result of war or for economic reasons, the mobile phone has become a means of keeping families and social groups together: distance no longer means rupture for these families. In cases of forced displacement, the mobile phone becomes an active tool and mobile phone activism plays a role.
- Mobile phone technology is clearly extending rapidly even to the poorer sections of Sudanese society and many people stressed the positive effects it has had in business terms. At the same time, it became clear that the mobile phone will not lead to an equal society. On the contrary, it will exacerbate differences between the haves and the have-nots and increase the gap in economic opportunities open to people. These tendencies appear most clearly in the Juba case study.
- Access to qualitative communication technologies is an important asset for the socio-cultural development of a society. This study, however, also shows the negative sides of this development: new forms of inequality, the debate on morality, and the direction of changes in social relations were not considered positive by all informants.

- It became clear that the field of telecommunications is closely interrelated with a country's political developments. In a complex political situation, such as that in present-day Sudan, the effects of the extension of the mobile phone network and the functioning of the companies interact with state policies and political controversies in the country.
- At all levels, new media such as the mobile phone enter into a historical context of socio-economic and political relations and a set of earlier communication technologies. In Sudan the particularities of the history of Condominium rule and postcolonial state policies show not only at the macro level in the ways in which mobile telephone companies operate but also at a micro level, in the daily usage of the mobile phone.

Our future research questions will concentrate on the following areas:

1. New ICTs and development;
2. The relationship between new ICTs, various forms of mobility and socio-economic development;
3. Morality, identity and social relations, more specifically gender relations and relations between the generations;
4. The political economy of the mobile phone technology (national politics, political tensions, the mobile phone companies and the history of ICTs); and
5. The historical embedding of new communication technologies (relations with older communication technologies, with historical patterns of mobility and communication, with past policies and politics).

Acknowledgments

The authors of this report started studying the introduction of the mobile phone and the processes of appropriation accompanying it in the middle of July 2007. We each visited Sudan for short periods to start the interviewing process and to establish contact with our Sudanese counterparts. Two commissioned researchers worked on the project in August and September 2007, conducting interviews and gathering research material. Hisham Bilal focused on the case studies in Khartoum and Karima, while Peter Taban Wani did research in Juba. We want to thank them both for their contributions. Part of the research project consisted of the production of a film. Sjoerd Epe Sijsma was our film producer and was a valuable partner in our team, and we would like to thank him for his contribution. The film will be presented as a separate product of this project.

We would also like to express our thanks to Sanaa Abasher and her family for their hospitality, the Netherlands Embassy in Khartoum and the Joint Donor Team in Juba, especially Marisia Pechaczek, for their support and Zain for arranging many of the administrative and organizational aspects of the project. We and the commissioned researchers talked with a lot of people and we would like to thank all of these people for devoting so much time and energy to our discussions. Francis Nyamnjoh offered very useful comments on this report, although that does of course not in any way release us from our responsibilities as the authors of this report. We are grateful to Ann Reeves for improving the English in this report and to Marthe Dijk who did the final lay-out of this report.

Mirjam de Bruijn
Inge Brinkman

1. Introduction

A vast country

Sudan is the largest country in Africa, with its territory covering more than 2.5 million km^2.

Picture 1: Map of Sudan

This first sentence can be read as a piece of ephemeral data, a basic fact and background information on Sudan. Yet its implications extend much further: Sudan's vastness and the distances involved have shaped the history of communication technologies in this area. It is, therefore, no coincidence that one of the interviewees pointed this out as a specific characteristic of communication technologies in Sudan. He explained why people from Darfur who are being employed as domestic workers in the capital Khartoum consider it very important to acquire a mobile phone:

> In the past there was no form of contact possible: only every one or two years sending a letter that would never arrive... By plane it takes three hours to reach the other side of Sudan: it is a vast country.[5]

[5] Interview 6.

He was referring to Sudan's long history of migration and cultural contact as well as to the limits and possibilities of communication over enormous distances. The vastness of the country is posited as a specific feature in relation to the history of Sudan's communication technologies. In other words, the report's first sentence should be at the heart of any analysis of Sudanese mobile telephony.

The geography of Sudan is also strongly related to communication technologies in other respects. Crucial examples are the presence of the River Nile and links with the Red Sea. The Nile and its tributaries have, throughout Sudanese history, played an enormous role in river transport, while port activities developed in both coastal and riverain areas. Sudan's geography and climate are highly diverse: there are deserts and tropical rainforests, there are mountains and plains, and there are the dry, stony coastal regions along the Red Sea and the huge swamps of the Sudd. The vastness and diversity of the land have led to communication technologies playing a pivotal role in Sudan's history. As Richard Hill wrote in 1965:

> The railways, deep sea harbours and inland waterways of this country have played a formative part in the development of the modern Republic of the Sudan […] Their history is the history of the Sudanese people.[6]

Politics and borders

But whose history are we actually discussing? A long-term historical perspective is necessary to describe how this immense country, with its varied and changing population, came into existence.

Like many countries in Africa, Sudan's present borders were created in the context of foreign domination. Yet the word Sudan already existed before that time. In the Middle Ages, the term was used by Arab travellers to refer to an even larger area than the present country: in the Arabic world 'Bilad al-Sudan' (the Country of the Blacks) was used to indicate the entire region bordering the Sahara to the south. This influenced naming patterns until very recently: only in 1959 did 'French Sudan' come to be called Mali.

Present-day Sudan started with the invasion of Ottoman-Egyptian troops in 1820. The Ottoman Viceroy of Egypt, Muhammad Ali, saw in the expansion a chance to gain access to the area's wealth, which was based on land, cattle, gold and the slave trade. The Ottoman-Egyptian rule included many regions of today's Sudan, although in the south their control was minimal, and their rule was contested in other areas too.

The Mahdist Revolt that started in the 1880s has often been presented as the most successful attempt to resist the government by the Ottoman-Egyptians but it was also a movement that focused on religious purity in a politically insecure situation.[7] The Mahdists initially assembled various groups that joined the movement for diverse reasons. They managed to take large parts of Sudan, and Omdurman was made the capital of the new Mahdist state. After the death of the first Mahdist leader, however, the movement lost momentum and Mahdist rule eventually ended after the British General Kitchener defeated Mahdist forces during the Battle of Omdurman in 1898. In the following year, French claims to Sudan were countered when Kitchener got the

[6] Richard. Hill, *Sudan transport: a history of railway, marine and river services in the Republic of the Sudan* (London 1965) p. v.

[7] P.M. Holt & M.W. Daly, *A history of the Sudan. From the coming of Islam to the present day* (Harlow 2000) pp. 75-85.

upper hand during the Fashoda crisis and British rule was established. Egyptian interests in the territory were honoured through theoretically agreeing to a joint Anglo-Egyptian government called the Condominium Agreement. However in practice, the British determined political authority in Sudan, which led to reactions from Egyptian nationalists in 1919.

British authority was not established easily; and many areas, especially in Southern Sudan, were not brought under British control until the late 1920s. The international borders were not at all clear and agreements about the border with the French territories to the west of Sudan, the Belgian Congo and Ethiopia were signed between 1899 and 1914. The Sultanate of Darfur even remained autonomous until 1916 when its leader Ali Dinar was killed and the Sultan's capital El Fasher was taken by the British. Three years later the French and the British signed a boundary agreement.[8]

Deteriorating Anglo-Egyptian relations due to the nationalist events in 1919 in turn influenced nationalism in Sudan. In 1924 the White Flag League was founded by a former army officer from the south who had been imprisoned for demanding 'self-determination for the Sudanese' in a newspaper article. Pro-Egyptian army officers joined the association but, after the British had quelled the insurrection by bombing the military hospital where the insurgents had taken refuge, the movement fell apart and most of the Egyptian troops were withdrawn from Sudan.[9] In 1936 Egypt became independent but Sudan's situation remained unchanged. It was only after a coup was staged in Egypt in 1952, which brought the republican Naguib to power, that the Sudan question was reconsidered and steps were taken towards Sudan's independence. Pressure from various nationalist groups and protest actions such as mutinies, strikes and demonstrations in Sudan certainly played a role in this.[10]

In 1956 Sudan became an independent nation but even before its flag was hoisted civil war broke out between the North and South and in 1958 a first successful coup took place. Political instability did not decrease and, after a conflict-ridden election period, another coup in 1969 brought Jaafar Nimeiri to power. In 1972 a peace agreement was signed between North and South Sudan. The terms of the agreement were not kept and a second civil war started in 1983, only ending with the Comprehensive Peace Agreement that was signed in 2005. In 1985, Nimeiri was overthrown but the subsequent government, which had been installed after elections in 1986, was ousted in 1989 following another coup. With this began the rule of the National Islamic Front under the leadership of Brigadier General Umar Hasan Ahmed al-Bashir.[11]

Sudan's geopolitical position in the international community was influenced by the Cold War and since 9/11 it has been affected by US policies against Islamic states. During the Nimeiri period, the United States supported the Khartoum government, while the insurgents in the South were leftist-oriented. After 9/11, the US accused Sudan of sponsoring, harbouring and supporting Islamic terrorists and classified it as a 'rogue state'. In 1998 the US bombed a pharmaceutical plant near

[8] Ibid. pp. 103-104, 110-111.
[9] Ibid. pp. 102, 112-116.
[10] Ibid. pp. 135-141.
[11] Ibid. pp. 179-187.

Khartoum, claiming it was an arms factory and, after the crisis in Darfur developed, an embargo was imposed on several Sudanese companies by the US.[12]

As peace with the South was being reached, the conflict in Darfur was intensifying to an unprecedented level. The international community stood virtually powerless as a humanitarian crisis in Darfur developed and millions of people fled into neighbouring Chad. In all these conflicts, there have been people who regarded secession from the central Khartoum-based state as an ideal.

Independence did not automatically lead to accepted borders and there have been disputes with Kenya, Chad, Egypt and Ethiopia over the exact location of the international frontier. And internally, the borders between the North and the South, which in the federal context are of considerable importance, are still under discussion. As these concern oil-rich areas, the economic interests at stake are high.[13]

History of mobility

Sudan is a country at the crossroads of the Middle East and Sub-Saharan Africa, and between West Africa and countries in Eastern Africa. The North and the South of Sudan have often been typified in opposite terms: the black, African, Christian South versus the Arabic, Muslim North. Reality proves to be much more complex. Immigration and emigration, and the exchange of ideas and influences from various regions have rendered the picture far more diversified than this simple binary opposition.

These links are older than often assumed. The patterns of mobility for trading purposes date from long before Turco-Egyptian rule began. Various trade routes, linking for example Sennar and Shendi with Egypt, and Darfur with Suakin, crosscut the territory of present-day Sudan. Apart from these routes, pilgrims from nations to the west of the Sudanic states trekked through Darfur to visit Islamic holy places on the Arabian Peninsula.[14] Most of the Sudanic states' economies were not only based on trade but combined agriculture and food production with pastoralism, slavery and trade.[15]

After Turco-Egyptian rule had been installed, contact between Egypt and Sudan became more intense. In addition, British influence grew sharply and was to increase after the Condominium Agreement. Especially in the early phases of British rule, the cosmopolitan character of many sectors of the colonial economy was striking. Thus Yemenis, Indians and British workers were involved in building the Suakin-Berber railway line. Italian, Maltese, Greek, Syrian, Turkish, Egyptian, British and Sudanese workers were all involved in Atbara town in the railway sector.[16] Given the shortage of labour, pilgrims from West Africa were encouraged to settle in Sudan.[17] The British tried to curb Egyptian influence in Sudan and even expelled the Egyptian military, but Sudanese-Egyptian interaction continued.

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[12] Ibid. pp. 192-193.
[13] J.G. Dak, 'North, South Sudan border of 1956 is incorrect – expert', *Sudan Tribune* (19 September 2007).
[14] Holt & Daly, *A history of the Sudan* pp. 7-10. For an account of a Darfur caravan leader, see George Michael La Rue, 'Khabir 'Ali at home in Kubayh: a brief biography of a Dar Fur caravan leader', *African Economic History* 13 (1984) pp. 56-83.
[15] Donald Crummey (ed.), *Land, literacy and the state in Sudanic Africa* (Trenton, Asmara 2005) p. 5.
[16] Hill, *Sudan transport* pp. 40, 157.
[17] Holt & Daly, *A history of the Sudan* p. 109.

The ties between Sudan and the Arabian Peninsula and the Gulf have been of historic importance and continue to be so today. Migration to Saudi Arabia has been extensive, mostly related to the economic opportunities there.[18] The wars in Sudan have led to a mass exodus abroad, especially to Uganda and Chad.

BOX 1
Sending remittances: Old and new

It is clear that mobility has played a role in Sudanic history for a very long time and issues related to mobility and communication are not as new as we may tend to think. Sending remittances, for example, is often seen as a modern issue, related to the postcolonial economy.

Yet correspondence from the past indicates that this phenomenon has existed for a considerable time. A letter dated 1895, from a man called Ahmad al-Mirghani addressed to a lady called Madina Bint Muhammad Ahmad, indicates the receipt of school fees for a new pupil at the Islamic school: 'We inform you that your consignment, which you sent to be delivered to Ahmad Muhammad Salih al-Nidayf, [consisting] of five riyals, has reached us and has been accepted by us.'[19]

Clearly also in those days, monetary obligations could be discharged across space. Throughout colonial history we find examples that stress the importance of sending money. Migrants were expected to send remittances to their families in the rural areas. A popular song from the 1950s, for example, tells of a mother in the countryside waiting for her son to send her some money.[20] The methods may have changed but sending remittances is nothing new.

[18] Gassoum K. Bilal, *Some salient features of migration to the GCC countries. The experience of Sudanese emigrants to Saudi Arabia, 1970-1995* (s.l. 2006).
[19] Jay Spaulding, 'The birth of an African private epistolography, Echo Island 1862-1901', *Journal of African History* 34, 1 (1993) p. 140.
[20] Ahmad Alawad Sikainga, 'Corporate identity and solidarity among the railway workers of Atbama, 1924-1946', *New Political Science* 23, 1 (2001) p. 128.

Mobility can be related to many factors. In Sudan, warfare has been a major factor in migration and in the course of Sudan's history many people have attempted to escape hunger, insecurity and violence related to armed conflict. At least four million people have left the South and Darfur during the post-independence wars and there have been huge numbers of casualties due to violence, famine and disease.

Sudan's first civil war started even before independence and lasted until 1972. The legacies of state power in northern and southern Sudan were very different. Turco-Egyptian influence had been much less pervasive in the South than in the North and Mahdist rule had hardly extended to the South. The British position was therefore not the same in the North and in the South from the start of the Condominium. The British only intensified these differences by limiting contact between the North and the South, and by setting up a special administrative system for South Sudan called the 'Southern Policy'. The South remained peripheral to the central government in Khartoum and most of the colonial development projects (such as the large cotton scheme in Gezira) focused on the North. Furthermore, sharp internal differentiation in the South took place as colonial stereotypes about ethnic groups and agriculturalists versus pastoralists informed policy. After the Second World War, the regional approach was stopped, which led to many Southerners becoming suspicions of Northern intentions about Sudan as a whole.[21]

When the plans for independence were drawn up, it turned out that northern political leaders were disinclined to consider the federalization of the Sudanese state and many Southerners feared Northern dominance. These fears were intensified with the growing emphasis placed on Islam and Arabic in education and religion. Christian missionaries' activities were severely curbed, Islamic institutions were built and Northerners were appointed to political positions in the South. These provocations led some in the South to take up arms and through the organization *Anya Nya* a guerrilla war started against the central government. Fighting never became widespread and internal controversies divided the Southern leadership, both in exile and in Sudan. After the coup in 1969, the war initially intensified but in 1972 negotiations started with the Khartoum government, leading to the Addis Ababa Agreement.[22] Ten years of peace followed.

After attempts to grant less autonomy to the South than stipulated in the peace agreement and the extension of Islamic *shari'a* law to include all Sudanese citizens, a second civil war started in 1983. At first, the Southern groups were organized in *Anya Nya II* but the Sudan People's Liberation Movement/Army (SPLM/SPLA) was formed in 1983 under the leadership of John Garang whose aim was to create a 'New Sudan' that would allow the regions considerable autonomy and oppose racism and tribalism. Fears of Dinka domination, however, led to internal conflict, with fighting not only between the Southern militias and the Northern army but also amongst Southerners themselves, who rallied around the leadership of Riek Machar and John Garang. With the increasing islamization of the Sudanese state, the war was appearing more as a jihad, a holy war against non-believers. Yet although the religious-political

[21] Douglas H. Johnson, *The root causes of Sudan's civil war* (Oxford 2003) pp. 9-19; UN website: http://www.unsudanig.org/ ; Holt and Daly, *A history of the Sudan* pp. 130-131.
[22] Johnson, *The root causes of Sudan's civil war* pp. 27-37; Holt and Daly, *A history of the Sudan* pp. 153-155, 170-171.

context was influencing the conflict, economic interests were at least as important, and the war became increasingly intensive in the oil-rich areas of the South.[23] Although fighting continued, negotiations between the government and the southern parties started in 2001. In January 2005 the Comprehensive Peace Agreement was signed, which led to the formation of the Government of Southern Sudan (GOSS). When some months later John Garang died in a helicopter crash, riots broke out but the parties involved stuck to the peace agreement.

Before the agreement was signed, tensions in Darfur mounted and Sudan experienced a new crisis. The Darfur region had faced a devastating famine in the 1980s that was related not only to failing rains but also to political conflict and misrule. This led to massive demonstrations against rising bread prices in Khartoum and to some Darfurians joining the Southern movements during the second civil war. Although there had been calm in the region for some time, violent incidents occurred from the late 1990s onwards and in 2003 the conflict in Darfur flared up with stark intensity. Several groups opposed the central government and called for more autonomy for Darfur. The government reacted by bombing villages and offering support to nomadic militias called the *Janjaweed*. Despite negotiations and agreements, fighting still continues today. The war has led to a widespread and deep crisis that has left hundreds of thousands dead and forced many more to leave their homes and cross the border into Chad. This, in turn, has led to an extremely volatile situation in Chad where a civil war is also being fought. In addition, the Chadian government declared war on Sudan in 2005. Plans to have UN peacekeeping forces intervene in Darfur were opposed by the central government that labelled the plans as a 'foreign intervention'. UN organizations are currently attempting to assist victims of the floods that hit many parts of Sudan in July 2007.[24]

[23] Johnson, *The root causes of Sudan's civil war* pp. 59-73; 91-94, 162-165; Holt and Daly, *A history of the Sudan* pp. 171-173.

[24] Based on various newspaper articles; the UN website: http://www.unsudanig.org/; and Wikipedia: http://en.wikipedia.org/wiki/Sudan .

2. Transport and communication technologies in Sudan: Historical remarks

The times of trade caravans

Transport and communication have played a vital role in the history of Sudan. Trading patterns, migration, interactions between people and cultural exchange have all been strongly related to communication and transport technologies.

Canoes and boats on the Nile and on other rivers as well as along the coast were crucial in commerce and contact. Camels were vital for long-distance trade, while donkeys and other draught animals were important for local transport and agriculture. Communication technologies not only supported external contacts but were also used in the internal dynamics of the kingdoms and states in the region. Literacy, for example, has played an intermittent role in the region for over four thousand years and was used mainly in connection with land sales.[25] At the same time, oral communication was equally important in social contact between people and at the political level.[26] In the personal sphere, messaging and visits were crucial, whereas at the political level communication also included drum language.

Picture 2: Drums at Sultan Dinar's palace museum, El Fasher

[25] Crummey (ed), *Land, literacy and the state in Sudanic Africa*.
[26] Janet Ewald, 'Speaking, writing, and authority: explorations in and from the Kingdom of Taqali', *Comparative Studies in Society and History* 30, 2 (1988) pp. 199-224.

Under foreign domination

New technologies were introduced during the Turco-Egyptian rule of Sudan, although numerous attempts failed and promises remained unfulfilled. All the same, new possibilities emerged in the nineteenth century with the introduction of new forms of shipping with sails and the first steam vessels that appeared in the 1850s. Later, a fleet of government steamers greatly increased the administrative control of the Turco-Egyptian government over Sudan but as the Nile is by no means easy to navigate, the possibilities remained limited.

Another factor in empire-building was the construction of telegraph connections. In 1866 Upper Egypt was connected with Wadi Halfa and a decade later the line was extended as far as Khartoum and the Red Sea. The telegraph system was almost entirely destroyed during the Mahdist revolt; with only the section that connected the dockyard near Khartoum with Omdurman remaining operational. Under Turco-Egyptian rule a start was also made with railway construction and the first section of railway between Wadi Halfa and Saras was opened in 1875.[27]

Picture 3: Railway construction
Source: Hill, Sudan transport, plate 4

When the British took over after the Mahdist revolt, they focused in particular on extending the rail network and at independence Sudan had the fourth-largest railway system in Africa. In the initial phase of conquest and re-conquest (after the Mahdist period), the emphasis was on military railway lines but later the tracks were also used for civilian transport. These railway connections were of crucial importance to Sudan's economy; for example, exports doubled after the Red Sea railway was built in 1906. Railway towns like Atbara and Karima attracted labour from the countryside

[27] Hill, *Sudan transport* pp. 1-2, 15; Holt and Daly, *A history of the Sudan* pp. 70-71.

