

Transformations in Transport in Zambia:
Preliminary ideas regarding a social history dealing with
the introduction of the motor-vehicle in Zambia, 1890 - 1930

Introduction

In this paper an overview is given of the state of current research regarding the history of motor-cars in Africa. It is noted that there is currently next to nothing written on the relationship between people and automobiles in African history, a relationship which, as examples from the fields of economics, politics, and society and culture indicate, is of crucial importance in African history. Taking this broad overview of the relationship between people and automobiles in Africa as a starting point, the paper goes on to concentrate on the historical development of the relationship between people and transport in the central African state of Zambia..

In dealing with the social history of transport in Zambia, this paper presents an overview of the manner in which transport was organised in Zambia prior to as well as following the introduction of the motor-vehicle. In describing this social history, the paper seeks to concentrate on the social, cultural, economic and political aspects of transport prior to and following the introduction of the motor-vehicle.

Automobiles in African History

Researching Namibian history of the late 1920's, I was struck by the fact that the introduction of motor-cars led to a dramatic reduction in the quality of missionary reports. Subsequent research indicated the near total absence of any literature or research dealing with the introduction of the motor-vehicle into Africa. In contrast though, there have been a fair number of articles and papers dealing with the socio-economic impact of

railways in Africa.¹ Roads and motor-vehicles do feature in a number of academic theses, but generally as a side issue to the main topic being discussed.² In works in which motor-vehicles are a major theme the emphasis has consistently been on economic aspects.³ An exception being the classic work of Polly Hill which detailed the manner in which Ghanaian cocoa farmers utilised the motor-vehicle to their full advantage in exploiting ever larger areas of Ghanaian forest for cocoa production.⁴ Notably, only one of the more than one thousand papers presented at the annual meetings of the African Studies Association in America between 1990 and 1997 deals with the impact of motor-vehicles in Africa. In the event the paper, which was later developed into a doctoral thesis dealing with both railways and roads, concentrated on economic history.⁵ The more anthropological works by Lewis, Silverstein and Stoller with their investigations into the manner in which motorised road transport was structured and regulated are particularly

¹ Frederick Cooper, “‘Our Strike’: Equality, Anticolonial Politics and the 1947 – 48 Railway Strike in French West Africa”, in *Journal of African History*, Vol. 37, 1996, no. 1, pp. 81-118; James A. Jones, *The political Aspirations of Railroad Labor on the Chemin de Fer Dakar-Niger, 1905-1963*, paper presented at ASA 1992 & *An African Response to European Technology: Railway Merchants on the Chemin de Fer, Dakar-Niger, 1897-1914*, paper presented at ASA 1995; Lisa A. Lindsay, *Shunting between Manly ideals: Nigerian Railway Men, 1935-65*, paper presented at ASA 1995; *The Nigerian Railway, Industrial Relations, and the Magic of Modernization*, paper presented at ASA 1998; Katherine Weist, *Women of Tabora: Of Trains, Credits and Micro-Enterprises*, paper presented at ASA 1997; Nkasa Yelengi, *Working and Living along the Port-Francqui-Bukama Railroad: Labor Policies and Household Economic Strategies in Kamina Camp in the Belgian Congo*, paper presented at ASA 1997; Wale Oyemakinde, “Railway construction and operation in Nigeria, 1895 – 1911: Labour problems and socio-economic impact”, in *Journal of the Historical Society of Nigeria*, vii (1974), pp. 303-24.

² Axel Harnett-Sievers, *Zwischen Depression und Dekolonisation: Afrikanische Händler und Politik in süd-Nigeria, 1935-1954*, (Saarbrücken 1991); Patrick Manning, *Slavery, Colonialism and Economic Growth in Dahomey 1640-1960* (London, New York, New Rochelle 1982).

³ S. Heap, “The development of motor transport in the Gold Coast, 1900-1939” in *Journal of Transport History*, v. 11 no. 2 1990 pp. 19-37; R. Poutier, “Transports et développement au Zaïre”, in *Afrique Contemporaine*, 153 1990, pp.3-26; Hélène D’Almeida-Topor et al. (eds) *Les Transports en Afrique XIX – XX Siecle*, (Paris 1992).

⁴ Polly Hill, *The Migrant Cocoa Farmers of Southern Ghana* (Cambridge 1963).