Picture 4: The railways in the North are no longer in use

and grew into sprawling communities. In some cases, a strong sense of corporate identity developed among railway workers, which even led to strikes.[28]

The British realized the importance of communication for empire-building and control over the South of Sudan, for example, only became effective after communication lines were set up. Until well after the First World War attention was focused on making the Nile navigable to the south to increase administrative control. Shipping and port building also increased during the Condominium. The decision to move the Red Sea port from Suakin to Port Sudan was a major change in maritime transport, while the creation of various steam services greatly enhanced river transport.[29]

Until the First World War, the construction of telegraph lines and road connections had resulted in a basic network but then construction stagnated. It was no coincidence that road transport remained poorly developed: after 1930 the British forbade road construction from competing with the railways in the entire northern area. In the south, road building was not discouraged as such but the distances and the costs involved meant that roads were at best rudimentary. A telephone system started in 1903 and developed steadily over the years until after the Second World War when it received a major impetus.[30] Increased literacy not only led to a wider use of letters and postal services but also to the increased importance of daily newspapers. As in the

[28] Hill, *Sudan transport* pp. v, 56, 74-76; Holt and Daly, *A history of the Sudan* p. 108; Ahmad Alawad Sikainga, *City of steel and fire. A social history of Atbara, Sudan's railway town, 1906-1984* (Portsmouth, Oxford, Cape Town 2002); Sikainga, 'Corporate identity and solidarity', pp. 113-129.
[29] Holt and Daly, *A history of the Sudan* pp. 103, 108; Hill, *Sudan transport* pp. 68-69.
[30] Holt and Daly, *A history of the Sudan* p. 108; Peter Cross, 'British attitudes to Sudanese labour: the foreign office records as sources for social history', *British Journal of Middle Eastern Studies* 24, 2 (1997) p. 229.

past, oral communication and information exchange remained important with radio services attracting large audiences. Sudan Airways was already set up before independence, although only afterwards did air traffic amongst Sudanese citizens start to grow.[31]

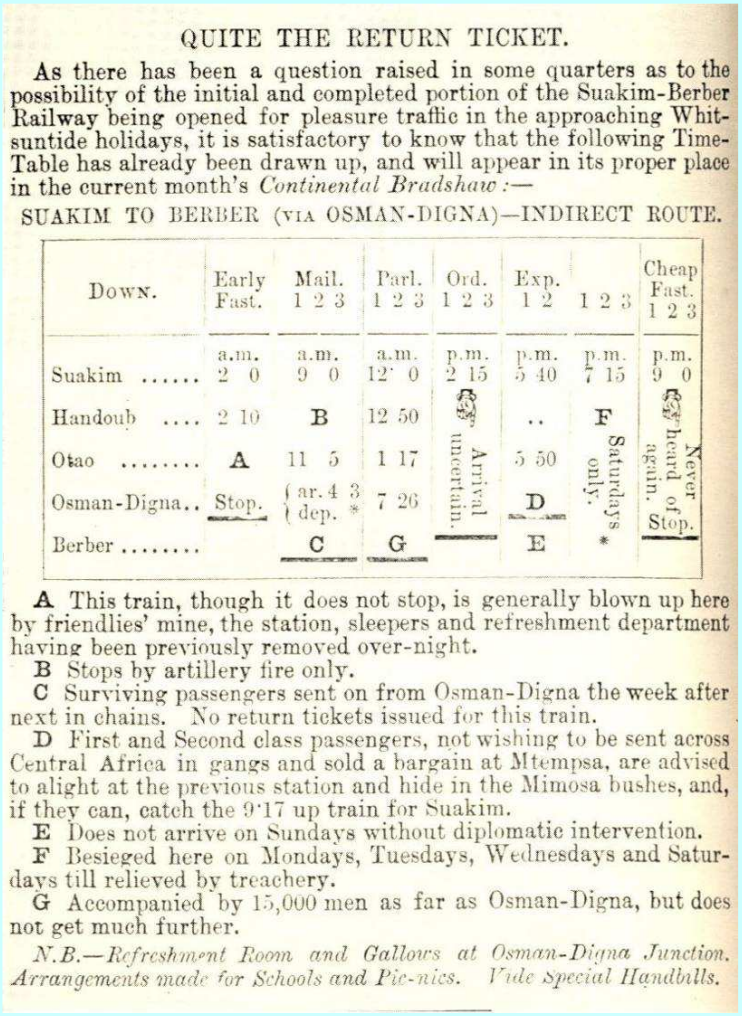
Picture 5: Ship on the Nile in Karima

Picture 6: Old steamer from British period, Karima

[31] Hill, *Sudan transport* p. 115.

BOX 2
Security issues: Past and present

Interesting parallels can be drawn between the past and the present in the problems that are encountered when constructing communication technologies. In 1885, in the midst of the Mahdist revolt, the British started building a railway between Suakin and Berber. It cost British tax payers £1 million but the line never became operational because there was no local labour available as the population was under Mahdist control. In addition, the Mahdists attacked the line. No British troops were available to defend it against attack as the British army was required in Asia to protect British-Indian interests there. The line was a failure in all respects and the British journal *Punch* even published a cartoon that mocked the safety situation of the Suakin-Berber line.



QUITE THE RETURN TICKET.

As there has been a question raised in some quarters as to the possibility of the initial and completed portion of the Suakim-Berber Railway being opened for pleasure traffic in the approaching Whitsuntide holidays, it is satisfactory to know that the following Time-Table has already been drawn up, and will appear in its proper place in the current month's *Continental Bradshaw*:—

SUAKIM TO BERBER (VIA OSMAN-DIGNA)—INDIRECT ROUTE.

Down.	Early Fast.	Mail. 1 2 3	Parl. 1 2 3	Ord. 1 2 3	Exp. 1 2	1 2 3	Cheap Fast. 1 2 3
	a.m.	a.m.	a.m.	p.m.	p.m.	p.m.	p.m.
Suakim	2 0	9 0	12 0	2 15	5 40	7 15	9 0
Handoub	2 10	B	12 50	Arrival uncertain.	..	F	Never heard of again.
Otao	A	11 5	1 17		5 50	Saturdays only.	
Osman-Digna..	Stop.	ar. 4 3 / dep. *	7 26		D		Stop.
Berber		C	G		E	*	

A This train, though it does not stop, is generally blown up here by friendlies' mine, the station, sleepers and refreshment department having been previously removed over-night.

B Stops by artillery fire only.

C Surviving passengers sent on from Osman-Digna the week after next in chains. No return tickets issued for this train.

D First and Second class passengers, not wishing to be sent across Central Africa in gangs and sold a bargain at Mtempsa, are advised to alight at the previous station and hide in the Mimosa bushes, and, if they can, catch the 9·17 up train for Suakim.

E Does not arrive on Sundays without diplomatic intervention.

F Besieged here on Mondays, Tuesdays, Wednesdays and Saturdays till relieved by treachery.

G Accompanied by 15,000 men as far as Osman-Digna, but does not get much further.

N.B.—Refreshment Room and Gallows at Osman-Digna Junction. Arrangements made for Schools and Pic-nics. Vide Special Handbills.

Picture 7: Cartoon
Source: Hill, Sudan transport, plate 24

Nothing much remained of the line and the project was one of the reasons for the fall of the British government in 1885.[32] Today the Sudanese telephone company Zain is also discussing security issues as it plans to expand its network into Darfur.

Picture 8: Darfur, Zain advertisement in El Fasher

'It is a risky situation – that's why we have to be particularly careful when we are rolling out our network through troubled areas,' said CEO Khaled Muhtadi. 'But people need telecoms wherever they are.'[33]

[32] Hill, *Sudan transport* pp. 34-48.
[33] Andrew Heavens, 'As other firms exit, phone companies enter Sudan', (AlertNet Reuters 15 August 2007)
http://www.alertnet.org/thenews/newsdesk/MCD652697.htm .
Interview 36

Postcolonial concerns

Political and economic interests can influence the construction of communication technologies and this is no less true for recent developments in communication technologies than in the past. The history of railway construction in Sudan is a case in point. Initially the focus was on building international links, and plans that were drawn up between the 1850s and the 1880s were meant to connect Sudan and Egypt as Turco-Egyptian rule envisaged a greater integration of Sudan into the Egyptian economy. In the course of Condominium rule, however, the British grew ever more 'apprehensive about the Egyptian presence in the Sudan'. This attitude directly influenced the construction pattern, and railway lines were rerouted towards the interior of Sudan.[34]

A century later, in the 1980s, the government of independent Sudan opted to concentrate its efforts on communication systems and road transport. The subsequent neglect of the railway sector had drastic consequences for the railway corporation and railway towns in Sudan. The network fell into disrepair and towns such as Karima and Atbara lost their function as nodal points in this network.[35]

Despite government investment in the road sector in the 1980s, communications across Sudan's vast territory remained poor. Many factors accounted for this. Apart from the sheer size of the country, climatic conditions made it difficult to develop an adequate road network, and sand and rain affected the road surface making the costs of maintenance very high. Investing in the asphalting of roads proved too much for the fragile Sudanese economy and, as a result of mismanagement and corruption, large sums of money were wasted. This also held for the River Transport Corporation, a parastatal set up in 1973, that was largely classified as ineffective. The airline sector also suffered similar problems and annual losses had to be covered by the state.[36]

Soon after independence, there was political controversy over the management of the inland rivers. In 1960 the building of the Aswan Dam in Egypt led to large-scale protests and although the Sudanese government had insisted on financial compensation from Egypt in the 1959 Nile Waters Agreement, the resettlement of Sudanese civilians in Wadi Halfa as a consequence of the building of the dam led to demonstrations and protests by the opposition.[37]

The wars in Sudan had huge consequences for the communication system in the South. During the Second Civil War in particular, bridges were destroyed, roads were mined and transport and communication facilities in the South declined in general as little or no maintenance was carried out. Attacks were launched on passing river barges, which led to a sharp decline in their use by civilians. Now that peace has returned to the South, a number of development projects are aiming to improve and reconstruct the area's inadequate infrastructure. The limited road system in Darfur is currently threatened by banditry.

Private companies, especially oil concerns such as Chevron, have been active in road construction and navigation endeavours but often to further their own interests. The oil companies have constructed pipelines for the export of oil but soon

[34] Hill, *Sudan transport* pp. 8-17; Sikainga, *City of steel and fire* pp. 10 (quote), 26.
[35] Sikainga, *City of steel and fire* pp. 164-173.
[36] Library of Congress: Federal Research Division, 'A country study: Sudan' (1992) http://lcweb2.loc.gov/frd/cs/sdtoc.html .
[37] Holt and Daly, *A history of the Sudan* pp. 150-151.

after their completion the pipelines were already being attacked in acts of opposition to the Sudanese government.

Since independence, television has been added as a new medium. It was introduced in Sudan in the 1960s and by 1980 had entered many middle-class households, especially in Khartoum. Government influence in television and radio amounted to a near monopoly, although the SPLA had its own clandestine radio broadcasts. Government control was exerted in the printed press and, after the 1989 coup, many newspapers were banned and journalists dismissed. In 1993 a start was made towards privatizing the telecommunications sector in Sudan. Internet usage was introduced in 1998 and grew sharply, both in capacity and in the number of users, from 5,000 users in 1999 to 84,000 in 2002. The number of fixed telephone lines increased during the 1990s and since the introduction of the mobile phone, the number of subscribers to this new medium has been constantly rising.[38]

[38] Library of Congress: Federal Research Division, 'A country study: Sudan', various newspaper articles and interviews; Wikipedia websites: http://en.wikipedia.org/wiki/Sudan_TV and http://en.wikipedia.org/wiki/Communications_in_Sudan.

3. The telephone companies: An overview

Beginnings and the process of privatization

The first telephone line in Sudan became operational in 1903. The telephone network expanded during the first few years but in the period after the First World War no major initiatives were taken to develop the system or increase the number of subscribers. A Post and Telegraph Department was set up, and a gradual increase in postal services and telecommunications ensued. After the Second World War, services expanded to include international calls but the system stagnated again after independence. In the 1970s the postal services and telecommunications were split and Sudan Telecommunications Public Corporation (STPC) was established in 1978. Until 1990 the number of fixed lines and the services provided were extremely limited, even compared to other countries in the region. In 1991, for example, there were only 73,000 telephones lines, two-thirds of which were in Greater Khartoum. In the course of the 1990s, however, the number of fixed lines increased and by 2002 there were 672,000 lines.[39]

Picture 9: Zain street Khartoum

[39] Sudatel website: http://www.sudatel.net/en/atopic.asp?artID=5&aCK=EA; Siddig Ibrahim Mustafa, 'Regulation versus market liberalization', (Paper, High Level ICT policy and E-strategy conference, Kigali 2004) www.uneca.org/aisi/NICI/Documents/REGULATOR.ppt; Library of Congress: Federal Research Division, 'Country profile: Sudan' http://lcweb2.loc.gov/frd/cs/profiles/Sudan.pdf; Library of Congress: Federal Research Division, 'A country study: Sudan' http://lcweb2.loc.gov/frd/cs/sdtoc.html; Wikipedia website: http://en.wikipedia.org/wiki/Communications_in_Sudan.

Throughout the colonial era, the railway administration (including all inland shipping), Sudan Airways and postal and telecommunication services were, at least partly, under government responsibility. This colonial legacy of state monopoly did not immediately change after independence. On the contrary, state control increased to include television broadcasting, and censorship issues frequently hit the press. In the 1990s, a change of course was envisaged and this coincided with a worldwide wave of privatization in developing nations related to structural adjustment programmes imposed by the IMF and the World Bank. In 1993 the process of privatization began. Sudatel, a company providing landline services, was established as a private enterprise, although the state owned the majority of the shares. At the same time, a regulatory body was created that, as of 2001, came to be known as the National Telecommunications Corporation (NTC).

The companies

In 1997 Mobitel was the first company to be awarded a licence to provide mobile telephone services. It started as a project within Sudatel and Sudatel continued to own about 40% of the shares. The owner of the other 60% of the shares, a Sudanese-Saudi Arabian businessman by the name of Salah Idris, wanted to sell his part of the concern to MSI (a Dutch-based company founded by the Sudanese Mo Ibrahim that later became known as Celtel). Sudatel objected to this deal and increased its own percentage of shares to 61%. In 2005 Celtel was acquired by MTC, a Kuwait-based telecommunications company. Some months later MTC obtained 100% of Mobitel shares and the Mobitel name was changed to Zain in 2007. Negotiations about shares and licences between Mobitel and Sudatel were by no means easy and the claims made by Sudatel were classified by some outsiders as 'high-street robbery in broad daylight'.[40]

BOX 3
Mobitel: A new business culture?

In 1995 a project was started within Sudatel to investigate the possibilities of the new mobile telephone system. The project was initially considered unimportant and a small team was crammed into just one office with no facilities. One of the persons involved in the project explained the neglect as follows: 'Everybody wanted to be in Sudatel itself; that is where the "fat" was. They were busy trying to get at that money and nobody expected anything from this small project in mobile telephony.' After doing market investigation, some of the team decided to start a company and enter the mobile phone business. Precisely because the project was not considered very important, nobody paid much attention to the initiative and the team was basically left to its own devices. The group called itself Mobitel and, having obtained a licence, started advertising. Knowing that relations between Saudi Arabia and Sudan were important, they contacted Sudanese residents in Saudi Arabia in an attempt to attract prospective customers:

[40] Information supplied anonymously.

… ‘in those days, faxes were usually in hand-writing. But I knew that Sudanese people always give more weight to something when it appears in print. Handwriting looks very preliminary, but if it is in print or typing it looks much more official and impressive.’

Picture 10: Mobitel placard in the desert

So all reactions faxed to Saudi Arabia were typed and sent as soon as possible. The new Mobitel group also aimed to create a new business culture in terms of dress code.

‘I bought a good tie, a nice suit. I gathered together young people and also provided them with nice ties and bought them new shirts. At that time the tie was something very rare in Sudan. And also people felt that there should be a distinction: the boss with nice clothes, but the staff with simpler clothes. But I said: “No, a presentable look is important for the entire staff.”’

New tactics were also tried in advertising, servicing and office space division. Coming from the state bureaucratic model, this business-like style was regarded as a novelty.[41]

[41] Interview 5 (quotes); Interview 6; Interview 37, Interview 38.

A second mobile phone operator appeared on the market in Sudan in 2005. Investcom, a large telecommunications company based in Lebanon, opened an Areeba branch in Sudan, as it had done in many other countries in Africa and the Middle East. Last year Areeba was bought out by the South African company MTN and started advertising under that name. Both Zain and MTN have been criticized for their investments in Darfur: 'For them, the vast expanses of Sudan's western Darfur region are not so much a disaster zone as one more unexploited mobile phone market waiting to be tapped.'[42] Before 2000 Sudan was a no-go zone for MSI (later Celtel). They decided to buy shares in Mobitel as it was expected that the government in Khartoum would change for the better.[43] In the meantime, the direct involvement of Celtel in Sudan has stopped, yet as Zain has integrated Mobitel and the Celtel part in it, connections remain strong.

Picture 11: MTN advertisement in Khartoum

[42] Heavens, 'As other firms exit, phone companies enter Sudan', http://www.alertnet.org/thenews/newsdesk/MCD652697.htm .
[43] 'A bell rings', *Africa Confidential* 41, 18 (2000) p. 8.

Soon after the Sudatel shares in Mobitel were sold to MTC, Sudatel started its own mobile phone service under the name of Sudani. Thanks to its competitive prices, Sudani has grown rapidly in the Sudanese market and is extending its services to the countryside at a rapid pace. Sudatel has not only been criticized for doing business in Darfur but was placed on the US embargo blacklist as a result of accusations about being state-controlled and providing finance to the Sudanese state for use in the war in Darfur.[44]

Picture 12: Sudani advertisement in Khartoum

A major difference between these companies is that Sudani works with CDMA standards that initially were mostly used in Asia and the US, while Zain and MTN are based on GSM technology that is widely available in Europe and accounts for nearly 75% of use worldwide.

As of 2004, a fourth company entered the national telecommunication sector: Canartel. Its focus is on Internet and fixed-line services but recently it has been considering joining the mobile market.

In the South of Sudan there are two other operators as well. The smaller NOW (Network of the World) has operated around Rumbek and Yei since 2005 but is not available at present (autumn 2007). Gemtel has been using the Ugandan gateway to operate in Southern Sudan since 2003 and has served mainly as a communication system in the SPLA-controlled area. Gemtel and NOW have been recognized by the central government as operators and will be using the Sudanese country code.

[44] CNN, 'Bush announces sanctions against Sudan' (29 May 2007) http://money.cnn.com/2007/05/29/news/international/bush_sudan/index.htm .

However, there is an on-going debate between the central government and the Government of Southern Sudan about the precise conditions and practices of the agreement. During the war other communication technologies, such as walkie-talkies and *thuraya* satellite phone connections, were also used by military leaders.

Rapid expansion

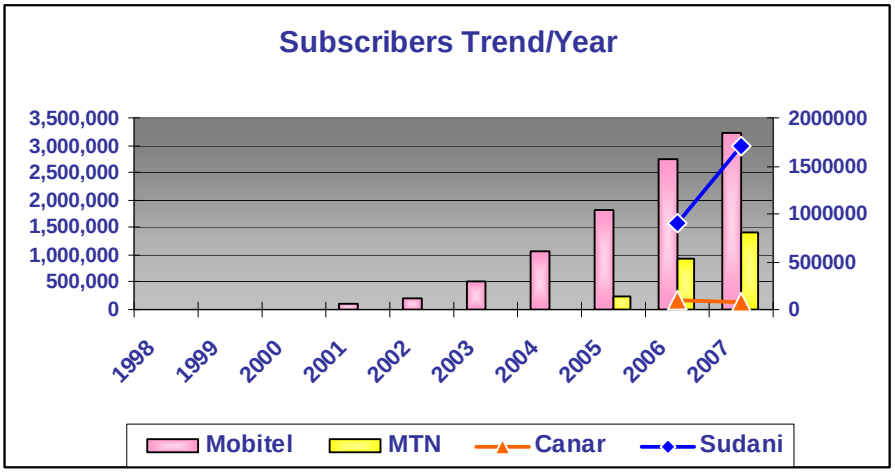
Mobile telephony in Sudan is expanding rapidly, as can be seen in the following tables.

Table 1: Total number of subscribers per company (1998-2007)

Year	Mobitel	MTN	Canar	Sudani
1998	2,919			
1999	5,204			
2000	16,757			
2001	91,117			
2002	211,241			
2003	527,233			
2004	1,048,558			
2005	1,801,538	248,434		
2006	2,747,139	931,172	104,442	895,556
2007	3,224,120	1,416,732	88,134	1,707,628

Source: Market information (provided by Zain)

Table 2: Total number of subscribers per year



Source: Market information (provided by Zain)

In 1998 there were fewer than 3,000 mobile phone subscribers but by 2006 there were over 6 million. This increase must, however, be qualified: Sudan has a population of some 40 million. Many people in Sudan, in fact the great majority, do not have a

mobile telephone. In addition, a link may be made between the exploitation of new oil fields from 1997 onwards and the booming business of Sudan's telecommunications sector. In other words, the service may be used extensively in the multinational business sector and not necessarily be of benefit to the local population. There are several reasons for people not being a subscriber to a mobile telephone company: some do not own a cell phone because they cannot afford to become a subscriber, others because they know they will not be able to use the cell phone because there is no network in their area, and yet others feel that they do not need a mobile telephone or have objections to using them.

Not having a cell phone does not always mean not using a cell phone: quite a number of people who do not have a handset still use mobile phones but with different degrees of frequency, often paying for the service or relying on friends and relatives to make a call on a cell phone on their behalf. Despite these qualifications, it is clear that mobile telephony in Sudan is growing fast.

4. New social configurations in Karima

Part 1: Introduction

From different directions

Karima is in Merowe Province in the Northern State of Sudan. It is a small town with a population of 12,226, according to Sudan's most recent (1993) population census. Since then the population has probably risen but no reliable statistics are currently available.

The northern region of Sudan has a long history that started with the Nubian civilization on the banks of the Nile. The Karima region was a holy place at the time of the Nubian Kingdom when *Jebel el Barkel* (Barkel Mountain) was believed to be a place of divine residence and many temples were built to the main god Amon. Around this time, the pyramids were being constructed on the opposite bank of the Nile.

After the introduction of Islam, the area became the homeland of the so-called *Shayqiyya* people, initially riverain warrior groups who later settled as agriculturalists. In the area around Karima, dates, mangoes and citrus fruits have always been cultivated and after independence these were complemented with government wheat and bean schemes.

Karima town knows a complex pattern of sharp social differentiation related to its history. The *Shayqiyya* people are now known as the town's indigenous people,

Picture 13: Karima, view from Barkel Mountain

although these are also descendents of seventeenth-century migrants to the region.[45] Western Sudanese, known locally under the discriminatory term as the *Gharaba*,[46] and the *Nuba*, people from the Nuba mountains, came mainly to work in the railway sector. The term *Nuba* came to encompass any black person, even immigrants from Southern Sudan. People who are regarded as 'Sudanic' (not 'Arab') are often also called *abeed* (slaves). More restrictively this term was used for all former slaves and their descendents. The *Nubians*, people from various backgrounds in the north, came after the construction of the Aswan Dam in Egypt and have always been seen as experts in river shipping. Smaller groups include the *Halab* (Gypsies), the *Arab* (Nomads) and the derogatory term *Falata* for immigrants from West Africa. These identity categories are contextual and flexible. In some contexts and events they play a role, while in other settings and circumstances they may not be a factor of consideration at all. Yet, it is obvious that identity politics are important in the patterns of networking and communication that interlink the various people within and outside the town.