⁵ Arlindo Chilundo, *Roads, Road Transport, And The Expansion of Commodity Production in Northern Mozambique*, paper presented at ASA 1992; *Economic and Social Impact of Rail and Road Transportation Systems in the colonial district of Mozambique (1900 – 1961)*, PhD thesis University of Minnesota 1995.

interesting, albeit that they are not histories, neither do they cover Zambia.⁶ The highly fetishised impact of motor-vehicles as a symbol of high colonialism in Africa is an aspect that has thus far only attracted the attention of one researcher, albeit in a rather sketchy, disjointed and inconclusive article.⁷ The work of Erdmute Alber is a notable exception in that it looks at “the introduction of motor cars in the West African colony of Dahomey and its consequences for colonial society”.⁸ On a personal note work done by myself has explicitly sought to document the social cultural impact of the introduction of motor-vehicles in Namibia prior to 1940.⁹ Elsewhere in the world the broader social history of motor-vehicles has been extensively researched, particularly in the United States.¹⁰ Some of the works mentioned above provide insight into the manner in which motor-vehicles impacted upon the lives of people, they do not however do so for people in Africa, let alone Zambia. They do however provide us with comparative material and a certain amount of theoretical background and insight into the issue. This is most notably so in the fields of status and power, where motor-vehicles appear to take on values in excess of their mere utilitarian functions.

⁶ Barbara Lewis, *The Transporters Association of the Ivory Coast Ethnicity, Occupational Specialization, and National Integration*, PhD Northwestern University 1970; Stella Silverstein, *Sociocultural Organization And Locational Strategies of Transportation Entrepreneurs: An Ethnoeconomic History of the Nnewi Igbo of Nigeria*, PhD Boston University Graduate School 1983 & Paul Stoller, “Signs in the Social Order: Riding a Songhay Bush Taxi”, in *The Taste of Ethnographic Things: The senses in Anthropology* (Philadelphia 1989).

⁷ Luise White, “Cars Out of Place: Vampires, Technology, and Labor in East and Central Africa”, in Frederick Cooper and Ann Laura Stoler (eds.) *Tensions of Empire: Colonial Cultures in a Bourgeois World* (Berkeley, London 1997).

⁸ Erdmute Alber, *Motorisation and Colonial Rule*, paper presented for the conference “Colonial Everyday Life in Africa”, 6-7 October 1998, Leipzig.

⁹ Jan-Bart Gewald, “*We Thought we would be Free...* ”: *Socio-Cultural Aspects of Herero History in Namibia 1915 – 1940* (Cologne, 2000), Chapter 7, “Mobility, Space and Information: The Social Impact of the Motor Car in Namibia before 1940” pp. 208 - 42. This chapter was recently published in revised form as, *Missionaries, Hereros, and Motorcars: Mobility and the Impact of Motor Vehicles in Namibia Before 1940*, in *International Journal of African Historical Studies* Vol. 35, No. 2 –3 (2002) pp. 257 – 285.

¹⁰ James J. Flink, *The Car Culture* (Cambridge Mass. 1975) & *The automobile age*, (Cambridge Mass. 1988); Julian Pettifer and Nigel Turner, *Automania: Man and the Motor Car* (London 1984); Wolfgang Sachs, *For love of the automobile: looking back into the history of our desires* (Berkeley 1992); P.M. Townroe (ed.), *Social and Political Consequences of the motor car* (North Pomfret Vt. 1974); Martin Wachs and Margaret Crawford, *The Car and the City: The Automobile, the Built Environment, and Daily Urban Life* (Ann Arbor 1992) & Jozef Wilczynski, *The Passenger car and Socialist Economic Planning*, (Duntroon 1979)

Automobiles in Africa

The introduction of the motor-vehicle into Africa is arguably the single most important factor for change in Africa in the twentieth century. A factor for change which has hitherto been totally neglected in research, let alone literature.¹¹ Yet its impact extends across the totality of human existence; from ecological devastation to economic advancement, from cultural transformation to political change, from social perceptions through to a myriad of other themes. There has been a tendency to see motor-vehicles as being attached solely to the state and the political and economic elite, yet their impact stretches far beyond the elite and into everyday lives of people in the smallest villages at the furthest reaches of African states. The bus, mammy truck, car, pick-up and so forth reach far beyond where railways, ferries and boats can reach. True, the introduction of railways had a tremendous impact on African societies. However, from the 1940s onwards the train dwindled in importance, and has come to be almost totally superseded by buses, trucks and lorries.¹² In addition, in contrast to the motor-vehicle, the train is bound to run on the tracks laid out for it. The train does not allow for the initiative of a single individual or a small group of people. The capital input is such that it requires state funding and is quite simply beyond the finances of small entrepreneurs, whereas the purchase of a motor-cycle, taxi or truck is not. Africa may possess but a minute proportion of the world's motor-vehicles, yet it is precisely because of the scarcity of transport that they assume such importance. In addition, there has been a tendency to see

¹¹ A notable and respected exception being, John Iliffe, *Africans: The History of a Continent*, Cambridge: Cambridge University Press, 1995. pp. 212 – 215.

¹² There is an extensive literature on trains in Africa, much of it of particular interest to train-spotters, e.g. Werner Sölch, *Kap-Kairo: Eisenbahn zwischen Ägypten und Südafrika* (Düsseldorf 1985). Of relevance here, John F. Due, "The problem of rail-transport in tropical Africa" in, *The Journal of Developing Areas* (1978/79), vol. 13, no. 4, pp. 375-393 & "Trends in rail transport in Zambia and Tanzania", in *Utafiti* (1986), vol. 8, no. 2, p. 43 - 58; Patrick Moriarty and Clive S. Beed, "Transport in tropical Africa", in *The Journal of Modern African Studies* (1989), vol. 27, no. 1, pp. 125 – 132; Edward Vickery, "Pricing rail transport services in Ghana for increased efficiency" in, *Economic Bulletin of Ghana* (1971), vol. 1, 2nd S., no. 4. Pp. 28 – 48 & G.H. Pirie, *Aspects of the political-economy of railways in Southern Africa* (Johannesburg 1982).

Africa as pre-dominantly rural. Yet Africa is highly urbanised in sprawling cities that are often serviced solely by motor-vehicles.

Economy:

The introduction of motor-vehicles, in the course of the twentieth century, radically transformed the economies of Africa. The increased mobility of people, products, raw materials -from labour to iron ore-, information, goods and services led to the development of new economies.

In the formal economy the motor-vehicle led to the development and accessing of new markets as well as the establishment of a completely new economy centred around motor-vehicles. New entrepreneurial and technical skills were developed as petrol stations and automotive workshops came to be established. New companies were created that transported people and goods, from small single taxi companies to enormous freight enterprises. The presence of motor-vehicles necessitated the development of roads, which in turn led to further economic development. The increased accessibility stimulated and allowed for the development and exploitation of resources which had been hitherto neglected; mining, agriculture, and industry all received a boost. Apart from being a major pollutant motor-vehicles also caused extensive environmental degradation through strip-mining, logging, and forest clearance, as well as top soil loss and soil exhaustion through large scale mechanized farming practices.¹³ In addition, the economic expansion and increased mobility led to the development of , not only, the itinerant migrant labourer, but also, the daily commuter; people essential to Africa's formal economies, but heavily dependent on the taxi and bus services of the informal economy.

¹³ Polly Hill, *Indigenous trade and market places in Ghana, 1962 – 64* (Jos 1984); Olabode O. Alokun, "The determinants of the operating characteristics of trucking firms in Nigeria" in, *The Nigerian Geographical Journal* (1994), n.s., vol. 1, pp. 221 – 232; Christine Gilguy, "Tendances des marches de l'automobile en Afrique" in, *Marches tropicaux et mediterraneens* (1997), annee 52, no. 2681, pp. 668 – 679; "L'automobile en Afrique 1983" in, *Marches tropicaux et mediterraneens* (1983), vol. 39, no. 1984, pp. 2715 – 2790; Benoit Mougoue, "La circulation automobile a yaounde" in, *Cameroon Geographic Review* (1987), vol. 7, no. 2, pp. 109 – 124; S. Tetteh Addo, "Accessibility, mobility and the development process" in, *Research Review: Institute of African Studies* (1995), n.s., vol. 11, no. 1/2, p. 1 – 15; Inez Sutton, "Some aspects of traditional salt production in Ghana" in, *Annales de l'Universite d'Abidjan, Serie I, Histoire*: (1983), t. 11, pp. 5 – 23; E. Amonoo, *The flow and marketing of cassava in the central region with special reference to Cape Coast*, (Cape Coast 1972) & J. Brian Wills (ed.), *Agriculture and land use in Ghana* (Oxford 1962).