Economic fluctuations

The town underwent changes in the early years of the twentieth century. During Turco-Egyptian rule, Karima had become the last point ships from the north (Dongola and further on) could reach as further passage was blocked by the fourth cataract. In 1906 this was connected with a railway line to the south. The railway line was meant to increase integration of the large Dongola region into the Sudanese economy and was at the same time clearly a move to reduce contact between Egypt and the region. The British were keen on reducing Egyptian influence in Sudan.[47] The railway brought an entirely new infrastructure: a station and a port were built, warehouses and workshops appeared, and the administrative importance of the town increased with the arrival of a post office, a police station and so on. Educational and health services increased in number throughout the colonial period and in the first decades after independence.

Karima market was set up in 1910 and became one of the two big markets in the region (with the market in Tangasi). The agricultural sector depended on the newly introduced transportation system to export its products and also received goods from other parts of the Northern State. Karima functioned as a crossroads between Khartoum and the North of Sudan, mainly to the vast Dongola region. All the colonial administrative offices were located in Merowe, on the opposite bank of the Nile, as were the health services and the British residential area. This pattern continued after decolonization and today Karima is still a transport hub.

After independence, industrial activities increased in the town, with the opening of a date-packaging factory in 1958 and one for fruit and vegetables in 1965. As a result of all these developments in transport and the local economy, the town attracted newcomers who were looking for work in the railway sector and traders at Karima's market. The town became a regional centre.

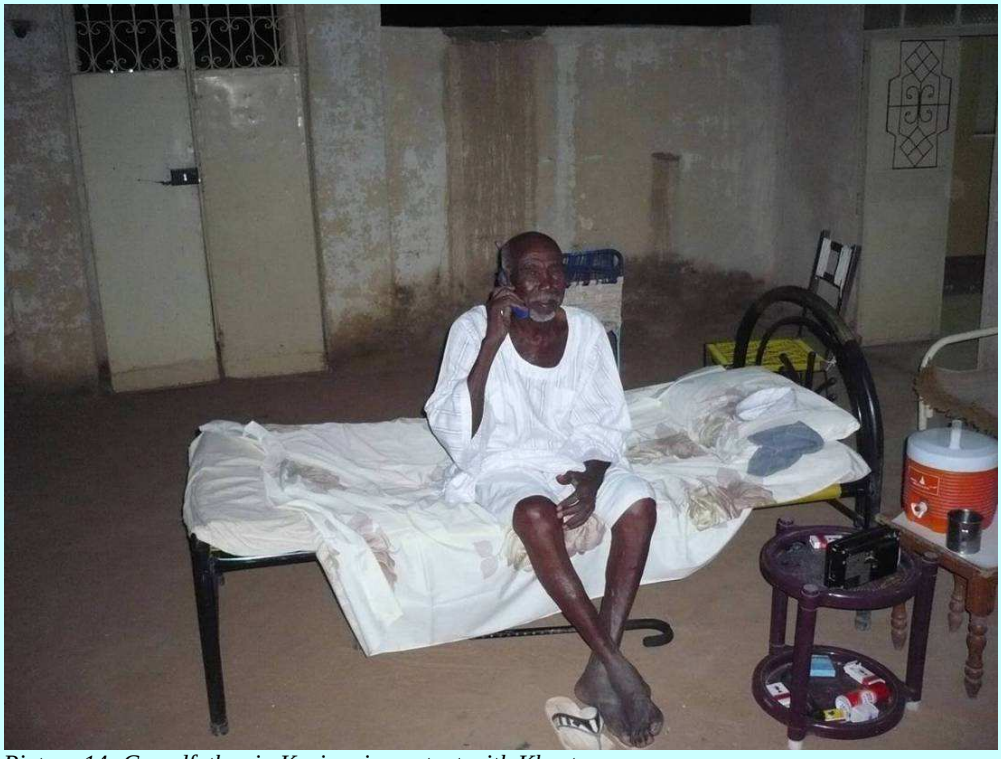
[45] Holt and Daly, *A history of the Sudan*.
[46] Cf. Alex de Waal, 'Who are the Darfurians? Arab and African identities, violence and external engagement', *African Affairs* 104, 415 (2005) p. 197.
[47] Hill, *Sudan transport* pp. 74-75.

From the mid-1980s onwards, however, Karima's trading position declined markedly. There was a general situation of political instability and economic decline but the town was also hit hard by the neglect of the railway system which affected life in the town and led to a decrease in market activities. The various groups in Karima started to look for other places to move to and different types of income-generating activities developed. During the 1990s, many internally displaced persons (IDPs) from the south and the Nuba Mountains arrived in Karima, settling in a squatter area near the town that came to be known as *el Cumbo* (from the English word camp). Some of the earlier immigrants to Karima from the same regions also settled in the IDP camp, thus making for a mixed community of older and more recent immigrants to Karima. Initially, people in *el Cumbo* lived in tents as local laws stipulated. but gradually these IDPs found ways to circumvent the local authorities and construct wattle and daub houses. They remained, however, on the fringes of society with no access to the town's economy.

At the beginning of the twenty-first century changes again influenced the history of Karima town. It was reconnected to the capital and to the rest of the country by a tarmac road called *Shiryan el Shimal* (the North's Artillery). After diplomatic relations between Sudan and Egypt improved, a customs checkpoint was set up in Karima and the market began to expand again, offering new types of goods and with new traders. Furthermore, at the end of the 1990s the plans to construct the Meroe Dam some 25 km from Karima started to materialize. Despite protests about resettlement plans and other disadvantages, the dam will be finished in 2008. Being the nearest urban centre, the dam has given Karima another impetus as a market for the companies that needed goods and sometimes even construction materials. A number of local residents were employed by the dam companies and some of their employees have come to live in Karima. These recent developments once again changed Karima's fluctuating economic history.

BOX 4

Drivers, trade and trust



Picture 14: Grandfather in Karima in contact with Khartoum

Kaamil is now an elderly man. In 1942, however, he was in his twenties, had just left school and went to Port Sudan to find work. He would have loved to work in the railway sector but did not pass the compulsory eye test and so returned to Karima. There he found a job as a driver's assistant in a Karima-based company called Affendi & Sons. With their two lorries, a Ford and a Chevrolet, they drove between Karima and Dongola. Some years later a company headed by *Halab* (gypsies) started operating in the region. The competition with this company forced them to move to the Karima-Omdurman route. At a later stage, Kaamil became a driver himself. They mainly transported passengers and in principle would only take on goods as passengers' luggage, although these could include items such as large bags of sugar or tea. Many people also asked them to take money, messages and smaller goods from one place to the other. As Kaamil explains:

'We would take such goods to transport them for people to another person. At that time most of the merchants in Dongola sent money through us [the drivers] to merchants in Karima if they wanted to buy wares. The Karima merchants would order the goods for those in Dongola and send them by steamer. The drivers were highly trusted. The merchant might come to the driver with the money hidden in his sleeves but after having given the money to the driver, he might just put it in his pocket, on top of the dashboard or in the suitcase of the next passenger. Directly after the passengers had left after arriving in Karima, we would go to the market and give the money from Dongola to the merchant in town who it was destined for. The merchants were often highly surprised as the amounts of money were quite big.'

All the people involved saw these relations in terms of trade and trust. Especially in the closely knit societies of Dongola and Karima, people knew the drivers could be given the responsibility of transferring money. Throughout his career, Kaamil never heard of a case of theft or fraud. There was only one incident that occurred to him and a Karima merchant called Rabir Mugilet:

'A merchant sent him money from Dongola through me. And after I gave the amount to Rabir Mugilet, he discovered that it was less than the deal. Until the evening he thought that I had stolen the difference from him but then he received a telegram from the merchant in Dongola who told him that he had indeed sent five pounds less than the deal. Before Rabir received this telegram, he had gone to the post office to write a telegram to the merchant in Dongola to inform him that there was a problem as I had stolen five pounds but the telegraph employee told him to wait and think about the matter. He assumed that the merchant had sent less money and that it was not me who was wrong. While they were negotiating, they received the telegram from the merchant telling them that he had indeed sent less money than the deal.

This is the only story of distrust that occurred during my life as a driver's assistant and a driver. And what is more, we did this for free…'[48]

Mobile telephony in Karima

With the town's recent economic growth, the old market in Karima centre has expanded and new centres of commercial activities have developed in Hospital Street and the custom's yard area. Hospital Street functions as a meeting place for the men of the town – with tea sellers, small restaurants and communication centres – while at the custom's yard, it is mainly consumption goods from Egypt that are traded.

The history of communication systems coincides with the town's economic conjuncture. During the colonial era, a postal service was installed, that included letter distribution as well as telegram services. Telegrams were mainly used in cases of emergency, such as funerals and weddings, although for these cases oral messaging also remained important There was a limited network of telephone lines. Although these devices did not include all Karima's inhabitants, the services functioned with relative efficiency. With Karima's economic decline, however, communication became ever more difficult and by the 1990s most of the systems had broken down. In those difficult days, messages were mainly delivered by travellers and bus drivers. Just as the economic crisis had passed and new economic activities developed, the mobile phone was arrived in Karima (in 2003). This communications technology has spread at enormous speed and is now present in most Karima households. Even people who live outside the network range of the immediate surroundings of Karima can buy a handset in order to be able to use it when visiting the town. In 2006 most villages in the vicinity of Karima came to be connected through a Sudani network and Zain has plans to also expand its network into the rural areas. Most of the shops and stalls related to mobile telephony can be found amid the new market activities along Hospital Street.

[48] Interview 38.

This spectacular growth has largely gone unnoticed by outsiders: Khartoum, as Sudan's capital, and Juba, as an important town in the war-torn southern region have both received international attention but a town like Karima has no particular place in world history or in global developments. This, however, may at the same time account for the importance of taking Karima as a case study in this research project; after all, the majority of African towns are in a similar position in terms of international attention. For this case study, several interviews were held with people from the health sector of Karima. Health is a basic sector in any town and forms a network in which communication and transport can be of vital importance. Furthermore, the case of mobile phone use in one family in its relationship with transport and communications will be presented. Family networks are crucial to an understanding of mobile telephone use in Sudan and, as in most Karima families, the history of this family is closely tied to the town's transport developments. Finally, as Karima functions as a regional centre, relations between the town and its rural surroundings will be also be explored.

Part 2: The health sector

The health sector and communication technologies

Since the beginning, Sudan's health sector has entertained a special relationship with mobile telephony. The story of this relationship, as told by one Zain's founders, shows that any interpretation must allow for contingency when analyzing the past. After Mobitel started, the management was looking for a dealer to distribute cards. Right next to their office that closed at 19.00 hours was a pharmacy which remained open around the clock. Seeing a possibly ideal solution, Mobitel entered into negotiations with them, offering the pharmacist as much as 4% commission in addition to other benefits. The pharmacist concerned, however, flatly refused, saying: 'There is no relationship between medicines and mobile phones, so I do not see the point.' In the meantime, Mobitel staff had learnt that the pharmacist's daughter was more open to innovation, and succeeded in convincing her to try distributing cards for a month. Through the mediation of the daughter, they gave it a try and they have now become big players in mobile telephony. Their success caught the attention of other people in the health sector and soon many pharmacists became linked to the mobile telephone business. A relative ly large number of people in Sudan's health sector are now connected to mobile telephony in one or another.[49]

In addition, Sudanese telephone companies have initiated social development projects mainly in the areas of health and education. In September 2007 Zain donated a four-wheel-drive ambulance to El Genina Teaching Hospital in western Darfur, while Sudatel has several projects running in Northern Kordofan. NTC, the national regulatory body, also organizes activities in this respect: through their e-hospital services, x-rays can be sent to the military hospital for analysis, a method especially used for antenatal checks and dental problems.[50]

Within the companies there is, on the whole, great enthusiasm about such projects. People are eager to explain the benefits of corporate social responsibility in

[49] Interview 37.
[50] Interview 15.

their organizations and offer detailed accounts of the various activities they are involved in. As the work has strong practical overtones, tangible examples can be given of the companies' involvement. Zain's CEO explained that the company's activities in corporate social responsibility and the expansion of telecommunications had led to 'great results for the economy, great results for Sudan.' He stated that the development activities relate to health, education, capacity building and the environment and gave more than five examples of such projects:

> An example is a hospital that we will be building in Kordofan in a region that is completely isolated. [..] A region with high rates of death and illness. Similarly when it came to the period of flooding and the rainy season: last season was one of the worst on record and we were among the first to reach out and help the communities. We have also financed a training centre in the Nuba hills in which teachers are trained, after which they return to the Nuba Mountains for elementary schooling for children. These projects are an essential part of our work.[51]

Of course, the development practices also receive plenty of attention in promotion campaigns. As explained in the introduction to this report, a culture of optimism is displayed not only by the companies involved but also by development agencies. This optimism includes both the possibilities of communication technologies and corporate social responsibility activities. These are presented as a whole and as integrally contributing to development, at a national and at a community level: 'Our role as a telecom mobile operator is not limited to just selling SIMcards and scratch cards in all the countries we operate. We truly believe that telecommunications can be a great tool for development in Africa.'[52]

As we will see in the Khartoum case, some end-users regard the development initiatives with scepticism as they are felt to be mere attempts at self-promotion. Within companies, some more critical voices can also be heard. One of the staff at Zain explained that there is a US$ 6 million fund that Zain Sudan spends on development projects. Decisions regarding the allocation of this money are taken by the board, which consists of six people from various different regions in Sudan. It is suspected that regional and clan interests play a role in the distribution of the money and the decisions are not based on open and transparent procedures. On top of this, development projects often take on the character of old-fashioned charity work. Some feel that capacity building and a long-term approach would be of much more benefit to Sudan. These critical remarks are not often heard (in this case from a staff member),[53] but given the risks involved in expressing them, they may be more widespread than appears at first sight.

The state and the private sector

The relationship between mobile telephony and the development of the health sector is not only shown in the development activities of the companies themselves. People also state that in cases of emergency an ambulance can be easily reached by mobile phone. Furthermore, mobile phones are widely used by people working in the health

[51] Interview 36.
[52] Interview 36.
[53] Conversation with mobile telephone company employee: information supplied anonymously.

sector. People in the sector feel that it has greatly facilitated contact between colleagues:

> Especially at work, it has strengthened the relationships between me and others, it makes everything easy. In the past when I needed someone, maybe the head of the work, it could be difficult to find him by using the fixed telephone, but nowadays the mobile phone makes it easy to find such people any time you need them.[54]

Some started out as mobile phone users only for their social contacts, but over time realized how it could help them with their work. Dr Azim initially used his mobile phone to call friends and relatives but nowadays his usage for work exceeds the private calls. He clearly sees the need in cases of emergency: 'You may be out of the hospital and something may happen and your advice be needed. In such cases the mobile phone is very useful.'[55]

In the Sudanese health sector, private enterprise and state regulation both play a role. People in the sector turn both to the government and to the private sector for supplies. Muneer Ali Yousif, a pharmacist's assistant in a health centre in Karima, explained how the mobile phone has facilitated relations within the private sector and with the governmental departments engaged in the health sphere. Especially in the case of shortages of supplies, the system they set up has proven its worth. They have established contact with private pharmacies and if shortages occur, they can call them to meet their immediate demands. They subsequently have to contact the state health branches for a more structural solution. They still have to fill out all the forms and documents required to receive supplies from the Northern State Ministry of Health but, as they have contacts in the transport sector and with the laboratory manager of the Ministry, everything can be prepared in advance and sent off as soon as the application arrives. This has greatly reduced the delivery times of medicines.[56]

With the mobile phone, contact between the network of health workers has increased. State health workers are frequently transferred and their networks usually consists of people from various places. Through the mobile phone they keep their personal history of transfers and relations more active. Muneer has worked in several places in the Northern State:

> In terms of the job, we are normally not permanent. So the circle of our acquaintances increases as we move to a new place. Inside Dongola our relationships are with the Ministry of Health and the colleagues from work. And when I came to Karima I built up relationships with new people. This also happened when I was in El Debba, El Golid, El Burgeig and Argo. We create relationships continuously, non-stop.
> I also have a colleague in Dongola: I call him in order to follow up some work. And one in Khartoum, and I call locally to the travel office to book a seat when someone comes over from Dongola.[57]

[54] Interview 35.
[55] Interview 28.
[56] Interview 32.
[57] Interview 32.

Work and the personal sphere

The health sector in Sudan is not very large and people tend to know each other, sometimes even going back to when they studied together. People in the state health sector may be transferred regularly and still keep in touch with the people they met in earlier jobs Thus, a network is created of people who know each other to varying degrees or at least have common acquaintances and colleagues.

Within such a network, interpersonal relations can go beyond the work sphere in a more limited sense and people may help and support each other in various ways. A good example of this was given by a woman working in a health insurance centre. A colleague of hers developed a credit association that enabled the six people in the office to continue using their mobile phones despite the costs. In the past, mobile telephone credit cards were not available for small sums; the minimum amount for a card being fifty Sudanese pounds. As it turned out that some of the colleagues became unreachable as their mobile phone was out of service without a card, the group decided to save money and keep all the mobile phones working. Every week each colleague would contribute a fixed amount and the entire sum could be used by the contributor whose phone credit was finished. However, when the credit cards came in lower values and some of the colleagues were transferred to another location, the system was discontinued.[58]

People in the health sector try to take into account their colleagues' positions. The woman working in the health insurance centre explained that she became a Mobitel subscriber as soon as it came to Karima. But as her colleagues all had Sudani numbers, she also subscribed to that company:

> I bought Sudani because all of my colleagues have Sudani and it costs too much when you call from Mobitel to Sudani. I did not want to burden my colleagues by asking them to call me back if it was me who needed to call them.[59]

Even if people lack the financial means to call, they can use the 'missed call' system to reach each other:

> When the financial burden becomes too much I rely on receiving calls only. Yet sometimes I make a missed call to my colleagues at work if something is up and they call me back via the normal telephone.[60]

People in the health sector use their mobile phones for personal as well as job-related reasons. Although the mobile phone is deemed essential for work, people indicate that they regard calling relatives and friends as even more important: they could do without calling colleagues but would not want to lack the means to call their family. All the same, attempts are made to keep the personal and work spheres separate: 'My people know that they cannot call me for private reasons during work hours: I am far too busy.'[61]

The mobile phone has become a well-established device in Sudan's formal health sector. In the state as well as in private health institutes, contact is often

[58] Interview 35.
[59] Interview 35.
[60] Interview 32.
[61] Interview 32.

established and maintained by mobile phone and the mobile phone plays an important role in the supply system. In what is usually known as 'traditional' health practices, mobile phone usage shows more variation: some people use it, other do not.

BOX 5

Healthcare without a mobile phone

Picture 15: Grandmother who worked as a midwife in Karima

Hisham Bilal's great-grandfather from his father's side (FFF) was born in Tangasi, an island downstream in the Nile. He came to Nouri to work as a mechanic on an agricultural scheme. One of his sons stayed in Nouri and he married two wives, one of whom stayed in Nouri while the other went to Karima. The latter was Hisham's grandmother who was educated as a midwife during the Condominium period. Although most of the midwifery course was done without recourse to reading and writing, she learnt the alphabet and has acquired the basics of literacy.

Hisham's grandmother is a strong and independent woman. Even during her marriage, her husband continued to live in Nouri and when he died in 1979 she never remarried and still lives on her own in Karima in a huge house that seems to be permanently under construction. She has three sons, two of whom are from an earlier marriage. The sons all live in Khartoum and only have limited contact with her.

This elderly woman has no mobile phone. She feels no need to call her sons, as she lives 'in disharmony' with them. 'Many things have happened,' she said. As a midwife, the mobile phone could obviously be a practical tool; in midwifery there may be emergency cases and it can be crucial to be reachable. Yet, she is used to working without a mobile phone and is always contacted by word of mouth. When asked why she had no mobile phone, this elderly woman curtly replied that she had no money for one.[62]

[62] Interview 39 and observations in Karima

Part 3: The family and the mobile phone

Uncle Yahya's family[63]

The history of many families in Karima is linked to the fluctuating developments in the region's communication and transport technologies. Job opportunities in the railway sector, the harbour and in road transport were the main reasons for moving to this small regional centre. In the following section, the history of one family in Karima is sketched and reveals the close ties between family life, economic opportunities, transport facilities and (inter)national linkages.

Hisham Bilal was born in Karima but moved to Khartoum for his studies. He worked on this telecommunications project as a researcher for the case studies in Khartoum and Karima. With his background, he focused on Karima's processes of urbanization in his MA thesis. Like many people in university circles, Hisham often uses his mobile phone, also to contact his relatives in Karima. Many of his relatives are still resident in Karima and he frequently visits the town. During these visits he is mainly in touch with two families: namely his father's brother's family and the house of the brother of his grandmother on his mother's side. We likewise concentrate here on these two households and their networks.

Picture 16: Karima family watching pictures on the computer

[63] The reconsturction of this family's history was made (by Mirjam and Hisham) during our stay in Karima in November when we stayed with the family for a few days, had informal meetings and chats with all the members; Hisham was of course an important informant. See also: Interview Mohamed, Interview 38, Interview 39, Interview 40.

Hisham's family came to Karima during the twentieth century. They belong to the Shayqiyya group who are the region's majority ethnic group. Although various informants emphasized that being Shayqiyya is not that important in Karima and that the town was created from the influx of many different people, the Shayqiyya do have a special relationship with the land and consider themselves part of the long history of 'civilization' in the region. The tomb of one of their religious leaders can be found at the foot of the Jebel el Barkel, which they consider a holy place. Given their historical relations with the area, the Shayqiyya in Karima consider themselves 'the children of the region'.

Transport in its many facets has always been part of the history of Hisham's family. Their reason for settling in Karima was linked to the history of economic opportunities in the town during the colonial era. Hisham's grandfather on his mother's side grew up in Omdurman but came to Karima to work in the railway corporation in the 1930s. He married a girl from a village nearby and as the railway workers were provided with housing and a relatively good salary, they lived a descent life. When Hisham's grandfather settled in Karima, it was still a small town.

Hisham's grandmother gave birth to one daughter and two sons. One son (Uncle Yahya) lives in Karima. Like his father, he came to be employed in the railway sector and although he is retired now (he is over sixty), he still works as a night guard. He is married and has eight children. His wife is Sudanese but was born in Egypt where her father had migrated for work. When she was three years old, the family returned to Jebel village near Karima. She has never worked outside the house and is a very good cook. Their four oldest children have moved to Khartoum while the other four live in Karima.