The impact of the motor-vehicle in the informal economy has primarily been in the service industry. African bus stations and transport depots are unthinkable without the myriad of services provided by transport touts, food and drink sellers, prostitution, informal bars, puncture repair men, welders, bush mechanics, and many more. Drivers maintain their concentration through the supply of stimulants, legal or otherwise, and passengers are entertained and kept occupied by everything from acrobats to illegal copies of music cassettes and book and pamphlet sellers. Along the road villagers peddle handicrafts, agricultural produce, chickens, fish and more, as well as “bush meat” and charcoal for city dwellers. New forms of corruption and taxation have developed along African roads, and in many countries roadblocks have become an important source of income for under paid civil servants.¹⁴

Motor-vehicles also led to the collapse of other forms of economic enterprise. Old trade routes lost their importance. Portage and animal drawn freight came to be superseded. The service industries that had developed to cater for these now defunct routes and forms of transport ceased to exist. Similarly, during periods of extensive economic decline communities that had come to depend and rely on the motor-vehicle and its roads could be struck by economic ruin.¹⁵

Politics:

Motor-vehicles have had a tremendous and multi-levelled impact on politics in Africa, transforming the manner in which politics is conducted at both the local and the state

¹⁴ There is a fair amount of literature on the informal economies of Africa, but very little on the relation between motor-vehicles and the informal economy. Jemimah Wainaina, “The ‘parking boys’ of Nairobi” in, *African Journal of Sociology* (1981), vol. 1, no. 1/2, pp. 7 – 45; D.H. Afejuku, “Theft under a motor insurance policy in Nigeria” in, *Zambia Law Journal* (1988), vol. 20, pp. 20 – 31; Ritah Marima, Josephine Jordan and Kenna Cormie, “Conversations with street children in Harare, Zimbabwe” in, *Zambezia* (1995), vol. 22, no. 1, pp. 1 – 24; Kaendi J. Munguti, “Health last: the paradox of ‘jua kali’ enterprises in Kenya” in, *Kenya Journal of Sciences, Series C, Humanities and Social Sciences* (1997), vol. 4, no. 1, pp. 44 – 60; O.Y. Oyeneeye, “Apprentices in the informal sector of Nigeria” in, *Labour Capital and Society* (1980), vol. 13, no. 2, pp. 69 – 79; Margaret Grieco et. Al. , *At Christmas and on rainy days: transport, travel and the female traders of Accra* (Aldershot 1996); Garcia Clark, *Pools, clients and partners: relations of capital and risk control between Kumasi market women*, paper presented at ASA, 25 – 28 October 1984 & Sara S. Berry, *From peasant to artisan: motor mechanics in a Nigerian town* (Boston 1983).

¹⁵ Patrick Moriarty and Clive S. Beed, “Transport in Africa” in, *The Journal of Modern African Studies* (1989, vol. 27, no. 1, pp. 125 – 132.

level. The colonial state and later the nation state came to rely heavily on motor-vehicles for the extension and enforcement of its control both at a symbolic level as well as at a functional level. Motor-vehicles became indispensable to the running of the state, and came to be used at all levels of government, from tax collection to education, from health care to border patrols. With roads and motor-vehicles the African state spreads its message and seeks to enforce its will. The development or neglect of roads has become part and parcel of patronage systems, which allow for and enable economic development or economic demise. The motor-vehicle has allowed for the standardisation of bureaucracies and the rapid and frequent transfer of government employees. Policemen and soldiers can be rapidly deployed in areas other than those from which they had been recruited. Motor-vehicles have led to the development of new forms of warfare in Africa, the “Technicals” of Somalia, and the “Toyota wars” of Chad being cases in point.¹⁶

The colonial state did not only seek to enforce its will through the use of motor-vehicles, but also through the establishment of roads. Throughout Africa colonial states demanded labour for the construction of roads. Where labour was not forthcoming reprisals were taken and prisoners made to build the roads. A colonial district commissioner in Tanzania was remembered in the following way, “He made us work long hours on the roads, and he was the only one who had a motor car”.¹⁷ That is, roads were built not so much for function but as a measure of colonial control and status; as a means by which to discipline a subject population and to create confidence amongst colonisers in a time when roads were a symbol of speed and modernity. The motor-vehicle also contributed substantially to the mystique of the lone White man, who was actually never really alone and could be assured of rapid re-supply and support should the need arise.

¹⁶ Daniel Compagnon, “Somali armed movements: the interplay of political entrepreneurship & clan-based factions” in, *African guerillas*, ed. By Christopher Clapham (Oxford 1998), pp. 73 – 90; Nene Mburu, “Contemporary banditry in the Horn of Africa: causes, history and political implications” in, *Nordic Journal of African Studies* (1999), vol. 8, no. 2, pp. 89 – 107 & Robert Buijtenhuijs, “Chad in the age of the warlords” in, *History of Central Africa: the contemporary years since 1960*, ed. By David Birmingham and Phyllis M. Martin (London 1998), pp. 20 – 40.

¹⁷ Gus Liebnow, *Colonial rule and political development in Tanzania: the case of the Makonde*, (Evanston 1971), p. 144.

Motor-vehicles also allowed for the development of novel ways of politicking. Ghanaian political independence was gained in part through the use of propaganda trucks.¹⁸ Africans have sought to enforce political change through the boycotting of bus services, and or the enforcement of a complete ban on all forms of motorised transport. Many political rallies in Africa would be unthinkable without the party faithful bussed in from outlying areas or the political leaders standing in open backed cars.

Society and culture:

African societies were transformed by the advent of the motor-vehicle, apart from the economic and political changes, there were tremendous changes in health, education, information, religion, inter-personal relationships, ways of living and much more.

The access of people to health care was improved through the advent of motor-vehicles. The inoculation campaigns, primary health care projects, hospital transfers, and medical extension work that characterise African health care in the present would be unthinkable without the use of motor-vehicles. Yet at the same time motor-vehicles have become the main vectors for the spread of diseases in Africa. The rapid transfer of viruses from forest enclaves to cities, and the rapid spread of HIV/Aids and STDs along the highways transecting Africa are examples to be borne in mind.

Formal education changed in Africa with the advent of the motor-vehicle. Educational curricula came to be truly standardised and controlled through the state's new found ability to rapidly transfer teachers and examiners as well as enforce the findings of school inspections. The educational criteria of African schools changed with large emphasis being placed on the training of people capable of repairing and tending to motor-vehicles.

With motor-vehicles and the increased mobility of people there was a tremendous increase in the speed and amount of information transferred within African countries. Not only did letters travel faster to and from towns and villages, but also newspapers and, perhaps more importantly gossip, or as it is aptly known in West Africa "Radio Trottoir".

¹⁸ Wendell P. Holbrook, British propaganda and the mobilization of the Gold Coast war Effort, 1939–1945 / In: *The Journal of African History*, 1985, vol. 26, no. 4, p. 347–361.

Information regarding developments in the newly created state, from soccer scores through to political gossip, as well as the world beyond, all flow along the roads of Africa.

Central to the issue of motor-vehicles in Africa are the issues of status and power. To some extent motor-vehicles were incorporated as new status symbols into older pre-colonial forms and concepts relating to the expression of status and power, and to some extent motor-vehicles led to the development of new forms of cultural expression of power. It is not uncommon in large parts of Africa for people to become possessed by the spirits of motor-vehicles.¹⁹ People associated with and in control of motor-vehicles were granted status in accordance with the type of vehicle concerned, accordingly wealthy traders are known across Africa as waBenzi.

The motor-vehicle with its tendency to traverse language, social and cultural barriers led to new ways of seeing the world, and new relations that required new forms of cosmological understanding. The myriad of new images and views led to a world-view that of necessity transcended the limitations of village mores, and can to some extent account for the extensive spread of Christianity in Africa. Inter-personal relationships and responsibilities were transformed by the increased mobility of people. In addition there was the development of a completely new culture of taxi and bus driving.²⁰

¹⁹ See for instance the work of Paul Stoller, *Embodying colonial memories : spirit possession, power and the Hauka in West Africa*, New York: Routledge, 1997, as well as personal communication from Baz Lecocq who sent me an image of a “motor-car” photographed at a possession ceremony in Mali in 2004.