One daughter in Khartoum is at university, the other is married and a housewife. The other two, a son and a daughter, are both working and have good jobs. At the time when they were looking for work, Karima had nothing to offer them and they had to go to Khartoum. Their mobility patterns are directly related to economic fluctuations: their life histories may be contrasted with the story of the younger son Mohamed (who is now 24). He left for Khartoum to study technology but was not admitted and, due to a lack of interest, did not complete his studies in water engineering. When he returned to Karima, the tarmac road between the capital and Karima had just been opened and with the increase in road traffic, he started working as a car mechanic. He always has enough customers and generates a relatively good income through his business. Of his three siblings who are also resident in Karima, his brother Aymen is still at school, while his sister Hadjoudj has just finalized secondary school and is waiting for admission to university in Khartoum. Haneen returned home after she got divorced and has come to live with her parents with her small daughter.

They live in a large house that belongs to Uncle Yahya. There is permanent electricity and a television that not only receives Sudanese television but also international channels. The men in the family gather daily to sit in the comfortable chairs in the living room and watch television – mainly films and soaps. The women hardly watch any television and can usually be found in the kitchen or in the spacious yard. The family has a clear division of tasks: the men do the shopping, take care of the family (business) affairs and its reputation in a broader context, and the women clean the house and cook. Religious activities, such as prayers and visits to the mosque are important to all the family members.

Waiting and social networking

For this family, contact with Khartoum has always been important. Many of their friends and relatives live in Khartoum and especially now that four children of the family have moved to Khartoum, this link is perceived as crucial. Until recently, the mother of the house used to travel to Khartoum by train, a journey that took over thirty hours. Since the tarmac road was finished in the 1990s, she prefers to take the bus that gets her to Khartoum in only a few hours. Nowadays she visits Khartoum more often than in the past and this is partly due to the mobile phone. In the past, announcements of important occasions might reach her too late but these days she receives all information about events and life in Khartoum instantly. She feels obliged to attend marriage ceremonies and other occasions in Khartoum as she has been duly informed by mobile phone. The mobile phone is not only used to exchange information and make announcements, family members also ask for credit to be sent over and for goods that they need.

Picture 17: Karima taxis

In the family only Mohamed and his father have a mobile phone. Aymen was forced to sell his because the costs were too high for him as a high-school student. He had received this mobile phone as a present from his sister in Khartoum after she had been given a new one by her husband when they got married. Although the costs were too high for Aymen and he had to sell it, he kept the SIM card. Haneen does not have a mobile phone and, without any income, considers it most unlikely that she will buy one in the near future. When she was still with her husband, they would use the landline telephone in the house but at her parents' place there is no fixed telephone

line. Her mother has no mobile phone either but often uses her husband's or of her son Mohamed's. For her it is predominantly a means of receiving calls from her children in Khartoum. The father's mobile phone functions as the family telephone. Hadjoudj who has mastered mobile phone technology very well always carries her father's cell phone with her in the house and has put many of her own contacts in the phone's memory. The credit on this mobile phone is always low and the members of the household wait for others to call them.

The family's attitude to the mobile phone is mainly one of waiting. If there is any credit in Uncle Yahya's mobile phone, it is nearly always an amount sent by the family's relatives. They rarely purchase any call time themselves. In most cases they are called by the family in Khartoum. Uncle Yahya takes his mobile phone with him when he goes to work as a night guard in case of an emergency but during the day it is with his wife or his daughters.

Mohamed is a frequent user and uses it to contact customers and order spare parts. It is thus a device that helps him to carry out his work and has also introduced him to new networks and contacts:

> It happened once I had received credit by mistake and after a while somebody called me and said: 'I am Mahmoud [names withheld] and I live in Khartoum North'. He explained that he had transferred credit and that it got onto my mobile by mistake I told him that I would transfer it back soon and so I did. After two days he transferred me credit worth 10sdg and told me that through the mobile phone he had come to trust me. Not like anybody else who might not have sent the credit back. Then we know each other through calling and he knew that I live in Karima in the Northern state. Some time after that he came to Merowe and called me to ask about how he could find me. I told him the way and he came to Karima market and I met him. I brought him to my home where he had stayed with us for a day and then went back home. He became one of my friends.[64]

Mohamed is also happy to play games on the mobile phone over a coffee or tea on Hospital Street during his free time. On Hospital Street he meets other young people who likewise carry their mobile phones with them. Hospital Street is the only place in Karima where a mobile phone culture has developed to any real extent.

[64] Interview 29.

Picture 18: Tea lady, Hospital Street, Karima

Satan, income and the mobile phone

Kaamil, the brother of Hisham's grandmother (MMB), was born in Karima. Originally the family lived in one of Karima's old neighbourhoods near the Nile but after the flood in 1946 the family moved to an area further from the centre. Kaamil first worked as a driver's assistant and a lorry driver (see Box 4). After travelling by rail and steamship had become much cheaper, road traffic over longer distances declined and in the 1950s Kaamil became a *bolman* (taxi driver) between Karima and Merowe. As he has retired, he is now at home.

The family house is spacious with enough rooms to accommodate the various members of the extended family. The house has electricity, running water, a television and other amenities that make life comfortable. Kaamil is ill but still capable of running the family affairs. His second wife, who was also born in Karima, is very old and blind and is now bed-ridden. The couple have seven children. One daughter lost her husband last year and has moved in with her parents. Two of her sons are truck drivers while Kidr, her youngest son, drives an *amjad* (minibus that is used as a shared taxi). Another daughter is now retired after having worked in the Sudatel office in Merowe. Her house is also in Karima. A third daughter works in the health sector in Karima. Two sons drive trucks. Their company is based in Khartoum but they are

often in Karima. One daughter works at the Ministry of Agriculture in Khartoum and is the only who has really settled in Khartoum. The children take care of their parents.

All seven children and the adult grandchildren with an income have a mobile phone and use it for business and social contacts. The mobile phone is a crucial device in the transport sector: taxis are ordered by mobile phone and truck drivers use them to keep in contact with their company's office and with other drivers. Mobile phone use only infrequently exceeds its more practical applications. One of the truck drivers has a video-camera on his mobile phone: the research team was shown two films of important events, one of which was the partial opening of the Merowe dam that is still under construction (see next paragraph). For the daughter working in the health insurance company, the mobile phone means more than just communication. She uses it frequently and it has influenced her visiting patterns:

> In the past if I needed something from neighbours, friends or relatives or needed information from friends or relatives, I used to go myself and see them in their place face to face but today with the mobile phone I just call them by phone.[65]

So despite the fact that the mobile phone was only recently introduced in Karima, in some cases the close-knit visiting communities have become more mediated through mobile phone use. The daughter in the health insurance company has decorated her mobile phone with a special cover and equipped it with different ring tones. In most cases, however, the mobile phone is a practical device used for social contacts and business: only a few people are concerned with the technological extras, such as style, status and design.

This family was one of the first to have a fixed line and in the past they often used the fixed telephone. Nowadays this line no longer works. Those in the house with a mobile phone consider it a replacement of the fixed line but far more practical in its use. Kidr, the son of the widowed daughter, is now 22 years old. Eight years ago he started as a rickshaw driver but nowadays he works as a driver of a shared taxi minibus. He bought a mobile phone in 2002. For him the mobile phone has become important in reaching his two brothers who both work as truck drivers, to 'keep an eye on the family', and for his work. He estimates that some 75% of his work is arranged by mobile phone.

Neither Kaamil or his wife have a mobile phone. They are, however, regularly called by relatives from various places via their children's mobile phones. The old lady has firm opinions about mobile telephony. She compares the mobile phone with *El waswas el khanas*, one of the names used for the devil. According to her, it burdens people financially and incites them to lie. She strongly prefers the fixed line and expresses pride that the family was one of the first families to have a fixed telephone line in town. Yet all her children have a mobile phone, and she realizes that if one of her children needs to talk with her, they will call one of the people in the house so as to reach her.[66]

Her husband has a different opinion. He does not have a mobile phone himself but holds that for many people the mobile phone has become indispensable and considers it an efficient tool. As all the children in the house have a mobile phone and

[65] Interview 35.
[66] Interview 34.

because only one of their children lives in Khartoum and the others are all resident in Karima, he has refrained from buying one himself.

Picture 19: Amjad, rickshaw and other transport in town, Hospital Street, Karima

Part 4: Karima as a regional centre

Self-made communities[67]

The Nile forms a central feature in the political, economic and cultural life of the region and its banks are lined with date palms, citrus trees and horticultural fields. The land is watered through ancient systems of irrigation that were developed locally and for the people in the numerous small settlements along the Nile this constitutes their only form of income. The Nile is part of the identity of these people as one old man explained to us; 'The Nile and its rich lands belong to us, it feeds us, it makes us live…' Each year the Shayqiyya people perform a ritual to thank the Nile for its gifts. The date palms are individually owned and often passed down from one generation to the next. Their products are of crucial importance to these families and the date harvest is a big event in September when children leave school to work with their family. It is a time of great joy.

Many Shayqiyya families in Karima have particular ties to the village of their origin in the area. As we saw, some members of Hisham's family, for instance, have

[67] The following paragraphs are largely based on observations of the dam and the villages north of the Merowe dam November 29, 2007 by Mirjam, Hisham and Sjoerd.

their roots in Nouri, a village that is one of the early Shayqiyya settlements in the area. A family resident in town may still claim ownership of palm trees that grow along the Nile and many people in Karima still exploit their palm trees.

Even in the colonial era date production was partially industrialized and with the construction of the date-packaging factory in 1958, export possibilities grew. Initially most transport was done by rail although at a later stage road transport also increased. Since the tarmac road was opened recently, transport to Khartoum has become a lot faster than in the past. Today the roads to the North from Karima along the Nile are still very bad; they are no more than rocky and sandy tracks bordered on one side by the desert but on the other by the green gardens and tall palm trees indicative of a different climate and way of life. The farmers who live here came a long time ago and their palm trees have produced dates for many years.

The Sudanese state has not developed any structural policies to provide facilities to the rural areas. During the Condominium, the agricultural North was neglected and hardly any investments were made there by the state. Yet, for example in the village Abu Haraz, various facilities are available: a school, a satellite connection, roads, etc. These are self-made communities by default, in which the community as a whole has organized itself to initiate projects that benefit the entire community. In the classic stereotype, these villages are thought to be isolated and backward. On arrival they appear quiet and rustic, and little seems to suggest dynamic economic enterprise. Yet below the surface, a lot is going on and although the pace of life may indeed be quite calm for many inhabitants, the dates and other agricultural products have brought prosperity to these farmers and they are relatively rich. This region is one of the heartlands of Sudan's date production.

The research team spoke to one of the farmers in the village Abu Haraz.[68] This farmer owns a number of trucks to transport dates from the village to Khartoum and also frequently travels to Khartoum to meet business contacts. He told us that he is benefiting a lot from the mobile phone these days. He used to have to travel to Karima to have access to mobile telephony to call his business relations in Khartoum but a year ago Sudani extended its network into Abu Haraz and this has made all the difference for him and he is now in daily contact with people he about selling his products. He has four mobile phones, each with a different SIM card.

[68] Interview 41

Picture 20: This family in the village

The Merowe Dam

These self-made villages along the Nile will soon disappear. The whole area will be underwater in the very near future when the Merowe dam is completed. This area will be at the bottom of the reservoir. The Merowe (also called Hamdab) Dam is the largest energy project at present in Africa and has been built mainly by Chinese contractors, although German and French companies are also involved.[69] The plans for a dam near Karima at the fourth cataract on the Nile date back to some considerable time but after the Aswan Dam in Egypt was built, they were put on hold indefinitely. The main aim of dam construction is to provide the country with a source of energy. The hydroelectric goals are linked with agricultural purposes: increased irrigation possibilities are meant to stimulate the growth of cash crops such as cotton in large-scale industrial agricultural schemes.

It is estimated that 55,000 to 70,000 people will be moved from the area as their home become inhabitable or end up below the reservoir's waterline. Quite a number of people have already been forcibly moved, in most cases to resettlement sites that have not been adequately prepared. These sites are not far from the Nile but are situated in the desert and, although an irrigation canal connects the sites to the Nile, there are often no further facilities available.

Many of the region's inhabitants have a history of mobility, and people do not expect to stay in one place for their whole life. Yet, in the case of the Merowe Dam removals, forced mobility has been imposed on residents and there have been protests

[69] Wikipedia website: http://en.wikipedia.org/wiki/Merowe_Dam .

in connection with the removals by the dispossessed. The inhabitants have organized themselves into various groups and organizations, the Leadership Office of the Hamadab Affected People (LOHAP) that was created in 1992 is the best-known internationally. Petitions and protests have called for a better evaluation of the social, ecological and archaeological consequences of the dam construction. Several human rights infringements have already been verified in connection with the dam construction and in April 2006 three people were killed during clashes between the police and local inhabitants. Compensation for the loss of land and productive trees are not adequate and the inhabitants are not always being informed in time of the rising water. The government has in several instances assured farmers they will receive compensation in accordance with legal Sudanese standards but these statements often turn out to be just empty promises.[70]

The farmer in Abu Haraz that the research team interviewed has so far refused to leave his village. He is still faring quite successfully and continues to do business and sell the production of the family's date palms. Yet he is aware of the fact that his future is very insecure and that sooner or later he and his family will have to move too. He uses the mobile phone not only to organize his business but also to remain in touch with neighbours and friends who have already had to move away. The mobile phone in this way has become a crucial instrument in keeping these displaced groups together and allows them to continue village identity despite the distance. News about the government's statements, protests, removals and resettlements is exchanged so that all are aware of the latest developments. This kind of 'mobile phone activism' lends a totally new meaning to the mobile phone than the social and market functions discussed earlier.

This chapter has indicated the various usages of the mobile phone in Karima. The highly diversified meanings reflected in the description of the mobile phone in the social sphere, private business in the transport world, the state and the health sector, relations between urban and rural areas and in mobile phone activism. In other words, mobile phone usage is not restricted to one domain but is being employed as a multifaceted device. On the whole, people in this region regard the mobile phone as an efficient tool that increases communication over longer and shorter distances. This emphasis on the mobile phone as a practical instrument may be related to Karima's history of fluctuating possibilities regarding transport and communication.

[70] 'Hundreds forced to flee as Merowe Dam reservoir waters rise', *Sudan Tribune* (10 August 2006): http://www.sudantribune.com/spip.php?article17017.

5. The mobile phone, modernity and change in Khartoum

Part 1: Introduction

During its short history, the socio-economic meaning and effects of the mobile phone in Khartoum have undergone vast changes. As the mobile phone was first introduced in Khartoum in 1997, its initial glamour has started to wear off and people are now assessing not only their positive experiences with it but also evaluating the problems related to mobile telephony. People in Khartoum describe the impact of the introduction of the mobile as a combination of benefits and disadvantages, of opportunities and restrictions. Many have come to appreciate the possibilities offered by mobile telephony but are wary of the risks and social problems involved.

This section considers the impact and appropriation of the mobile phone in Khartoum by focusing on the social and cultural processes that accompany it. The new dynamics involved include topics as diverse as morality and landscape, family ties and linguistic puns. The focus here is hence on local interpretations and debates surrounding the mobile phone. There is, for example, no way in which we can establish whether or not Khartoum's mobile users actually lie more than before, but the fact that people suspect lying is on the increase as a consequence of mobile phone technology is significant. People's understanding of the mobile phone is central to this chapter.

Picture 21: Khartoum at sunrise

The focus during the team's fieldwork was, although not exclusively, on university circles and networks related to the educated. Students are widely known to form an important group of mobile phone users, despite their sometimes limited financial means. And quite a number of university graduates have found employment in the mobile telephone business. For this case study, some 18 people working in the sector were interviewed. Except for one, all were men. Although a number of women are active in the mobile telephone business, the great majority are male. Interviews were

held with people from the highest level in the sector to credit sellers in the market, and they all talked about their activities in the business as well as of their experiences with mobile telephony as end-users. In addition, eight end-users, four of them women, and one non-user were interviewed. The interviews were conducted in various parts of Greater Khartoum.

Khartoum: The hub

Although the place where the city is located today had been a settlement for a very long time, Khartoum was only established as a small garrison town after Muhammad Ali extended his rule into Sudan in the 1820s. Strategically situated near the junction of the White Nile and the Blue Nile, the town soon expanded and became an important trading centre in the region. Although Khartoum became the capital of Sudan during the Turco-Egyptian period, the Mahdists shifted their seat to Omdurman, the town on the opposite bank of the White Nile. For many Sudanese, Omdurman still forms the historical capital of Sudan, partly because it is larger and more densely populated. After the Mahdists lost the crucial Battle of Omdurman in 1898, the British returned the capital to Khartoum and General Kitchener planned the town so that its neighbourhoods were in the pattern of the Union Jack.[71] It attracted a growing number of inhabitants and became important as the political and administrative centre of the country. A store house and arsenal were built on the other side of the Blue Nile and this area came to be known as Khartoum North (El Bahri). It became the major industrial area, although its population also grew over the years from 700,887 at the time of the last population census in 1993 to an estimated 1,725,570 in 2007.

These three towns now form a conglomerate called Greater Khartoum. Omdurman is by far the largest of the three, having over three million residents. In 1956 the Greater Khartoum area had some 98,000 inhabitants, in 1983 there were well over 1.3 million inhabitants, in 1993 the total population was approaching 3 million, and today the figure is over 7 million.[72] This growth has been due to natural causes, to international refugees coming from neighbouring countries in the 1970s, and to a large influx of internally displaced persons from the war zones in the south and Darfur from the 1980s onwards.

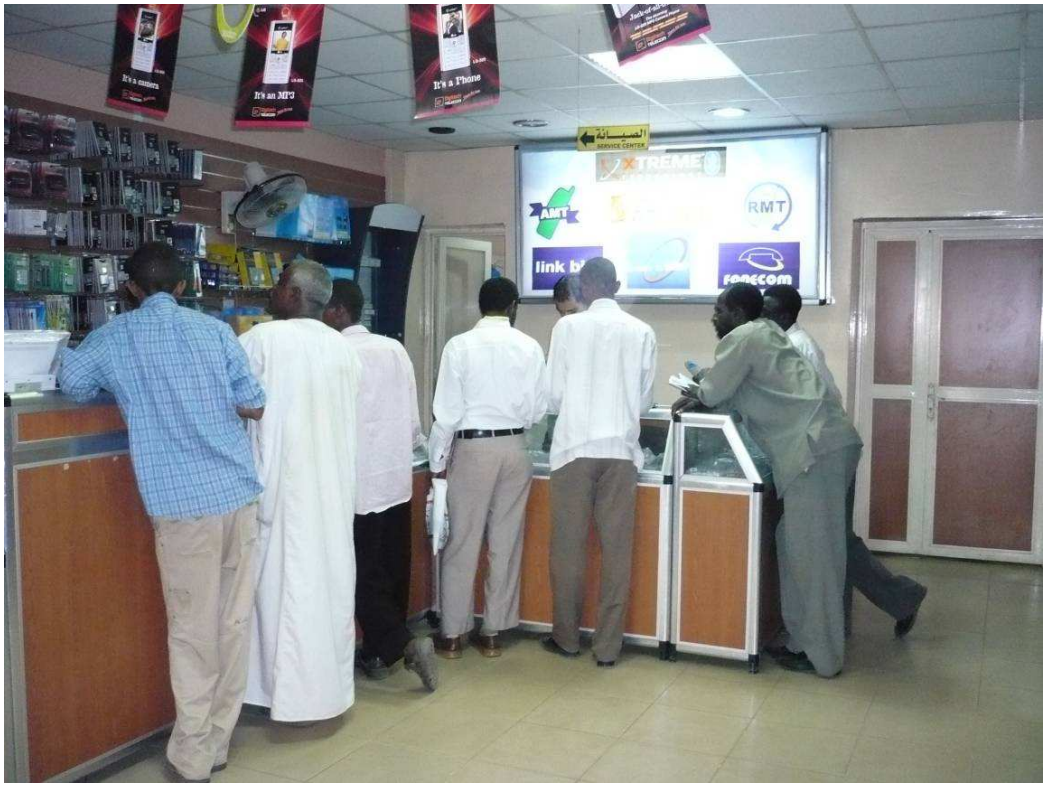
Khartoum's markets

Markets are a central feature of this tripartite city. In many cases, they are linked to transportation facilities and are located near bus stations or large traffic intersections. Some examples of important markets would include the well-known *Suq el Arabi* (Arabian Market) in Khartoum's city centre, *Suq Omdurman* and *Suq Bahri*, but also the *Suq Libya* (Libyan Market in Omdurman), the popular *Suq el Shaabi*, *Suq el Wihda* (Unity Market in Khartoum North), *Suq el Leffa* (Turn Market in Khartoum) and *Suq el Mahali* (the Market of the Place). Many people in Khartoum visit one of

[71] G. Hamdan, 'The growth and functional structure of Khartoum', *Geographical Review* 50, 1 (1960) p. 24.
[72] Population figures from Hamdan, 'The growth and functional structure of Khartoum', p. 23; World Gazetteer website: http://www.world-gazetteer.com/wg.php?x=&lng=de&dat=32&geo=-188&srt=pnan&col=aohdq&men=gcis&lng=en ; although other statistics also exist.

these markets every day. While road transport is generally sparse in Sudan, Khartoum's city centre is plagued by long traffic jams, and high levels of air pollution as a result. Public transport comes in the form of shared taxis, buses and, within neighbourhoods, rickshaws.

Usually markets are organized by product, with each street offering its own product. Obviously such connections between location and product are subject to change. For example, a street in 'Foreigners' Market' in the centre of Khartoum where clothes used to be sold later changed to be a 'mobile telephone street'.[73] However, especially in less extensive markets, people have to diversify as much as they can. Thus a businessman may have a licence for a photo shop but at the same time offer credit transfers and repair services in mobile telephony.[74]



Picture 22: Arkaweet shop, Khartoum

The relatively new business of mobile telephony is highly visible in the markets: mobile telephones and accessories are on display and businesses have elaborately decorated shop windows. Street vendors, however, may have no more than a suitcase, three mobile phones (so as to include the Zain, Sudani and MTN networks) and a placard announcing their activities. Survival is precarious for such street vendors: the police may appear at any time, confiscate their wares and demand payment before their possessions are returned to them.[75]

[73] Interview 42.
[74] Interview 24.
[75] Interview 22.

Many of the businessmen are part of extensive international trading networks. One man the research team met had received his education in business and technology in Egypt and now, as a trader, regularly travels to Dubai to buy products to sell.[76] The economic chains involved are extensive and, at the multinational level, incredible sums of money are being earned. Some of this is being reinvested in modern, upmarket shops.

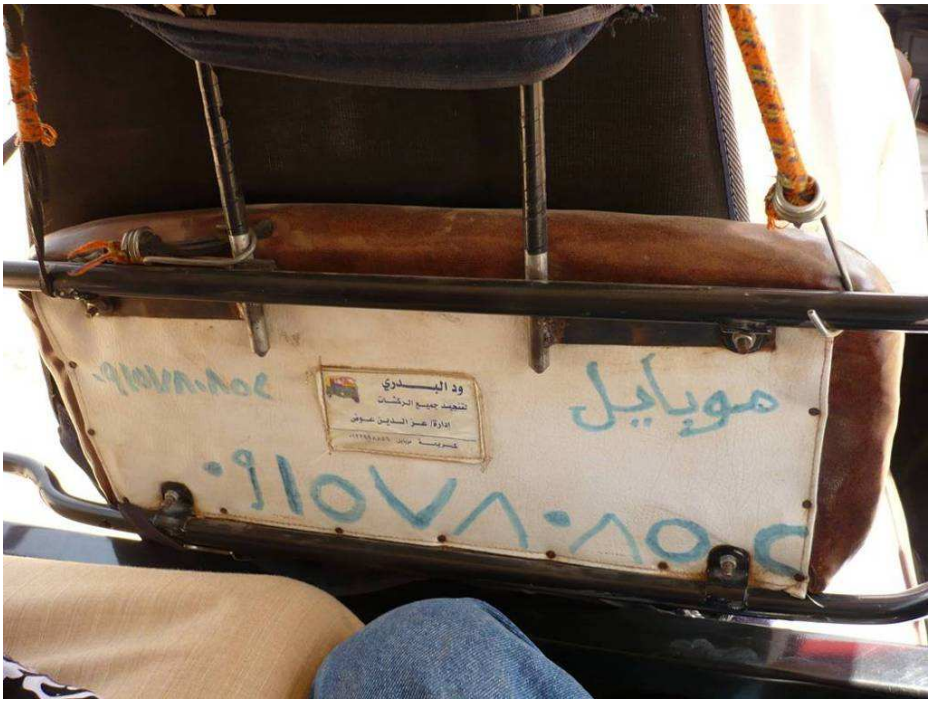
The sector also consists of chains of distribution from local shops to market stalls and, like the multinational companies, these are often tied to economic trading networks in Egypt, Saudi Arabia, Dubai, Uganda and elsewhere.

Part 2: Morality and socio-economic meanings

Economic opportunities and restrictions

The mobile phone is opening up a wide range of new economic possibilities for many people. Handsets have their seasons; prices rise sharply round special occasions such as Ramadan and Eid al-Fitr, and during the Hajj pilgrimage period. People are then importing brand-new models from the countries they visit and these new models can fetch up to double the price originally paid for them. It is a risky business, however, as prices can also drop spectacularly shortly afterwards.

For some merchants not directly involved in mobile telephony the economic possibilities are also growing. Through their mobile phones, traders can attract new customers and people active in petty trading and small businesses have their mobile phone numbers clearly displayed so that they can be reached by prospective clients.



Picture 23: Rickshaw number

[76] Interview 42.

The advantages of having a mobile phone are especially relevant for women in business. As women are not always allowed to walk outside on the streets and travel at all times of the day, making appointments by mobile phone can help them to plan their lives and allow them to operate within the imposed limits of 'respectable' behaviour. The mobile phone can also help to limit the number of fruitless visits they make. For Fatima, a henna painter, the mobile phone constitutes an important income-generating tool. All her customers reach her by phone and she used the first income she ever had (in 2002) to invest in a mobile phone. When asked the reason, she answered: 'I heard that the mobile phone would bring work and that was exactly what has happened.'[77] Many business people testify that the mobile phone offers new possibilities to fix up business appointments, arrange for wares to be delivered and develop clear time schedules. In short, business organization is greatly enhanced by the mobile phone.

Economics are not only important for those in business. End-users also try to use the mobile phone for their own benefit and as economically as possible. Credit transfer has become an important way of sending money between relatives and between lovers. End-users agree on a 'sign language' so they can place orders with petty traders. Tea sellers, for example, may be reached through a 'missed call' system that costs nothing at all.[78] The initial purchase of a mobile phone is a financial burden for many people so, to deal with this problem, students of Khartoum University established a credit association through which they saved money to be able to buy a mobile phone for each member in turn.[79]

Many people have more than one SIM card and, if they can afford it, several handsets. In Khartoum this is predominantly to ensure the best rate: calling contacts with the same operator are usually cheaper and some companies have special rates at night or offer other incentives or promotional packages. Other people use different phones for different aspects of their lives and have separate phones for work and private use. These strategies indicate the lengths people go to in order to reduce costs and gain maximum benefit from their mobile phone.

Still, there were regular complaints in the interviews the team held about the risks of spending too much on calling. Some people mentioned a local saying: '*Mobile yakul israb*' (the mobile phone eats and drinks with you), implying that a large percentage of the household budget can be spent on a mobile phone.[80] People who, for whatever reason, do not have access to or can only make limited use of the mobile phone are excluded from the economic networks and chains mentioned above. For some, this is a choice; they may be against the mobile phone in principle or feel that they do not need one. Even so, economic considerations play a role in many of these cases. One non-user indicated that he saw no need to have a mobile phone and mentioned a number of disadvantages related to it, but he also held that mobile phones were too expensive: 'In the past I had one but I stopped it due to the high running costs. The normal telephone is cheaper and it does the same thing that a mobile phone does.'[81] This man saw no need to have a mobile phone as he felt his fixed line was

[77] Interview 27.
[78] Interview 15.
[79] Interview 16.
[80] Informal conversation with university teacher; Interview 18.
[81] Interview 18.

serving him well, but there are also large numbers of people in Khartoum who just cannot afford a mobile phone.

BOX 6
'Credit Hiba'

Picture 24: Credit Hiba, a young woman in Khartoum

Hiba is a 26-year-old graduate student at the University of Khartoum who has just started her practical specialization year at the Ministry of Irrigation. She started university in 2002 and was immediately given a mobile phone by one of her uncles who lives in the US: 'Uncle Seddig was refusing the idea of a mobile phone but he bought it for me to keep in touch with my family.' As Hiba is from Kordofan and has many relatives in Bahrain and the US, it is difficult for her to reach her relatives other than via a mobile phone. Soon her bills reached 25,000 Sudanese pounds every quarter, and, although her family helped her to settle the bills, she felt the financial burden had become too high.

That is why a year ago she joined a credit service: 'I thought: If I use the mobile phone to transfer credit on a commercial basis, I can use the money to run my own mobile phone in balance. I use the profit from the credit calls to communicate with my family (my mother, my father and so on). Instead of being a financial burden, I use the mobile phone to cover itself financially.'

Initially she had only a few customers but as her network started to grow her income increased and she no longer spends extra money on her telephone bill. Hiba knows her customers well; most of them are relatives or female friends from university. With some of them she experienced problems as they did not pay her and would try to postpone clearing their financial debt with her indefinitely. That is why she no longer accepts customers who want to pay later. Despite the income she gets

from the credit transfer, she stated that she will stop the business as soon as she has a job. Hiba's nickname is 'Hiba Rasiid': 'Credit Hiba'.

For this young woman, the mobile phone constitutes an important way of keeping in touch with her family: 'The mobile phone is one of the technologies which is very effective and we benefit from it. For example you can use it to communicate with those you cannot reach physically, especially in emergencies, wherever they are.' Once Hiba had to sit an exam but was mistaken about the time. The teacher called her on her mobile phone and, as she was able to appear within ten minutes, allowed her to participate. This way she did not miss her exam, which would have cost her an extra year of study: 'Think about it, if I had not had a mobile phone, how would he have been able to find me?'

Yet, Hiba is sharply aware of the negatives side of the mobile phone and feels that it should be used 'rationally', not in a 'bad' way such as for 'immoral relationships' in which people 'spend their time chatting on the mobile phone all night'. 'There are many advantages. It is a means of communication and people use it in their business. It can help people to win millions but at the same time through it they can also lose millions in meaningless conversations against God's will!'

Social bonds and privacy

The mobile phone is not only of relevance for the economic sector in Sudan. Social bonds are perceived as extremely important in Sudanese society and people are using modern communication technologies to forge, re-establish or reinforce these bonds. In many cases, people use the mobile phone exclusively to create and/or maintain social connections. These may involve existing networks of family and friends but also new networks of mobile phone users.[82] This (re)production of social bonds redirects the function of mobile telephony. While designed for communication and information exchange, people in Sudan are also using it as a form of technology to maintain, create and/or expand their networks *per se*. This explains why some people talked about the 'wrong way' of using the mobile phone:

> Sudanese people like to talk very much! That is Sudanese. In Europe it is: 'Hello … goodbye'. Only a short subject is discussed and then: 'Bye bye'. In Sudan, however: 'How is your family? How is your brother? How are your friends? How are you since the last time I saw you? and so on. Talking very much! That is Sudanese.[83]

In terms of privacy, opinions about the mobile phone vary. Some people appreciate the possibility of talking in private on their mobile phone; in stark contrast with fixed lines in houses and shops. Amr, a young university graduate who deals in credit transfer, explained that privacy was the most important reason for him to buy a mobile phone: 'I think the most important motivation for me to buy a mobile phone is the privacy; that you can be sure that any phone call for you comes to you directly.'[84] Others, however, find it tiring and annoying that they can be reached day and night by

[82] For a comparative example in history, see Spaulding, 'The birth of an African private epistolography'.
[83] Interview 3.
[84] Interview 23.

everyone and they consider it a breach of their privacy. People may switch off their mobile phone when they feel tired or depressed, or if they can no longer tolerate the indirect form of contact that the mobile phone establishes.[85] Some people indicated that they cannot survive without their mobile phone and feel nervous without it: 'It is like a drug. After one month you cannot do without it', one man commented. Obviously such cases of 'mobile phone addiction' are adversely related to the issue of over-expenditure.[86]

Generations and the family

For many Sudanese, relations within the family are the most intimate and intensive ties in terms of social contact. Such ties are not restricted to the nuclear family but may include ever-widening circles of relatives. A number of Sudanese of working age, especially men, have moved away from home to earn an income and this migrancy may involve moving from the rural areas to a regional town, further afield from one region to another or to Khartoum. International migration, especially to the Arab world (Saudi Arabia, Egypt and other countries in the region) is also common. Many families from the war zones have been separated: some members have continued to live in the South or Darfur, others have fled as IDPs to Khartoum, and yet others may have ended up in Uganda, Chad or elsewhere. For these families, the mobile phone provides a most welcome opportunity to restore or maintain kinship bonds.

Family news can be passed on much more rapidly than before. If there is conflict or a problem within the family, decisions can also include absent family members if required, whereas in the past it was often impossible to reach all family members who might need to be involved in a discussion. In cases of bereavement, for example, it was often difficult in the past to reach relatives to pass on the news. The mobile phone offers almost instant access to all family members.[87]

A handset and SIM card have become important presents and remittances that children offer their parents when they work elsewhere. The elderly in most cases do not buy telephones themselves and it is usually those who have an income who buy mobiles both for themselves and family members. Sons in particular tend to send their parents a mobile telephone so that they can remain in close contact. For many elderly people, their telephone is their 'life line' to the outside world. A 63-year-old woman from Sinja who moved to Khartoum explained in an interview that at first she felt that people with mobile telephones were 'acting crazy'. She regarded the loud and intrusive presence of the mobile phone negatively and was 'shy' about becoming a mobile phone user herself. Now however, she is convinced of the advantages of the mobile phone as it is the only way that her sons who are living abroad can contact her.

> Once when I had been in Sinja my sons were trying to call me and they didn't find me at home. Then they tried at my father's house and they told them that I had gone to my sister's place but when they called me there, I had left already. When I heard that, I decided to get a mobile phone to make it easier for them to find me wherever I am.[88]

[85] Interview 16; Interview 26.
[86] Interview 14.
[87] Informal conversation with university graduate.
[88] Interview 25.

The mobile phone intensifies links between town and countryside in that people working in town more often call their relatives and friends 'at home' in the rural areas.

Picture 25: Mobile phone use in Khartoum

The mobile phone is regarded as an important tool for creating, restoring or maintaining social relations. The risk of travelling to visit somebody who happens to be out has decreased and visitors are less likely to arrive unannounced. Yet, many people in Khartoum worry that the mobile phone is leading to less face-to-face interaction between people: people may just send a 'missed call' instead of going to talk to people. A non-user in Khartoum stated: 'I visit my family in Gezira every week but other people don't care about this because they depend more on mobile phones.'[89]

It is further argued that the mobile phone allows people to lie more easily. When asked what changes the mobile phone had brought in Sudanese culture, a businessman argued:

> It changed matters, it really did: everything is different. Before the mobile phone, Sudanese people they would not talk so much but all they said was true, but when this mobile phone came, everybody is just telling falsities on the cell phone. They will always say matters like: 'Where are you?' 'Just near you!' But he is not near me at all, he is maybe two hours away from me![90]

Many people take a highly balanced view of the relationship between the mobile phone and social interaction:

> The mobile phone decreases visits between people and this is a disadvantage. Face-to-face interaction between people is more comfortable and people feel free to take

[89] Interview 18; also Interview 20; Interview 22.
[90] Interview 3; also Interview 19; Interview 22.

> their time with this. The mobile phone does not offer this possibility. At the same time, however, it has intensified my relationship with relatives abroad and connects Sudan and its various parts.[91]

Even within the household, informants argue, the mobile phone can lead to increasing distance between family members. Sons and daughters may quickly switch off their mobile phone when parents appear and they then wonder what their children are hiding from them.[92] Secret conversations tend to be held in their bedrooms where parental control is less. In most cases, these 'secrets' concern relationships between the sexes.

Gender and morality

There are many stereotypical representations of gender relations in Islamic societies, and in non-Western societies too. It is often assumed that Islamic women are subordinated and confined to the private sphere, while men dominate the public space and are in charge of the political and economic arena. The reality is infinitely more complex.[93] Under Islamic law, women in Khartoum are subject to certain dress restrictions and, at least in the public space, the sexes have to be kept separate as much as possible. In Khartoum, there is deep controversy about the nature of respectful Islamic behaviour. In the view of those defending Islamist policies, traditions kept women submissive, while the islamization project allows women to actively participate in public life. Women interviewed by Salma Nageeb, however, were negative about 'the attacks that claimed traditional norms of gender segregation were not Islamic enough'. They felt that in the past women and men each had their social space and respected each other's activities. In their view, the new Islamist policies have led to a disintegration of this system and, albeit under a veneer of Islamic appearance, disrespectful behaviour:

> I see them from my house when they come out of university. They wear their black cloth [referring to Islamic dress] and cover their heads, but their laughter breaks the ears – walking with men and eating in the street. Where is modesty?[94]

These debates about gender relations and morality have also surrounded the introduction of the mobile phone. During fieldwork, it was the issue that was most frequently brought up when discussing the advantages and disadvantages of mobile phone behaviour. Issues of respectful behaviour and sexual morals have become closely tied to the introduction of the mobile phone. Some people hold that the mobile phone directly contributes to immorality and increasing divorce rates. Appointments can now be made from the house and keeping a wife confined to the home is no longer enough to ensure 'control' of her affairs.[95]

Especially for young people, the mobile phone has become a central strategic device in courtship. In the new dynamics of relations between men and women, 'love' is a central theme. Given the financial aspects involved, it is astonishing how many

[91] Interview 20; also Interview 23.
[92] Informal conversation with university teacher.
[93] Nageeb, *New spaces and old frontiers* pp. 1-2.
[94] Ibid. pp. 21-24, 23 (quotes).
[95] Informal conversation with university teacher.

youngsters of high-school age and especially university students have a mobile phone. They regard it as a necessary tool for social networking and will do everything possible to become a subscriber.

Parents may give their daughters a mobile phone in order to be able to exert closer control over their whereabouts, but obviously these young women overcome such restrictions and use their mobile phones to reach and be reached by admirers. The mobile phone gives, especially women, new opportunities to establish contacts and be masters of their own networking. 'Communication technology has made it easier to be in touch with a girl. In the past it was difficult because of our traditional society but today they can't control it if a girl has a mobile phone.'[96]

Obviously this comes with all the risks involved: stories circulate of young women being contacted by mobile and lured on a date only to be robbed of their handset and their jewellery.[97] This is a general complaint: the mobile phone does not only make social and business contact easier, it also facilitates crime. The mobile phone can be crucial in emergencies and many see it also as a form of security to be able to reach the police or the emergency services straightaway, but many of Khartoum's residents also see the cell phone as encouraging theft and offering increased opportunities for criminals.[98]

A number of young people regard the increased opportunity to communicate with age-mates of the opposite sex as one of the most important features of the mobile phone: 'In the past it was very difficult to communicate with people from the other sex through the fixed telephone line, especially during the evening given the social norms. But the coming of the mobile phone broke down all these borders.'[99] Yet many people also fear that this leads to an increase of indecency and immorality. They refer to the exchange of pornographic pictures via the mobile phone and to young people speaking at length to one another behind their parents' backs: 'On the negative side the mobile phone makes it more difficult for the family to follow their sons and daughters. You may find a girl talking to a boy the whole night in her room.'[100]

Young men are sometimes pestered by women who ask them to send credit,[101] while women complain of strangers calling them. Fatima, who gives her number to many women who may call her to make an appointment for a henna painting appointment, is sometimes harassed by male callers who she does not know:

> Q: You give out your number to your customers. Have you faced any problems as a result? […]
> A: I was just annoyed by some men who called to harass me. Actually they don't even know my name and call me to speak foul language, they shocked me!
> Q: Could you tell me how that happened to you?
> A: Once someone called me here…
> Q: After you had got married?
> A: Yes. He said 'Hello' to greet me. I asked him: 'Who are you?' He told me that he wanted to speak to the owner of the mobile phone. I asked him: 'Did you call this

[96] Interview 19.
[97] Interview 4.
[98] Interview 19.
[99] Interview 23.
[100] Interview 18; Interview 20; Interview 21 (quote); Interview 22.
[101] Interview 4.

number [mentions her number]?' He said: 'Yes.' I said: 'So in that case you should actually know whose mobile phone this is.' He said: 'No, I don't know. I don't know her.' I said: 'Well, if you don't know her, then why are you calling? What do you want?' He said: 'I want a … [refrains from mentioning the word].' So I insulted him and scolded him, insulting him and his mother and his sister; he drove me mad!

Another time somebody called me and told me that he had found my number in his mobile phone. Well, he annoyed me very much and I shut the phone off in his ear. I explained to my husband that I did not know that person. My husband was present when that person called me. […] My husband ordered me to end the call and not to talk to strangers anymore![102]

Part 3: Mobile phone culture

Modernity and social status

The mobile phone is not only influencing patterns of social and economic interaction but is also changing notions of time, privacy and prestige. The mobile phone becomes a part of the environment, the language and the body. In this sense, we can talk about a 'mobile phone culture'.

The mobile phone has changed patterns of social interaction in that people may start a telephone conversation in the middle of meetings or face-to-face conversations. A sort of hierarchical social contact has emerged in which cellular conversations take precedence over face-to-face contact. As these phone conversations may be between lovers, spouses or relatives, the boundaries of public and private space are redesigned in the process. Conversely, people complain of being called for business purposes at inconvenient hours, when they want to rest or spend time on leisure activities.[103]

The mobile phone is seen as constituting a breach with the past: letter writing is on decline and, as indicated above, people fear that face-to-face contact is also decreasing. The mobile phone is associated with modern life, with new dimensions of speed and immediacy. 'I depend on SMS to organize my day,' one man said.[104] The mobile phone is perceived as something new and revolutionary: 'This is the age of speed and globalization.'[105]

In its early phase, all Mobitel services were post-paid lines and customers would receive their bill afterwards. Only people with a certain level of income had access to this system and so the mobile phone was only available to the well-to-do in Khartoum. In 1999, pre-paid accounts started but customers still had to pay to receive calls. When this barrier was removed, competition started between companies to offer the best rates for their customers and the network continued to expand to areas outside Khartoum. Mobile telephony became more widespread and attracted customers from the middle classes and the poorer strata of Khartoum's society.

[102] Interview 27.
[103] Interview 3.
[104] Interview 16.
[105] Interview 16; Interview 21.

Picture 26: Man in telephone street

These two phases in the history of mobile telephony in Khartoum clearly had a bearing on patterns of prestige related to the industry. As initially only a few people could afford a mobile phone, it was considered a sign of great affluence. The following appeared in a book published in 2004: 'Mobile phones invaded Khartoum recently, particularly thanks to businessmen, and rapidly became significant items of status presentation.'[106] During the first five years of mobile telephony in Sudan, having a mobile phone was regarded as an indication of prestige and riches.

As the mobile phone has became more popular, the upper classes have felt less need to show off their cell phone, which has just become an integral part of their lives, their culture and even their body. They always carry it switched on and, with money not a consideration, they use the models that give them access to all the amenities they might ever need. Yet as the mobile phone has become so self-evident for them, it has become less of a mark of prestige than it used to be.

The function of status marker related to the mobile phone has shifted to middle-class residents and even those on low incomes. They will save up to buy the latest model, decorate it with lights and other accessories, equip it with fancy ring tones and wear it conspicuously on their belt.[107] A statement from a young man who received his mobile phone as a present from a friend back in 2001 is indicative of its changing prestige:

> Maybe in the past it was somewhat strange to exchange a mobile phone as a gift amongst people. It gave rise to many reactions that show how unusual it was because of the rarity and costs of a mobile phone. So giving it as a present was the highest limit and only for closest relatives. But recently this has changed. You may remember that time when people told tales of people who presented their fiancées with a mobile phone. It was regarded as a source of pride and indicated that they were rich. But nowadays I think buying a mobile phone as a present may be less

[106] Salma Ahmed Nageeb, *New spaces and old frontiers. Women, social space, and Islamization in Sudan* (Lanham 2004) p. 26 (note 3).
[107] Interview 2; Interview 3; Interview 21; Interview 23.