²⁰ Sara Berry, *Fathers work for their sons: accumulation, mobility and class formation in an extended Yoruba community* (Berkeley 1985); Roy Gentle, *Crime and poverty* (Cape Town 1984); J.U. Obot, “Urban development planning and environmental population in Africa: the case of Calabar municipality, Nigeria” in, *African Urban Quarterly* (1987), vol. 2, no. 2, pp. 96 – 104; W.F. Banyikwa, “Urban passenger transport problems in Dar es Salaam, Tanzania” in, *African Urban Quarterly* (1988), vol. 3, no. ½, pp. 80 – 93; James William Jordan, “Role segregation for fun and profit: the daily behaviour of the west African lorry driver” in, *Africa* (1978), vol. 48, no. 1, p. 30 – 46; Sjaak van der Geest, “‘Sunny boy’, chauffeurs, auto’s en Highlife in Ghana” in, *Amsterdams sociologisch tijdschrift*, jrg. 16, nr. 1, mei 1989, pp. 19 – 38; D.C.I. Okpala, “Traffic consideration in urban expansion: reviewing the Enugu town plan” in, *Nigerian Geographical Journal* (1980), vol. 23, no. ½, pp. 83 – 97; Ernst Dammann, “Einiges ueber ‘omitandu’” in, *Afrika und Uebersee* (1996), Bd. 79, H. 2, pp. 271 – 294; Andrzej Lisowski, “Functional structure of Ghanaian towns in 1970” in, *Africana Bulletin* (1990), no. 36, pp. 95 – 108; K.B. Dickson, “The development of road transport in Southern Ghana and Ashanti since about 1850” in, *Transactions of the Historical Society of Ghana* (1961), vol. 5, part 1, pp. 33 – 42 & Hortense Powdermaker, *Copper Town: changing Africa: the human situation on the Rhodesian Copperbelt* (New York 1962).

The Heart of Africa:

Zambia is an African nation with an established if somewhat moribund academic tradition and a rich if sparsely documented history. Landlocked in central Africa, Zambia is a country that has the shape of a rectangle that has been squeezed in the middle. In effect it is the relic of British attempts at gaining the rich copper deposits of Katanga, Congo. As such, though the country was moulded around the core of the Lozi empire in the west and the Bemba in the east, the Zambian population is a hodge podge of multiple ethnicities and cultures. Or as Andrew Roberts eloquently put it :

Northern Rhodesia was simply an awkwardly shaped piece of debris resulting from Rhodes's failure to obtain Katanga. The [British South Africa] Company now found itself committed to ruling what amounted to not one but two huge and sprawling territories: one in the west, with communications running south, and the other in the east, with communications running further east, to Nyasaland.²¹

In the second half of the nineteenth century the British South Africa Company (BSAC) of Cecil John Rhodes was granted Royal Charter by the British government to exploit claims to the territories that form Zambia in the present. By 1900 administrators appointed by the BSAC had begun establishing administrative centres in the territories of North-Western Rhodesia –operating from Kalomo- and North-Eastern Rhodesia –operating from Fort Jameson (Chipata). In 1911 the two territories were amalgamated as Northern Rhodesia and a single administrator, Lawrence Wallace, appointed to Livingstone to administer the territory. In the years that followed young Oxbridge graduates were selected for service in the BSAC territory of Northern Rhodesia. These young men were despatched into the interior with instructions to establish an administrative system that, in the first instance, sought to establish a system of taxation. It has been primarily through researching the reports, diaries, letters, and official correspondence of these men, that the information contained within this paper has been gathered.

²¹ Andrew Roberts, *A History of Zambia*, New York: Africana Publishing Company, 1976, p. 175.

Transformations in Transport in Zambia

Writing about sources for Northern Rhodesian history, the much maligned Lewis Henry Gann threw in an aside on the impact of copper development in colonial Zambia and remarked on its impact on transport:

The new development led to a tremendous influx of new capital which was accompanied by profound social and economic changes. One of the most important of these concerned transportation. Originally transport had largely depended on African carriers and later on bicycles, rickshaws and donkey carts. Ox-waggons, which played so important a part in opening up the south, could not be employed on a large scale north of the Zambesi because of the existence of extensive 'fly' belts, with fluctuating boundaries. Between 1904 and 1909 a railway was built from the Victoria Falls to the Belgian Congo, but off the railway line communications remained entirely inadequate. The decisive change came with the introduction of the motor car. By 1927 all Government stations were supplied with motor transport, and in 1929 the Great North Road was opened for cars, linking Fort Jameson with the remainder of Northern Rhodesia rather than Nyasaland. The drivers at this time were all Europeans.²²