> expensive than other items that can be used as a gift. Taken from a financial perspective, a great number of relatives and contacts may be given a mobile phone. As for me, I gave one as a present to my fiancée and there is another one I gave away as a present. This is a normal thing to do.[108]

In its brief history, the mobile phone has had consequences for the way social differentiation is conceptualized. For some people in Khartoum, the mobile phone is so widespread that they regard it as a force in 'equalizing' people: 'It is lessening the gap between the rich and the poor.'[109] Although some hold that the mobile phone has changed from being a luxury to a necessity,[110] many mobile phone users will still try to buy a good model or attempt to turn their mobile phone into an exclusive and special item through ring tones or accessories.

Language, numbers and popular culture

In the context of new communication technologies, new linguistic patterns frequently develop. For example, technological railway jargon in Atbara reflected the cosmopolitan nature of the early Atbara railway workers: *wardiya* indicated a guard or a change of duty (from the Italian *guardia*), *wabur* was used for any steamer, motor vessel or locomotive (from the French *vapeur*) and many English words also entered the Atbara language.[111]

The introduction of mobile telephony likewise has been accompanied by a new vocabulary and new forms of literacy. People may learn the alphabet so as to be able to do SMS text messaging, whereas those already using SMS may use the codes and abbreviations applied in their network. Such coded linguistic forms are particularly important for youth cultures.[112]

New concepts related to mobile telephony are widely used, many of them being borrowed from English: the word 'mobile' itself is a case in point. The various models have received nicknames. Thus the name Nokia 3310 was turned into a pun: *talata wa talateen ashara* (3310) shifted to *hasharteen hashara* (2 insects, 1 insect). The first Nokia model that could have its cover changed was called *Hirbaya* (Chameleon) but as it is now considered old-fashioned, big and heavy, its name has changed to *Toba* (brick). Ring tones can be associated with the insects they sound like (e.g. grasshoppers).

Most models are given a local name in addition to their official one. One Samsung model was called after the popular Syrian singer Asalah (Nasri), while another was given the name of a song (*A'ashiqa*) by the Lebanese female pop star Najwa Karam. As is often the case in popular culture, politics has also joined these new linguistic patterns; one model is called *janjaweed*, another Rebecca (the name of John Garang's widow) and yet another Salva Kiir (now president of the GOSS).

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[108] Interview 26.
[109] Interview 19; Interview 21.
[110] Interview 26.
[111] Hill, *Sudan transport* pp. 156-158; Sikainga, *City of steel and fire* p. 58.
[112] On literacy: Interview 6. On youth culture: this is not restricted to Khartoum: relations between youth cultures and the new literacy of the Internet and mobile phone have been discussed elsewhere: Jing Wang, 'Youth culture, music, and cell phone branding in China', *Global media and communication* 1, 2 (2005) pp. 185-201.

Mobile telephone numbers came onto the market in a fixed order. As people associated these numbers with specific groups who were most likely to buy a mobile phone at that time, the numbers relate to that group. Thus numbers starting with 129 are known as *Sit el shay* (tea sellers), while all those that came next are identified as *El talaba* (the students).

In the first few years of mobile phones, the numbers all started with the digits 121, 122 and 123. These numbers are now highly sought after as they are linked to the wealth and prestige of the initial phone buyers. Huge sums of money can be asked for numbers starting with these digits. A man who trades in handsets and SIM cards was asked whether he was interested in such numbers:

> Q: Are you one of those who like special numbers and special models of mobile phone?
> A: Yes, I am forced to care about this. I care about special numbers and expensive models because the number of the mobile phone has become a measuring tool for evaluating a person. So I have found myself forced to deal with this, and I have become one of those looking for special numbers even though I have thus had to change my number many times [as a consequence].[113]

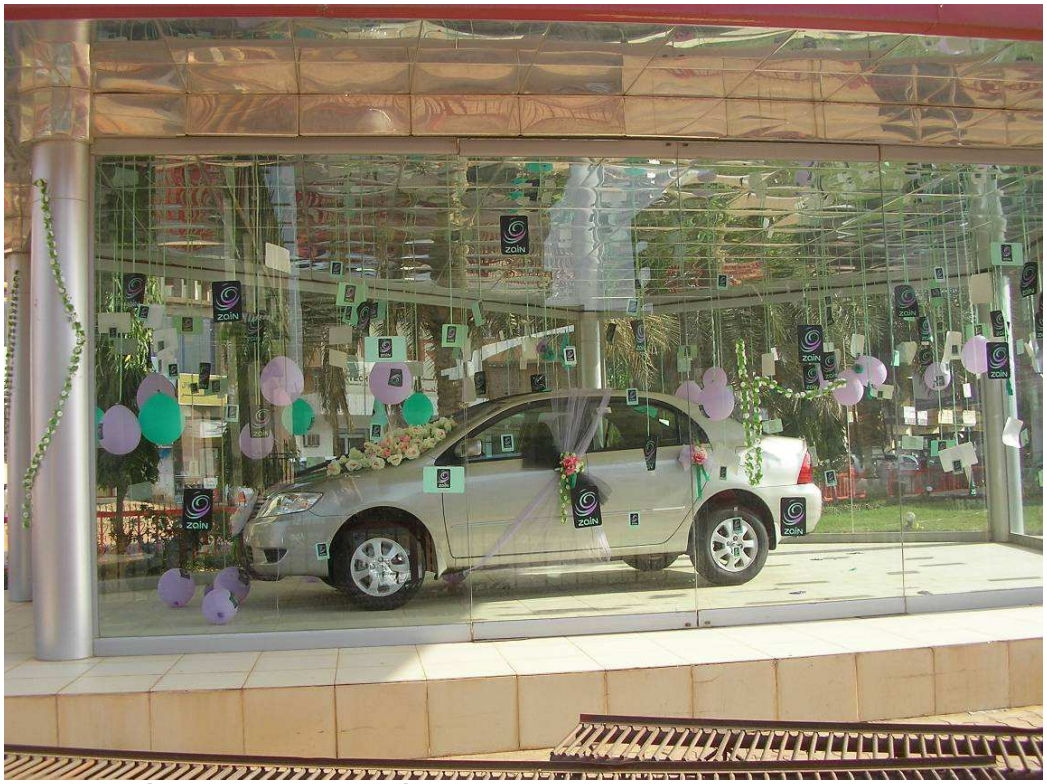
Some people go out of their way to buy such a number. One of the researchers involved in the project observed how girls started laughing at a young man who had no money to call but still used an early, and hence expensive, number.[114]

In the meantime, the mobile phone has also entered others parts of Sudanese popular culture. It has become a theme in popular songs, and the companies sponsor television programmes. Advertisements are placed on Youtube and recently the logos used by the mobile phone companies have started appearing as henna tattoos.

[113] Interview 16; Interview 23.
[114] Hisham Bilal, 'The study of the social effects of the mobile phone in Northern Sudan: the cases of Khartoum and Karima'(Unpublished report 2007).

City landscape

For those who do not have one, the mobile phone can seem to be omnipresent and very conspicuous. Firstly, there are the sometimes aggressive advertising campaigns that have come to dominate the city landscape. Entire streets have been filled with huge billboards, buildings are painted in the colours of company logos and some companies buy whole pages in newspapers for their advertisements.



Picture 27: Advertisement campaign, Khartoum

In these campaigns, the companies are trying to appeal to Sudanese sensitivities and play on issues of social bonding, relations with relatives and gender sensitivities. For example, one ad presents a mother who is told that she need not worry when her daughter leaves home to get married because with the mobile phone she will not go 'missing' as she would have in the past. The campaigns do not always fit the Sudanese context perfectly. For example, some people associate the yellow of MTN (in their advertisements, MTN uses the concept 'yello') with the madness of the pink palace that is called 'yellow palace' in Arabic and is now a mental institution, while the word *zain* (Arabic for goodness or beauty) is apparently not used in colloquial language in Sudan.[115]

The mobile phone companies are heavily involved in social work and development projects. This is not only an international trend for multinational companies but is also related to business traditions in the Islamic world. But quite a lot of people are suspicious of the motives behind these activities. 'Sometimes I feel that the social projects in which these companies are involved serve no other purpose

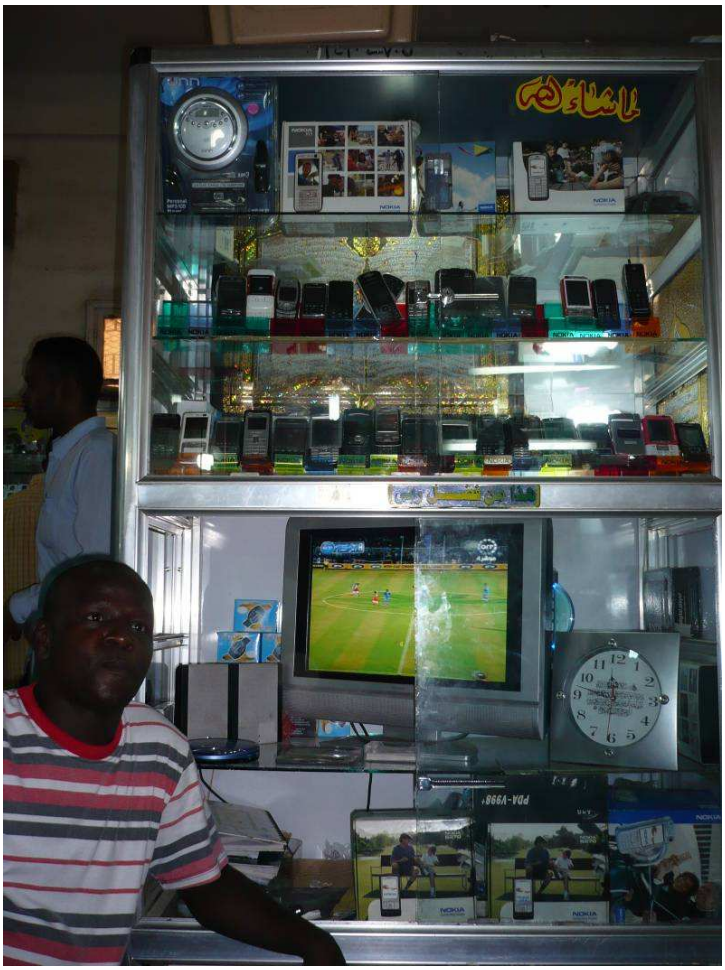
[115] Informal conversation with university teacher.

than self-promotion,' one informant stated. [116] The same informants also complained that people are lured into becoming subscribers but get very little in return:

> I think competition has led to good results both for the companies and the users. Yet I believe the communication companies should shift from the quantity concept to one of quality because they have already cheated a large number of customers. They focus on how to attract an ever-larger number of customers but don't care about improving their services.

Some campaigns are considered misleading as it is only in very small letters that the conditions are stipulated, while the advertisement itself may be gigantic.[117]

There are so many mobile phone shops that people are confronted with the presence of the mobile phone wherever they go. This obviously holds for Khartoum but is also true of places like Juba where the dynamics of the mobile phone in relation to socio-economic patterns show both similarities and differences with Sudan's capital.



Picture 28: Display case, Khartoum

[116] Interview 26 and informal conversation with university teacher.
[117] Interview 26; informal conversation with university graduate; Interview 15.

6. War, business and mobile telephony in Juba

Part 1: Introduction

This chapter explores developments in the mobile phone market in Juba. The sector centred on mobile phones, accessories and communication is part of the general economic trend in Juba and is linked to the new communication possibilities in the town that became available following the peace accord in 2005. The interviews held led us to conclude that Juba has indeed changed and the mobile phone has become a central issue in the organization of Juba's economy and its market structures. However, informants also indicated that much still remains to be improved in the mobile phone market in the area. Inevitably the political history of Sudan, with its changing dynamics in relations between the North and South, comes into play here. Political debate is part of daily life and also part of the discussions, actions and policies surrounding communication. People are inventively attempting to circumvent the barriers imposed on them, trying to cope with the ever-changing situation and organize their lives and businesses in town.

For this pilot study in Juba, the research team concentrated on market activities and interviewed 18 businessmen. These business people were active in the various markets in Juba: the Customs market (12 interviews), Juba market (1 interview), the Konyokonyo and Malakia market (each 2 interviews) and 1 interview in a shop that was not in a specific market. In addition to these businessmen who are at the same time mobile phone end-users, interviews were held in three households whose members are not involved in the mobile telephone business but who are end-users. The households were selected at random in the main neighbourhoods in Juba, i.e. Munuki, Nyakuron, and Kator. Information was also provided through various interviews with Southern government representatives, employees of the mobile phone companies and Southern Sudanese people resident in Khartoum. Before delving into the specificities of the business, an overview of the developments in communication technologies in Juba is presented and the mobile phone business, which is at the heart of current socio-economic developments in Southern Sudan, is then characterized.

Juba: A booming town following the peace accord?

Juba is a town in Southern Sudan. Before independence it formed part of an important contact line with the North as steamers from Khartoum followed the White Nile up as far as Juba and unpaved roads from the town then led to other places in the South. Under Turco-Egyptian rule, the regional administration of Equatoria Province was established near Juba in Gondoroko on the opposite bank of the Nile. Equatoria Province was split into East and West and the Bahr al-Jabal States, with Juba as the political centre of the Bahr al-Jabal State. In 2005, Bahr al-Jabal came to be known as Central Equatoria. In 1947 and 1954, conferences were held in Juba at which political representatives from the South discussed future relations between Southern and Northern Sudan.[118]

In 1955 a mutiny took place among southern soldiers stationed at Juba and this sparked off the first civil war between Northern and Southern Sudan. After it ended in 1972, people who had taken refuge elsewhere returned to Southern Sudan. Plans were

[118] Johnson, *The root causes of Sudan's civil war* pp. 25, 27.

made to implement infrastructural projects and several projects, such as the building of a new bridge over the Nile at Juba, were realized. People hoped that their standard of living would soon be at the level of what they had become used to in Uganda and elsewhere but their expectations were not fulfilled: 'Inadequate state services, limited markets and ineffective or inappropriate international aid was a problem in much of Southern Sudan during the 1970s and the situation deteriorated further in the 1980s.'[119]

When the second civil war started in 1983, Juba was the scene of intense fighting. It remained in government hands and was frequently attacked by the SPLA. In Equatoria State there was a great deal of resentment at Dinka domination and in Juba itself Dinka and Mundari competed for trade markets. These animosities led to an ambivalent relationship between the SPLA and the local population in Equatoria.[120] The war had devastating consequences for the region which suffered massive displacement, famine and disease. Infrastructure was almost entirely destroyed and Juba became increasingly difficult to reach.

Picture 29: The roads in Juba

The Comprehensive Peace Agreement (CPA) that was signed in 2005 changed the situation in Juba profoundly and it became the capital city of Southern Sudan. The

[119] Joshua .O. Akol, 'A crisis of expectations. Returning to Southern Sudan in the 1970s', in: Tim Allen and Hubert Morsink (eds), *When refugees go home. African experiences* (London, Trenton 1994) pp. 78-95 (quote p. 92).
[120] Johnson, *The root causes of Sudan's civil war* pp. 68, 85-87.

new Government of Southern Sudan (GOSS) established its headquarters there and processions of cars belonging to the government and international agencies are now visible every day on the one and only tarmac road, At times they even cause traffic jams, a phenomenon that has hitherto been unknown. Road construction and de-mining lead to much confusion in the traffic sector as roads may be closed at any time because of construction activities. The number of cars has at least tripled over the past year mainly due to the amount of cars owned by the Southern government and the aid organizations. The former limited activities in the realm of emergency relief are now being replaced by more elaborate programmes in peace building and reconciliation, infrastructure, health and educational services. A large number of new cars for these international aid organizations are still waiting to be imported and people are already trying to bid for the first second-hand cars that will soon become available. The international agencies all have their own compounds and houses that were constructed after the peace accord was signed in 2005. Despite high prices, the construction sector is active in various parts of the town building houses, markets and buildings for aid agencies and commercial companies. In the near future, Juba University will be transferring back to Juba from Khartoum where it was housed during the war.

The bridge over the River Nile was attacked during the war and use by heavy vehicles has resulted in the collapse of one lane so that the bridge is now a weak one-track structure. In August 2007, the Kenyan company that won the tender to construct a new bridge finally received permission to start its activities and the company aims to

Picture 30: Bridge over the Nile, Juba

finish the bridge within six months. The new bridge will allow much larger loads to be transported and encourage trade and traffic between Southern Sudan and neighbouring countries such as Uganda and Kenya. New companies have also arrived in the region, with the multinational oil company Total being one of the most prominent. New investors are eager to start up businesses in the area, and, although negotiations with the new Southern government are by no means easy, there are several business initiatives in the pipeline.

Juba is changing from being a city under curfew to a city with new prospects. Many of those who stayed on in the town during the war have become accustomed to city life. The situation in the countryside is still problematic and insecure and, as a result, many returnees are flocking to Juba where a huge market has grown up attracting merchants from different places. Juba's population is now estimated to have grown since the peace accord to around 250,000.[121]

Table 3: Population of Juba

Year	Population of Juba
1973 (census)	56,737
1983 (census)	83,787
1993 (census)	114,980
2007 (estimate)	250,000

An article published by the BBC on 8 January 2007 entitled 'Peace brings boom to South Sudan' suggests economic growth and future prosperity, with the author even wondering whether Juba will become the new Dubai. Certain developments seem to suggest that these expectations may become true and ten months later a newspaper article appeared under the headline: 'Kenyan airline plans direct Juba-Dubai flights'.[122] Juba's port was also opened in the course of 2007, after extensive construction work by mainly Chinese contractors. Local people share the general view of future prosperity in the sense that they feel major chances are occurring in the town. 'Miracles are happening and there are now a lot of vehicles on these roads. In the past children were playing on the streets: there were no vehicles! We are now living like human beings.'[123]

For all their hopes and expectations, it is clear that many people in Juba still face problems and the boom in the town can only be interpreted in relative terms. Juba at present lacks adequate infrastructure, many of its residents live in makeshift dwellings and face poverty and hunger, and healthcare and educational facilities are limited. Life expectancy is less than 50 years, meningitis and cholera epidemics hit the population in 2006 and 2007 and the number of children living on Juba's streets is still growing. Juba has no running water, many neighbourhoods do not have electricity and the parts of town that do are only intermittently supplied. As Charles

[121] Wikipedia website: http://en.wikipedia.org/wiki/Juba,_Sudan .
[122] Jonah Fischer, 'Peace brings boom to South Sudan', *BBC News* (8 January 2007): http://news.bbc.co.uk/2/hi/africa/6241259.stm ; 'Kenyan airline plans direct Juba-Dubai flights', *Juba Post* (4 October 2007): http://www.k2-media.org/jubapost/go/record.php?cat=20&recordID=238 .
[123] Interview 9.

remarked; many people remain 'squeezed to the corners of the city'.[124] The aid agencies, the large construction projects and the big investments are all related to the foreign presence in Juba and these activities do not form part of the daily reality of the local population. The contrasts in Juba town are stark: along the Nile one can find IDP tents that may house an entire family alongside modern bars where NGO personnel and well-to-do businessmen and politicians enjoy a beer or good wine.

The situation in Juba is still extremely volatile. Relations between the government and the South are still strained and there is little dialogue: 'We need a definitive solution for the causes of this war. But only the gun is silent. There is no dialogue between the parties. Let us hope for the best.'[125] Former military personnel are often ill-prepared for diplomatic and political tasks and there are cases in which hierarchies have become confused to such an extent that people who are supposedly formally superior cannot undertake actions without the consent of those of a lower rank. Relations between people who remained in Juba, those who stayed in SPLA-controlled areas and returnees from abroad, often with a higher education, are by no means easy. The population of Juba is living between hope and fear.

The war and communication technologies

The war and communication technologies often show a highly ambiguous relationship. In many cases, infrastructural services are entirely destroyed during a conflict and no investments are made to introduce new technologies. In an area like Southern Sudan, this has led to an almost complete lack of communication facilities. Yet, history also provides examples of communication lines being built by fighting parties to ensure the transportation of troops, weapons and military equipment. For example, during the Mahdist period in Sudan, the British tried to extend military railways without considering whether this would also help civilians to solve their transport problems.[126]

Before the civil wars, Juba formed an important nodal point in communication lines between North and South Sudan, being situated near the Ugandan border and with connecting gravel routes to Nimuli, Wau, Rumbek, Yambio and Yei. Juba thus has links with international trading and transport routes between Kenya, Uganda and Zaire/Congo. The town was also the final destination for river transport on the White Nile between Khartoum and Juba through Kosti. These connections were accompanied by the introduction of other modern technologies, such as telegraph lines and mail services.

After the war started, Juba's central position in communication and transportation came to a virtual halt. Roads and bridges were destroyed or mined, barges on the Nile came under frequent attack and air transport was primarily of a military nature. As many people were forced to move during the war, families became separated and the subsequent need to communicate grew although the possibilities decreased as a result of the violence. A man who lived in the South during the second civil war testified: 'With the war, all communication broke down. You don't know nothing about your relatives. You are isolated.'[127] Although the situation fluctuated and periodically the

[124] Quotation from a chat between Mirjam and Charles a Kenyan migrant in Juba and driver during the visit of the team in November 2007.
[125] Interview 9.
[126] Hill, *Sudan transport* pp. 16-27; Holt and Daly, *A history of the Sudan* p. 96.
[127] Interview 9.

roads were open, communication within town, let alone with people outside town, was very difficult for most of the war. Food was hard to find and life was very expensive.

Despite these difficulties, people tried to remain in touch with their relatives and friends. Every possible means was used to send messages, trace people, exchange news and stay in contact. A GOSS Ministry of Telecommunications and Postal Services official explained this very nicely:

> The government forces closed the border and the people here in Juba suffered a lot. The only way out for them was to Khartoum, but they could not go that way […] Postal services only existed between Khartoum and Juba. But people were sending messages to SPLA-controlled areas. There was communication, linkages existed. There were people who came from the liberated areas to the town, they could stay and then go back. They could take messages. People could sneak in. Most messages were taken verbally.
>
> The official channel was of course the Red Cross: they could carry your letter to somebody in the controlled areas. They could also take the name and then the names were printed: there was somebody there looking for his brother, mother, father… And people could go and check that list at the Red Cross office. Then you could find your person there and start communication. That was a legal channel […]
>
> The rural areas were closed: that was under the SPLA. They could move, they could cross to the refugee camps in Kenya, Uganda. There was movement. In the liberated areas [under the SPLA] they could be given permission, a letter to move, from the civil authorities. Then if they were asked, they could produce that document. But from Juba one could go only to Khartoum. Although if you had permission, you could even go outside the area: go from Khartoum to Kampala and then on to the liberated areas. Because some people went from Khartoum to Yei and Yei was in the liberated areas. Juba, Wau, Malakal were government areas.
>
> Now there is peace at the moment: people are free to move. You can go to your village without any problem. People do it. It is not very expensive: from here you can go up to my village in the west for $10, over 80 miles. People can manage to move. People can come to town, buy some things: they are moving. Peace means more mobility.[128]

Such means of communication during the war were not available to all. Connections within the military, be it government or SPLA forces, were often a prerequisite for using communication technologies and means of transport. People were closely screened before they were given permission to travel and bribes were usually required before it was possible to obtain the necessary documentation. The Red Cross letter service was greatly appreciated by civilians and constituted the only legal way for people to establish and/or maintain contact across the border. Letters sent through the government postal services did not always reach their destinations and were often opened by the security forces. For many southern Sudanese, illiteracy formed another barrier to using written communication.

People in government or SPLA leadership positions and well-off business people had more means at their disposal than ordinary citizens. They used radios, walkie-talkies, *thuraya* satellite phones and other means of communication. For rank-and-file soldiers in Southern towns under government control – like Juba – army

[128] Interview 7.

telegraphs, landline telephones and letters were important means of communicating with family members in the North.

The mobile phone era

During the war, communication in Juba was limited and only a few basic forms of communication technology were available. These were confined to postal services, telegraphs and a limited landline network that was used mainly by government forces.

With the arrival of the mobile phone in Southern Sudan, the possibilities for communication expanded. It is unclear when Mobitel started its services in Juba. Adil, a trader who came to Juba with his father, claimed that Mobitel started in 2003 when Juba was still in government hands.[129] Although the situation in Juba was at that time very insecure, Mobitel was able to install services under government protection. All Mobitel services were organized through the Sudatel telephone installation in Juba, and that is still the case today. Sudatel continues to operate its landline services in specific areas in Juba and, as of September 2005, its Sudani mobile telephone network became available. Gemtel started in the SPLA-controlled areas in 2003 using Uganda's country code, while the smaller NOW has been operational around Rumbek and Yei since 2005.[130]

Initially only a few people could use the mobile phone network. During the war the use of mobiles was mostly restricted to the army, government officials and a few businessmen. Almost no women used mobile phones and, as SIM cards could only be obtained in Khartoum, people without a travel permit stood little chance of getting access to the network. Furthermore, civilian mobile phone users were likely to arouse the suspicions of government security forces and this could easily lead to accusations of being an SPLA supporter.

It was only after the CPA was signed that the mobile phone became more widespread in Juba. This, however, immediately led to problems. While the network had functioned well in 2003/2004, communication afterwards became ever more difficult as the capacity to cater for so many customers was not available. Ishaq, a trader in the Customs market, explained that before the peace agreement communication with his uncle in Saudi Arabia was relatively easy with Mobitel but became difficult after 2004.[131] When Gemtel started its services, lines with Uganda improved, while the Sudani network helped to increase the possibilities of calling the North and making international calls.

After the CPA, a Memorandum of Understanding was signed between the central government and the GOSS concerning policies and licenses in the area of telecommunications. Since then, however, negotiations between the Government of Southern Sudan, the NTC and the central government have stagnated. There is continuing disagreement between the parties about the precise conditions of network licensing and gateway usage. Representatives of the Southern government argue that Gemtel and NOW should be allowed to operate in the North, just as the Northern operators are entitled to provide their network in the South. The problem with Gemtel using a Ugandan dialling code as yet remains unresolved. While the GOSS wants its own gateway separate of the North, the national licensing council NTC does not agree

[129] Interview 43.
[130] 'South Sudan's mobile phone network revolutionizes' (24 January 2005).
[131] Interview 44.

to this. Accusations of corruption and domination are further aggravating the tensions between the various parties.[132] Because of these political controversies, both the Sudani and Mobitel networks only function intermittently in Juba and their roll-out plans have been stalled by GOSS politicians. The permission granted to Gemtel to use the Sudanese country code has not yet been realized and the Gemtel network often does not function at all. In this sense, the legacy of war still influences communication technologies.[133]

Because it saw its developments in the South blocked, Zain initiated negotiations with GOSS independently of the central government and the NTC. Zain's CEO, Khaled Muhtadi, said the following about the current relationship:

> In the South what we face so far is that the political issues between the governments of the North and the South reflect also in the relationship that they have with and their trust in the Northern companies. We have invested heavily in this relationship and now have a healthy relationship. We intend to roll out our network in several of these states. The governments of these states are welcoming us as they have been waiting for telecom for a long time.[134]

As relations between the various parties in the South are still extremely sensitive, it is hard to predict what directions these developments will take and what the implications will be.

Part 2: The mobile phone market(s) in Juba

Markets in Juba

Juba's markets have expanded over the past few years. After the peace agreement, trust in the market and hopes for new business prospects increased. There are various markets in Juba and their history mirrors the history of the town.

Juba market is the oldest market and is located in the centre of town near the town's bus station and taxi rank. Though the oldest, it is the smallest market in Juba in terms of size. Other markets were established later such as Malakia, Konyokonyo and finally the Custom market. Konyokonyo market is east of Juba, while Malakia market is along the main road that links Juba town with the Custom market. The Custom market is located west of Juba town and although it is the newest market, it is the largest and most active trading centre in Juba. The Custom market is divided into two sectors. Sector one is the part of the market that was established first and was the main market in Juba during the war. Sector two is an expansion towards the east referred to as *Al Salaam* market. The word *Al Salaam* in Arabic means 'peace' and this part of the market expanded after the peace agreement. Its history is inextricably linked to the

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[132] Interview 7; Interview 15; 'Stalled north-south MOU stalls mobile phone expansion in Sudan', *Gurtong Peace Project*, General News (31 March 2007): http://www.gurtong.org/ResourceCenter/weeklyupdates/wu_contents.asp?wkupdt_id=704&vswuOrder=Sorter_WuType&vswuDir=ASC&vswuPage=73

[133] 'Why do South Sudan have the worst telecommunications in the world?' *Sudan Mirror* (30 August 2007): http://www.sudanmirror.com/newsdetail.php?catid=5&subcat=439 .

[134] Interview 36.

CPA. Sometimes sector two is also called *Suk Koboko* because most of the traders are from the northern Ugandan town of Koboko, or *Suk Yei* because most of the commodities for sale in the market were brought along the Juba-Yei road. Nearly 90% of the land of the Custom market area is the property of the University of Juba. So, although the Custom market is the largest business centre in Juba, it looks temporary because one day in the future the university may claim back its land and the market will have to be relocated.

The Sudanese traders, mainly from the North, are mainly found in sector one of the market. In the second sector are most of the new arrivals from western Sudan, Kordofan and the North, or foreign traders, mainly from Uganda and Kenya.

Picture 31: Custom market, Juba

Start of the mobile phone business

When mobile telephony started in Juba (probably in 2003), only a few people were active in the business. According to Adil, only six traders were in the mobile phone business in 2003, although a year later the number had already increased.[135] After the CPA, business boomed and now Juba's markets have a bewildering range of shops dealing in telecommunications, mobile phones, credit transfer and accessories. Despite difficulties in the network, or perhaps precisely because of them, the diversity of the wares and services on offer is extensive. Of course, one of the reasons for the expansion is the increased security. People no longer risk being accused of rebel support if they have a mobile phone. Another reason is the overall expansion of market activities, which has led to an increased need for communication between business partners.

This is not to say that everybody in Juba has a mobile phone; far from it: the great majority of the inhabitants do not own a mobile phone. As the network is frequently down, using a mobile phone is often an enormous struggle. All the same, people hope that the mobile phone can link them with their pre-war history, i.e. with

[135] Observations Peter and interview 43.

their relatives and friends who left the region, and with a future, i.e. with a modern system of remittances and business. Most of the businessmen and a few women had this in mind when they decided to enter the mobile phone business.

Some people involved in the mobile phone business have only just arrived in Juba and as Juba's market, construction sector and development activities are growing, the town is attracting new people, some from faraway. Patrick, for example, is a young man from Kampala who through some friends learnt that there would be a job for him in Juba. When he arrived, however, it turned out the job had already been given to someone else. So he started working in the mobile telephone sector.[136] The market also attracts young women in their early twenties from Uganda, like Jane who came by bus in January 2007. She arrived in Juba through her network of Sudanese friends who fled the war and were refugees in Uganda. Most Ugandans start as petty traders, selling scratch cards and phone calls.

As indicated, newcomers are most likely to be found in sector two of the Customs market. These may be people from different areas of Sudan and people from Uganda and, to a lesser extent, Kenya. Quite a number of the recent arrivals are Sudanese. Mahmoud, for example, fled from western Sudan and settled with his family in Khartoum. Fellow businessmen advised him to go to Juba, telling him profits would be good there. He is quite satisfied with his income and is now able to support his family in Khartoum. Due to the war in Darfur, the number of western Sudanese traders increased in 2007. One trader from Nyala sold his cattle out of fear of raids by the *Janjaweed* and reinvested the money in mobile telephony in Juba. Yet, relatively speaking, people from Uganda and Kenya are the ones prominent in the mobile telephone trade.

The mobile phone business does not only consist of newcomers. Small and large-scale businessmen have decided to move into mobile telephony. Adil had a business in electrical appliances before changing to selling mobile phones and scratch cards in 2003. This was facilitated by his father who, having retired from the government army, invested money in Adil's shop. Another example is Arnast el Agib, who arrived by steamer from Northern Sudan in 2002 and started dealing in grain. The grain trade came to be dominated by army officers and so he decided to change to mobile phones as he feared being portrayed as a government collaborator after the CPA.

In general, the mobile phone market in Juba is dominated by relatively young people between the ages of 20 and 40. The great majority are men, although three female traders from Uganda were interviewed. Of the men, only half were married and had children. Nine of the fifteen were single but all had responsibilities for relatives elsewhere. Of the three women from Uganda, one was a mother and had come to Sudan with her child. And of those who were married, only two had family in Juba, the other families all lived either in Khartoum or in western Sudan. Immigrants from Uganda and Kenya are crucial for the mobile phone business in many respects. Not only are most traders from these countries, but their customers are also often from Uganda or Kenya. These customers may be people who immigrated to Juba and want to call relatives and friends still in Uganda, but most are traders who travel between Juba and Uganda and need to check with their partners and customers for business purposes. Links with Uganda are especially strong, and the majority of the mobile

[136] Interview 12.

phone business people are from that country. People from Uganda and Kenya play an important role in trade, transport, construction and other sectors in the town.

BOX 7
Kenyans in Juba[137]

Charles moved to Juba some eight months ago to try his luck. He grew up in Kenya, where he did well at school as a child. After his father died, however, the family had problems and Charles became a school drop-out. He worked for some time in the hotel sector and because of this experience he was invited by an acquaintance to come and work at a hotel in Juba. However when he arrived, it turned out that the friend had gone and the hotel concerned would not take him on. Charles was left on the streets, without a job and with no place to stay. Fortunately he met an Indian Kenyan who put him in contact with a businessman and Charles was able to work as his personal driver. The businessman only stayed for three months and after this Charles once again had to look for work. He started as a bus driver between Juba and Bol (Chad), but he did not like the road or the way the passengers treated him. So he decided to start a transport company with some fellow Kenyans. In this company, he works as a driver and he also does the accounts.

The transport and repair sector in Juba is largely run by people from Uganda and Kenya. Until now, very little local expertise has been available in this branch and foreigners recruit people from their own country for the jobs. Often they view their role as contributing to the development of Southern Sudan. As a Kenyan garage holder stated: 'We Kenyans we can develop this country. These people have so suffered from the war, look at them, they have to be developed.' Most Kenyans

[137] Based on group interview in Juba November 2007 (visit of Sjoerd and Mirjam) and on observations and informal chats with Charles (see above)

already knew quite a lot about Sudan before arriving. News from Southern Sudan is eagerly followed in Kenya and as the late John Garang lived for some time in Nairobi, people in Kenya are familiar with his ideas and organization. Like many other Kenyans, Charles speaks with admiration about the ideas and charisma of John Garang. Most Kenyans feel that they are not accepted in Juba and, although there are some possibilities to earn an income, they think it is not easy to be away from their home country for a long time. They often seek contact with other Kenyans and watch Kenyan television in bars and restaurants owned by their fellow countrymen. They all read newspapers brought in from Kenya and listen daily to Kenyan radio. Like many Kenyans, Charles will return to Kenya for the elections in December. For him, communication is important in order to keep in contact with Kenya. Through his mobile phone with a Gemtel card, he tries to call his friends and relatives in Kenya regularly, despite the network problems. The mobile phone is also important for his work; his business partners call him to make appointments and organize the company. Although Charles feels that his life is not easy, he has in the meantime been able to buy a plot of land in the middle of the bush in Kikuyu land.

Hierarchies, income and business expectations

Most of the businessmen and women started their trading activities in mobile telephony with great expectations. With the increasing commercial life in Juba there is huge demand for communication technologies. Yet, negative developments are also influencing the sector. There is stiff competition between business people in Juba and the fact that the networks only function intermittently is negatively affecting the business. Most of the card sellers are forced to work with the three companies that operate in Juba: Gemtel, Sudatel and Mobitel. There are also many individual circumstances that can negatively influence a trader's position. Some people have been forced to redirect their business because of the problems. One shop that operated from the veranda of a house in Juba market was initially going very well and with the profits the trader was able to open another shop. However when the owner of the house in Juba market returned because the war had ended, the shop owner had to leave the veranda. The network in his second shop was not good so he could not survive on telephony alone. Now he offers printing, photocopying and photo services in addition to phone calls.

Picture 33: Phone cult in Juba

There are clear hierarchies in the mobile phone business. People who sell scratch cards and phone calls are usually not rich or are just starting. Many of them are from poor background and had only limited access to schooling. For example, John, a young man from Southern Sudan, sells cards and calls from a small table, two plastic chairs and a parasol. His income is an average 20-25 Sudanese pounds per day, although some people like him may earn up to 100-150 Sudanese pounds a day.

The businessmen who sell mobile phones and accessories are generally richer. Most of them had money to start with, either from relatives or from previous business activities. They usually have a more elaborate shop in the market and their income is also higher. Adil, for example, has an average income of 400 to 600 pounds a day and on some days he may make as much as 900 to 1000 Sudanese pounds. A third category is the shops that focus on other wares than mobile telephony but offer phone

services in addition to these activities. There are at least two local restaurants offering food and beer where phone calls can be made. For these business people, the revenues from telephony are usually modest and seen as an extra only.

In view of the cost of living in Juba where renting a house costs at least 250-350 Sudanese pounds per month, these incomes are at most moderate. Life in Juba is not cheap, although prices for groceries are now lower than during the war when everything had to be imported from Khartoum. All business people intend to send remittances to their relatives and mobile phone sellers usually send money to their parents, their family and cover the costs of schooling of their children. Their families may live in El Fasher, Geneina, Khartoum or elsewhere. But not all card and call sellers earn enough to send money home. A young female trader from Uganda only had an income of 150-200 pounds per day but expressed her hope that the amount would increase so that she could support her relatives in Uganda. Despite the difficulties, there are examples of people doing well. One man, who started working in Juba with an NGO in the 1980s, opened his call shop in 2002 with a fixed-line service. After a few years he had earned enough to open a second shop selling groceries. He now runs the grocery shop and employs a woman to manage the telecommunications shop, from which he earns 350-500 Sudanese pounds a day.

Networks

Networks and social relations are important for business people. Those who come from outside Southern Sudan have all received advice and assistance from relatives and friends who came earlier. Usually newcomers are initially accommodated by these people and advised on how to start a business. Because of this, trading networks in Juba generally have clear regional patterns. As contact between Northern Uganda and Southern Sudan is longstanding, people from these areas are likely to cooperate, while people from Western and Northern Sudan in most cases belong to separate networks.

Despite cooperation, business is organized on an individual basis. Traders each have their own strategies to acquire mobile phones and/or cards. Most Northern and Western traders buy their wares in Khartoum, while people from South Sudan have access to both Khartoum and Uganda for goods. Ugandans can buy Gemtel cards in Uganda and Sudani and Mobitel cards at the market in Juba itself, thus standing less chance of making profit. Some traders said that they bought mobile phones in Dubai, where prices are lowest. As one trader explained:

> From Khartoum, I have established good relations with some of the mobile phone dealers near Al Baraka tower in Khartoum, so I usually send them my request and they deliver the goods to me here in Juba. Of course I have to send them money first and they consign me the goods. I also buy other goods from Ugandans who usually sell their goods at wholesale prices. We also have some traders who order mobile phones from Abu Dhabi and as they also sell at wholesale prices we buy from them.[138]

Most of the traders have a history of mobility related to the war. Northerners may have arrived with the central government army, westerners have often fled from the

[138] Based on group interview in Juba November 2007 (visit of Sjoerd and Mirjam) and on observations and informal chats with Charles (see note 124)

war in Darfur, Ugandans may first have established contact with Southern Sudanese refugees in their country and, finally, Southern Sudanese have often lived elsewhere during the war. Many have relatives in Canada, the US, Uganda and elsewhere.

Part 3: Mobile phone acrobatics

Business people as end-users

Many business people are at the same time end-users of their own product. In an interview, a young man from Uganda explained that he used his mobile phone stall as an income-generating device but also as a meeting point and a networking centre for himself:

> I thought: 'I need contact with other people. I need a meeting place.' Here people can reach me because I am here and also by telephone. So I can build my network. And in the meantime I can try to make some money.[139]

Business people use their phones to call relatives and friends resident outside Sudan. To contact relatives in Khartoum, Mobitel and Sudani are usually used, while Gemtel is obviously the best option in communicating with Uganda. Connections with Western Sudan are erratic as the network there is often down. Most people try to have access to all three networks and, if they can afford it, also a *thuraya* satellite line.

Traders use their mobile phones for business purposes. The mobile phone is important to order supplies and make appointments about how orders can be organized and paid for. This is regarded as a major advantage of the mobile phone: people no longer need to physically travel to order goods and settle bills.

Relations with customers

These comments about trading practices also hold for business people who are not into the telecommunications sector. They often depend on mobile telephony to make appointments, place orders and confirm the arrival of goods. Due to network problems, calling from Juba can often be a real struggle. During one interview we met a customer from Uganda who had been sitting for four hours ar one of the stalls in Customs market trying to get through to Uganda. Generally customer-call seller relations are regionally linked: Ugandan business people usually go to Ugandan or Southern Sudanese call sellers, whereas Northerners and Westerners are less likely to use the services of Ugandans. This is chiefly related to the language issue since many Ugandans do not know Arabic and many Sudanese, especially the non-Southerners, only have a limited knowledge of English.

In their relations with customers, business people may face problems. There are often disputes about prices and customers may refuse to pay for their calls. This may be especially true for Gemtel, that charges as much as 5 Sudanese pounds for a minute and for Mobitel as this company charges per minute and not per second. Customers may accuse the traders of having tampered with the timer on the phone and start an argument with the trader. The traders' complaints concern the local people in

[139] Interview 12.

particular: they hold that they have had little or no schooling and so often barely know how to count and have limited knowledge of modern technologies. The traders assert that the local young men may be aggressive in their reactions and even attack the traders who are usually not from Juba itself.

Some customers lack the knowledge of how to handle a mobile phone. One customer who bought a mobile from Mahmoud came back to the shop the next day complaining that the set fell into water and then would no longer work. The customer stated that as he had not been told that the mobile phone was not water resistant, he wanted a refund or a new phone. Mahmoud had to follow legal procedures to defend his position and it was decided that the customer had no right to a refund in this case.

Generally the assessment of the advantages and disadvantages of the mobile phone in Juba is different from in Khartoum. Many people in Juba aspire to buying a mobile phone and see it as a technological miracle. As in Khartoum, people in Juba indicate that communication has become much faster because of the mobile phone. Time-consuming visits are no longer necessary and many people have stopped writing letters.

BOX 8

The mobile phone and emergencies

Monica Muja lives in one of Juba's neighbourhoods. She is 36, married and a mother of four children. She has a senior secondary certificate but has as yet not been able to find a job. Her living conditions are modest but still she has a mobile phone. Her cousin-brother went to Canada during the war in 2000 as a refugee. She uses her mobile phone predominantly to

stay in contact with her husband who works in Yei but also with other relatives some of whom live in Juba. She sees the mobile phone as a major change from past means of communications:

'I bought the mobile to enable me have easy links, faster communication with my relatives and especially with my husband who is working in Yei town. The mobile phone is saving me the visits I used to undertake in the past, no more letter writing as in the past, and I am no longer sending my children to relatives with oral messages as before.'

The mobile phone enables her to increase her contacts with direct relatives, while at the same time offering the chance to enlarge her social network:

'You know, the more you keep on using the mobile phone, the more you get into contact with people. Your communication network expands the more your relatives and friends come to know your phone number and this widens your network.'

Monica feels that distances are overcome by the mobile phone: 'I call within the neighbourhood when it is an urgent message. Mobile phones have made the world much closer in the sense that you are able to obtain fresh news via the mobile.' She can no longer imagine a life without her mobile phone: 'If you lose your phone, you will feel as if you have lost a vital part of your body, I am addicted to it.' Monica has experienced how the mobile phone can be a useful device in warning people of oncoming danger and in cases of emergency:

'It happened one day that a group of men wanted to attack me because they were having personal problems with my husband. So luckily one of my friends knew about the plot and she called me telling me not to use the usual route when coming back home from the market, because these people where planning to attack me on that particular road. So I took another road to avoid them.'[140]

Apart from the statements that coincide with the general findings in Khartoum and Karima about the efficiency of the mobile telephone, people in Juba added that they are now much freer in using communication technologies than during the war: 'Now there is a speed in communication. Use is free, not like before, during the war when carrying a phone was risky!'[141] People in Juba are usually very positive about mobile telephony as such and, compared to Khartoum, there is much less attention paid to any negative consequences that usage of the mobile phone might have. Complaints in most cases concern imperfections in the services and people express their wish to see the network improved. As the mobile phone is still relatively new, the morality issues so intensely debated in Khartoum are barely playing a role in Juba. Due to the war, families are often spread over different regions and countries even and the mobile phone is regarded as a wonderful tool for re-establishing kinship networks. Some people also held that more communication possibilities would contribute to an increased understanding between communities and so play a part in bringing about a more peaceful climate in the region.

[140] Interview 45
[141] Interview 44 and 45

7. In conclusion

The mobile phone and society

The main goal of this report has been to describe mobile telephone use in its manifold facets in Sudan. This descriptive focus has led to an exploration of the socio-economic processes that are not only a consequence of the introduction of the mobile phone but also inform the ways in which this new communication technology is being used. Instead of a limited emphasis on the *impact* of the mobile phone, we have also sought to understand in what ways Sudanese people have appropriated the mobile phone and adapted it to their own needs and wishes. The findings in this report are based on only five months of research and an in-depth analysis would still be premature at this stage. All the same, some directions for further research can be presented here and some preliminary conclusions are offered.

Karima

The Karima case revealed the intimate links between the various Sudanese contexts: many families have relatives working in Khartoum or elsewhere, and IDPs can also be found here from all over the country. Family histories showed that most people in Karima have become used to mobile telephony in a very short time span. The mobile phone is regarded as a practical and efficient tool for establishing contacts and making appointments. The mobile phone is, in this context, used in a down-to-earth way and has few explicit links to status and mobile phone culture. There is a clear relationship between access to work and access to communication technologies. Although there is no specific link to generation, as many elderly people do not carry out wage labour they often also do not have a mobile phone. Mobile telephony in Karima forms part of the wider fluctuating history of Karima as a transport centre. It was introduced at a time of economic growth and increased transport facilities in Karima after a period of economic decline. For this reason, a cluster of transport and communication technologies has come into being that relates to the increasing economic possibilities in the town. These developments reinforce the ties between Karima and the surrounding region: contact between town and countryside has become much easier. And this contact is not restricted to business purposes; people also use the mobile phone as a tool for organizing political action (as in this case of the forced resettlement of local residents because of the new Merowe Dam).

Khartoum

In contrast to Karima, the Khartoum case took the analysis towards the mobile phone culture. The mobile phone has indeed become part and parcel of people's lives not only in the urban landscape in people's daily occupations and in keeping in touch with family, relatives and business partners but also in terms of identity construction. Over the ten years that the mobile phone has been around in Khartoum there has been a shift from the mobile phone being seen as a status marker for the well-to-do to it being used by the middle-class and even poorer people. These aspects of mobile phone culture show not only in the new discourses on numbers but also in the names given to mobile phones and the ways in which people discuss modernity in relation to the mobile phone. It is important to realize that in both other case studies (Juba and Karima) the mobile phone is rarely used as a gadget for self-identification. This may be explained by the longer history of the mobile phone in Khartoum, whereas in the

other two case studies its introduction was only about four years ago. Another explanation could be in the urban culture of Khartoum where people have indeed a different attitude towards life. Also the intensive debates about morality and sexuality that accompany mobile phone presence in Khartoum do not play a large role in Karima and Juba. Although the mobile phone is associated with youth (although in practice many elderly people also use it) all over Sudan, in Khartoum there was a great deal of stress on the changing practices of courtship, of women's mobility and of social interaction.

The Khartoum case study also showed that the mobile phone has led to the development of a totally new economic branch. It provides many people with an income either through their direct involvement in mobile phone business or because the mobile phone is used to develop economic activities, even by the poorer strata in society. This economy has introduced new linkages, such as the relationship between the commercial centre in Dubai and Khartoum as a distribution point for other parts of Sudan. Older long-distance economic ties are also being reinforced, for example, relations with Egypt and Saudi Arabia.

Juba

The economic aspect of the cell phone was elaborated upon in Juba where the same developments could be seen as in Khartoum, albeit on a smaller scale and in a very different context. These differences in scale and connection were related to the history of warfare in the region. Not only was the mobile phone introduced later in Juba, it also turned out to be a process fraught with difficulties. For technical and political reasons, the network coverage in Juba has functioned only intermittently. Negotiations between companies and political bodies, such as Zain's initiative to enter the south Sudanese market, form an interesting starting point for further study into relations between politics and business competition.

The legacy of war has influenced the interaction between North and South Sudan. While the boundaries between Northern and Southern Sudan have become an increasing reality, the war dynamics have led to increasingly porous borders with Uganda and Kenya. The war's legacy is also visible in the political relations of both the GOSS and the central government vis-à-vis communication technologies and the installation of communication systems. This is apparent in patterns of mobility, in the past as well as in the present. Throughout, communication and transport have played a role in refugee movements, relations between returnees and those who stayed in Juba, new configurations of rural-urban relations in south Sudan and cross-border trade, and the newly introduced mobile phone is regarded by many as having been crucial in these developments and changes.

The mobile phone market in Juba is dominated by people from outside Juba. We encountered many Ugandan and Kenyan men and some women active in the selling of cards and calls, and traders from Western and Northern Sudan who had invested in Juba seeing it as a promising market after the peace agreement. Only a few people from Juba or nearby towns are involved in the trade in mobile phones and accessories. The background and consequences of this division in the market require attention in future research.

In other sectors of transport and communication too, the Juba case study shows the increasing presence of foreigners, mainly from Kenya and Uganda. They are important in the construction of new roads and bridges, and most of the garages

are run by Kenyans or Ugandans. For the organization of their business they rely heavily on the mobile and the satellite phone and our hypothesis is that without these devices, Juba would not have attracted so many people exploring the potential new economic opportunities there. This subject would also form an interesting axis for further research. The same holds for the prominent development sector in Juba. The international structure of these organizations requires intensive long-distance contacts and these are made possible by the new media now available in Juba.

To summarize, the pilot study for Sudan has indicated interesting fields of investigation that require further research:

1. Social networks and mobile phone use: labour migration; war-related mobility; the presence of foreigners in Sudan and internal movements within Sudan;
2. Economic opportunities and new hierarchies in society; the mobile phone in relation to the household economy; commercial networks;
3. Mobile phone culture and urbanity; identity construction and status;
4. Historical relations between older and recently introduced communication technologies;
5. Moral debates, gender, and generation in relation to new media like the mobile phone.
6. Politics and commerce: the relationship between policies, conflict and the mobile phone companies.
7. Development as discourse and practice in relation to communication technologies.

ICT and development: A discussion

The last point mentioned, on development, is at the heart of many current debates on new ICT and therefore calls for more attention. In the discourse employed by the mobile telephone companies, optimism is the dominant impression. The mobile telephone industry active on the African continent displays an enormous faith in the possibilities and opportunities that the new communication technologies will bring. Obviously the advertising campaigns display a wonderful and happy world, full of radiant smiling faces. Yet also in their explanations, many of the company management and staff suppose that the mobile phone will automatically contribute to development: relations between communication technologies and development are seen as intrinsically positive. The companies view their role in society as constructive and developmental in terms of social dialogue, economic climate, and job opportunities. They see these positive changes not only in euphoric terms but also as revolutionary. One of Zain's leading management staff referred to the company's role as 'a change in the culture of Sudan'.[142] In addition, most companies have an elaborate corporate responsibility programme, involving development projects mainly in the fields of health and education. In the case of Sudan, these development activities are related to the new emphasis on corporate social responsibility and the longstanding tradition of Islamic business and social work.

[142] Interview 37.

The optimism displayed in the discourse and in the companies' activities is reinforced in development and policy-making circles. Here too, relations between new ICT and development are automatically assumed. Although in these circles there is more emphasis on exclusion and concepts like the 'digital divide' and the 'technology gap' are more prominent than in the companies' discourse, these issues are posed as mere problems of access. The aim is to capacitate people (especially disadvantaged groups) so that they can afford these technologies and are no longer blocked from usage. The relationship between development and communication technologies as such is not questioned.

In this report we partly subscribe to the positive evaluations. The people we interviewed pointed to the crucial importance of communication in their lives and many interviewees expressed delight about the possibilities that mobile telephony offered them. Sudan's particular history of labour migration, for example to Saudi Arabia, and mobility patterns as a consequence of warfare renders international communication of particular importance to many Sudanese people. In some cases family bonds have been (re-)established through the mobile phone. Within Sudan itself, people indicated the advantages: visits are no longer made in vain, important family news (such as births, marriages and death announcements) can be passed on immediately and family members who in the past were only rarely in touch with their loved ones can now be in regular contact. People in business also testified to the positive effects of mobile telephony. Business arrangements can be organized with more efficiency, supplies can be ordered in a second and in many sectors the mobile telephone can be used to reach new markets and to be reachable by customers (such as taxi drivers, henna painters, tea sellers, etc). In addition, many people have found work in offering credit and call services, selling mobile phones and accessories, and new sources of income generation have thus come into existence. These advantages are by no means restricted to the rich and powerful in Sudan: many less well-off people have also acquired mobile phones and those from disadvantaged groups are clear about the benefits they have experienced: the mobile phone gives women more space to develop their own networks, youngsters more possibilities to explore the world around them and poorer people a new means of starting a business with relatively little capital investment. In this report, many examples of positive assessments of the mobile phone technologies can be found.

Below the surface, however, a different picture emerges. In new contexts, where the mobile phone has not yet or only recently arrived (such as in Juba), people only stress their wish for acquisition and their desire for a functioning network in the place where they are. Their aim is to have enough income to be able to buy a mobile phone and enough call time. In contrast to this 'culture of aspiration' and in areas where the mobile phone has been present for some years, views are far more balanced. In Khartoum, for example, people talked both about the positive and the negative consequences of the introduction of the mobile phone. The flipside of mobile telephony is far less visible and therefore more difficult to describe and analyse. People who cannot afford a mobile phone may not always be prepared to divulge this fact and are less likely to engage in research on mobile telephony. Furthermore, people testified that there are cases of families running into financial difficulties because their mobile phone costs were too high. They spoke of mobile phone addiction, the decreased respect for privacy, their worries about the decreasing quality of social contact and less face-to-face interaction. People felt that with the mobile

phone people could lie more easily and expressed worries about the clashing sexual morals of youth and parents, a source of tension aggravated by the arrival of the mobile phone. The development activities of the companies were also regarded with suspicion and people wondered to what extent they were merely self-promoting.

Mobile telephony's positive discourse needs to be challenged and a more balanced evaluation should be offered. This begs the question about how we, as researchers, can meaningfully react to the culture of optimism displayed by telecommunication companies and development agencies. It also highlights the issue of research ethics: What is our position if the research project is being funded by one such company? These questions are pertinent and need serious scrutiny.

These general remarks about academic research and funding by the business sector require further attention in the specific case of Sudan. To date, we have not experienced any interference whatsoever with our research activities on the part of the companies we have been cooperating with. All the same, we must dare to pose the question as to whether it is appropriate to be funded by a multinational business enterprise that is aiming to make a profit in a country like Sudan where a war is being waged in Darfur and governments show signs of corruption and authoritarianism. If this pilot study had been funded by a development agency or a Western government body, these questions might not have arisen, presumably because in research circles development and governmental organizations are somehow regarded as more 'neutral' than the private sector. We have to realize that no comparative analysis has as yet been made of the role of such organizations and a company like Zain in terms of transparency and the positive effects on democracy and peace building. Although we have struggled with these questions, we firmly believe that doing research in such a context can be valid. Without knowledge of the situation, opposition to injustices and offences becomes very difficult. We sincerely hope that this report contributes to such knowledge.

Future programme

The pilot study for Sudan was intended to pave the way for the comparative research programme to be executed by the African Studies Centre in Leiden. The proposal envisaged historical ethnographic qualitative research into new ICTs in African societies. Various alleys of research were already indicated as guiding our study: African economies with all the risks and opportunities involved; patterns of mobility; gender and generational relations; cultural and moral aspects (mobile phone culture); and the political economy of the cell phone. The pilot study in Sudan took as its specific angle the war economy and the effects of the war on society and patterns of mobility. As will be clear from this report, the pilot study has shown that the chosen topics were of relevance for an understanding of the relationship between society and the mobile phone. We look forward to elaborating on this study and to working with PhD and Master students as proposed in the comparative research programme. In such a programme, we hope to have ample space for discussions on relations between commercial companies and academia; the political situation in African countries, doing business and ethical issues; and the overall relationship between communication technologies and development.

Interviews

1. Hindi Mohamed Elamin. Man. Background: MTN marketing. Place: Khartoum, Buri, shop. Date: 20 July 2007. Present: Inge, Salah Mosa Makin (man, shop owner), Alamin Yusef Ali (man, card seller). Interview in English, notes taken.
2. Ahmed Abdallah Abdurrahim. Man. Background: Sudani engineer. Place: Khartoum, Buri, his house. Date: 20 July 2007. Present: Inge, his male relatives, Mr. Hindi Mohamed Elamin. Interview in English, notes taken.
3. Rida Mohamed Ali. Man. Background: shop owner. Place: Khartoum city centre, his shop. Date: 21 July 2007. Present: Inge. Interview in English, voice recorder.
4. Musab Ellahim. Man. Background: shop worker. Place: Khartoum city centre, shop. Date: 21 July 2007. Present: Inge, Yaser Mohamed (man, shop worker), Ismail Elsair (man, shop owner). Interview in English, notes taken.
5. Ibrahim Ahmed Alhassan. Man. Background: Mobitel Chief Regional Operations and PR officer. Place: Khartoum, Mobitel HQ, Mograin. Date: 23 July 2007. Present: Inge. Interview in English, voice recorder.
6. Mohamed Abdelbagi Ahmed. Man. Background: Mobitel Regulator and Government Affairs consultant. Place: Khartoum, Mobitel HQ, Mograin. Date: 25 July 2007. Present: Inge. Interview in English, voice recorder.
7. Juma Stephen Lugga. Man. Background: Undersecretary Ministry of Telecommunications and Postal Services, GOSS. Place: Juba, his office. Date: 27 July 2007. Present: Inge. Interview in English, voice recorder.
8. Simon Mojok. Man. Background: Historian at Juba University. Place: Juba University, his office. Date: 27 July 2007. Present: Inge. Interview in English, notes taken. Interview in English, notes taken.
9. Felix Peter. Man. Background: Sudatel operator. Place: Juba, Sudatel premises. Date: 27 July 2007, present: Inge, Sudatel personnel. Interview in English, notes taken.
10. [name withheld]. Man. Background: Local businessman. Place: Juba, his shop. Date: 28 July 2007. Present: Inge, customers. Interview in English, notes taken.
11. Charles. Man. Background: Local businessman. Place: Juba, market Yei Bus Park stall. Date: 28 July 2007. Present: Inge, customers. Interview in English, notes taken.
12. Patrick. Man. Background: Local businessman. Place: Juba, market Yei Bus Park stall. Date: 28 July 2007. Present: Inge, Patrick's companion, customers. Interview in English, notes taken.
13. Awad Abbas Alawad. Man. Background: Sudatel satellite engineer and shop owner. Man. Place: Khartoum Buri, place where Inge stayed. Date: 30 July 2007. Present: Inge. Interview in English, voice recorder.
14. Sabir Shahin. Man. Background: shop manager. Place: Khartoum. Mobitel shop Arkaweet. Date: 30 July 2007. Present: Inge, a male and a female Mobitel worker. Interview in English, notes taken.
15. Siddig Ibrahim Mustafa. Man. Background: Deputy Directory General, NTC. Place: Khartoum, NTC, his office. Date: 01 August 2007. Present: Inge, Mr. Abbas. Interview in English, notes taken.
16. Abdel-Moneim Abdel-Rahim. Man. Backgound: College graduate, working in International Center for Peace Culture. Place: Khartoum, his work place. Date: 07 August 2007. Present: Hisham, colleague. Interview in Arabic, voice recorder.

17. Hiba Bashir abdul-Rahim Bashir. Woman. Backgound: Khartoum University student and credit transfer. Place: Khartoum University. Date: 09 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
18. Anonymous. Man. Backgound: trader. Place: Khartoum North, his shop. Date: 09 August 2007. Present: Hisham, customers coming and going. Interview in Arabic, voice recorder.
19. Anonymous. Man. Backgound: worker at credit transfer shop. Place: Khartoum North. Date: 09 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
20. Anonymous Man. Backgound: electronic engineer, worker at maintenance shop. Place: Khartoum North. Date: 09 August 2007. Present: Hisham, customers. Interview in Arabic, voice recorder.
21. Anonymous. Man. Backgound: sells credit services on street. Place: Khartoum North. Date: 10 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
22. Anonymous Man. Backgound: mobile phone shop owner. Place: Khartoum, Arabian market. Date: probably 10 August 2007. Present: Hisham. Interview in Arabic, notes based on memory.
23. Amr Mohammed Ahmed Eldarir. Man. Backgound: student and credit transfer. Place: Omdurman. Date: 17 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
24. Yassin Hassanein Mohamed. Man. Backgound: shop owner (photography and mobile phones). Place: Omdurman. Date: 19 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
25. Sakina Ali el Awad. Woman. Backgound: elderly end-user, housewife. Place: Khartoum, her house. 22 August 2007. Present: Hisham, her daughter. Interview in Arabic, voice recorder.
26. Khaleefa Hamad Elhaj. Man. Backgound: end-user, journalist. Place: Khartoum, his sister's house. Date: 28 August 2007. Present: Hisham. Interview in Arabic, voice recorder.
27. Fatma Salah Eldeen Eltoum Khaleefa. Woman. Backgound: Henna paintress. Place: Khartoum North, her house. Date: 23 September 2007. Present: Hisham, Rasha Abdul Hafiz (also interviewing), Mirjam. Interview in Arabic, voice recorder.
28. Abdul Azim Ahmed Ali. Man. Background: Doctor at hospital. Place: Karima, health centre. Date: 6 September 2007. Present: Hisham. Interview in Arabic, voice recorder.
29. Mohamed Yahya Mohamed. Man. Background: car mechanic. Place: Karima, his house. Date: 7 September 2007. Present: Hisham. Interview in Arabic, voice recorder.
30. Zakaria Mohammed Magbouli. Man. Background: businessman in construction materials. Place: Karima, his shop. Date: 8 September 2007. Present: Hisham. Interview in Arabic, voice recorder.
31. Hassan Ahmed Mohamed Mahari. Man. Background: mobile phone shop owner. Place: Karima, his shop. Date: 9 September 2007. Present: Hisham. Interview in Arabic, voice recorder.

32. Muneer Ali Yousif. Man. Background: pharmacist assistant. Place: Karima, health centre. Date: 10 September 2007. Present: Hisham, people going in and out the centre. Interview in Arabic, voice recorder.
33. Khidr Aabdul Khaliq el Khidr. Man. Background: taxi driver. Place: Karima, Date: September 2007. Present: Hisham, house of a relative. Interview in Arabic, voice recorder.
34. Anonymous. Elderly woman. Background: end-user, housewife. Place: Karima, her house. Date: September 2007. Present: Hisham. Interview in Arabic, voice recorder.
35. Anonymous. Woman in her thirties. Background: working at health centre. Place: Karima, her house. Date: September 2007. Present: Hisham. Interview in Arabic, voice recorder.
36. Khaled Muhtadi, CEO Zain Sudan, Place: Zain office Khartoum. Date: November 21. Present: Mirjam and Sjoerd (film interview)
37. Ibrahim Elhassan, PR Zain Sudan. Place: Zain office Khartoum. Date: September 24. Present: Mirjam
38. Kaamil Ahmad Sirir,. Place: Karima in his house. Date: November 27, 2007. Present: Hisham, Mirjam.
39. Old lady, grandmother Hisham. Place: Karima in her house. Date: November 30 2007. Present: Hisham, Mirjam, Sjoerd (interview for film)
40. Interview with Uncle Yahyah. Place: Karima in his house. Date: November 30, 2007. Present: Hisham, Mirjam, Sjoerd (film)
41. farmer and business man in village Abu haraz. Place: Abu Jaraz in his house. Date: November 29, 2007. Present: Hisam, Mirjam, Sjoerd (film).
42 Adiil, shopkeeper in Khartoum foreign market. Place: market Khartoum in his shop. Date: September 22 and 23. Present: Mirjam & Hisham.
43. Adil, Custom market business man Juba market. Place: Juba market. Date: September 2007. Present: Peter
44. Ishaq Nimeiry, Custom market business man. Place: custom market Juba. Date: September 2007. Present: Peter.
45. Monica Mja, housewife. Place: in her house in Juba. Date: September 2007. Present Peter.

Other interviews (typed out and available) from Peter (September 2007) analysed for Juba chapter, but not cited directly:

John, Yusif, Adam, Lawrence, Chaplain, all business men in Juba Custom market;
Khalim, Arnast, Mahmoud, business men from Malakia market;
Hassan, Boboya from Konyokonyo market;
Angelo Juba, business man in town market;
Jane, Sarah and Rose, Ugandan young women doing small business in Juba town market.

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Zain:	http://www.zain.com/muse/obj/portal
Zain Sudan:	http://www.sd.zain.com/autoforms/portal/home

Pictures

1. Map of Sudan
2. Drums at Sultan Dinar's palace museum, El Fasher (Mirjam de Bruijn)
3. Railway construction (Source: Hill, *Sudan transport* plate 4)
4. The railways in the North are no longer in use (Mirjam de Bruijn)
5. Ship on the Nile in Karima (Hisham Bilal)
6. Old steamer from British period, Karima
7. Cartoon (Source: Hill, *Sudan transport* plate 24)
8. Darfur, Zain advertisement in El Fasher (Mirjam de Bruijn)
9. Zain street, Khartoum (Mirjam de Bruijn)
10. Mobitel placard in the desert (Hisham Bilal)
11. MTN advertisement in Khartoum (Mirjam de Bruijn)
12. Sudani advertisement in Khartoum (Mirjam de Bruijn)
13. Karima, view from Barkel Mountain (Mirjam de Bruijn)
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15. Grandmother who worked as a midwife in Karima (Sjoerd Sijsma)
16. Karima family watching pictures on the computer (Mirjam de Bruijn)
17. Karima taxis (Mirjam de Bruijn)
18. Tea lady, Hospital Street, Karima (Mirjam de Bruijn)
19. Amjad, rickshaw and other transport in town, with the donkey contrasting this (Mirjam de Bruijn)
20. This family in the village (Mirjam de Bruijn)
21. Khartoum at sunrise (Sjoerd Sijsma)
22. *Arkaweet* shop, Khartoum (Inge Brinkman)
23. Rickshaw number (Hisham Bilal)
24. Credit Hiba, a young woman in Khartoum (Hisham Bilal)
25. Mobile phone use in Khartoum (Sjoerd Sijsma)
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27. Advertisement campaign, Khartoum (Mirjam de Bruijn)
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29. The roads in Juba (Sjoerd Sijsma)
30. Bridge over the Nile, Juba (Sjoerd Sijsma)
31. Custom market, Juba (Sjoerd Sijsma)
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33. Phone cult in Juba (Sjoerd Sijsma)
34. Monica in Juba (Peter Taban Wani)