On account of the Tsetse fly most regions of Zambia were unsuitable for domesticated animals²³. Trypanosomes, parasites in the blood, are transmitted from one host to another by tsetse flies. As a result of these parasites domestic animals can develop trypanosomiasis, otherwise known as sleeping sickness, which is inevitably fatal. On account of trypanosomiasis, draught and pack animals, such as oxen, donkeys, and horses, which were employed elsewhere in the world for transporting goods and people, could not be used in Zambia. The consequence of this was that whereas in the rest of the

²² L.H. Gann, "The 'Northern Rhodesia Journal' as an Historical Source Book", in *Human Problems in British Central Africa*, The Rhodes Livingstone Journal, 23, 1958, p. 52.

²³ The standard work on Tsetse fly and Trypanosomiasis remains the excellent work by John Ford, *The Role of Trypanosomiasis in African Ecology: A study of the Tsetse fly problem*, London 1971.

world draught and pack animals were used to transport goods, in Zambia the transport of goods and people was dependent on the muscle power of people.

Portage²⁴

Kansanshi, January 21, 1913

My Dear Evelyn, I am off in an hour or so – on my road to Mwinilunga. Carriers have all got their loads fixed up- I am just sheltering in the verandah while the rain runs its course. I mean to get about 5 miles out this morning – ie just to get started- to get the men out of reach of their friends & the store. Then we start tomorrow with day light.²⁵

The description provided by the young Mervyn Williams of his first tramp through the bush with porters, is in essence no different to those of the many other literate travellers and traders who traversed central Africa between 1600 and 1900.²⁶ Williams' descriptions echo those of Livingstone, who, although consistently portrayed as the single White man in Africa, as if Livingstone were truly alone, was always accompanied by and indeed dependent upon a whole host of African, porters, guides, soldiers, traders, and so forth. Williams, and, along with him, all the young men despatched by the BSAC to administrative posts on the fringes of the territory of Zambia, were dependent on the good services of men and women who not only carried their goods and equipment, but also knew where to travel and how to travel.

Williams dependence on the skills of his African porters is aptly illustrated by his honest descriptions of days on the road:

²⁴ For a detailed overview of portage see, Stephen J. Rockel, "Caravan Porters of the *Nyika*: Labour, Culture, and Society in Nineteenth Century Tanzania", Ph.D. Thesis, University of Toronto 1997.

²⁵ Rhodes House (RH), Oxford, Williams (Theodore R.) Administrative Officer, Northern Rhodesia: Diaries, 1912 – 21. 3 vols.; letters home, 1912 – 24. 3 Volumes. MSS. Afr. S. 776 – 781. Kansanshi, January 21, 1913.

²⁶ See the papers and report of the conference "Angola on the Move: Transport Routes, Communications, and History" organized by Beatrix Heintze and Achim von Oppen, Centre for Modern Oriental Studies, Berlin, 24 – 26 September 2003.

We had breakfast & got our carriers loads arranged – with the help of (thank god) the English speaking Headman (“capitao”) named Matthew – a mission trained boy.²⁷

As yet unacquainted with the local language Williams is dependent on the missionary taught language skills of Matthew, the man appointed as Capitao, -a word and position that nicely throws up the important, if somewhat forgotten, role of Portuguese traders and travellers in central Africa. In addition to Matthew, who effectively leads the expedition, Williams notes that:

... one has “boys” to do all dirty work, boys, moreover who know all about this affair, & what to do when, & how to fix up tents and beds, & boil water & cool it
_28

Reliant on the muscle power of porters, journeys through central Africa, and the rest of the world for that matter, covered at most 25 kilometres per day, with porters carrying loads of on average no more than 20 kilogram’s. Throughout the world this distance and mass have by trial and error been found to be the optimum to be covered and carried by porters. Any more unnecessarily tires the porters, and serves to bring down the total distance covered.

We are going to take about 6 days to do the 90 miles of our journey – the carriers are heavy loaded & I have had to leave 3 book boxes & one picture case to be sent for later - & we are in no hurry...²⁹

Prior to embarking upon a journey the goods to be transported were divided up into loads of approximately 20 kilograms apiece. Large items, such as tusks, crates, and even pianos, would be slung under poles that would then be carried by more than one porter. Amongst things carried were people, and it is this image of colonial officials being

²⁷ RH, MSS. Afr. S. 776 – 781,

²⁸ RH, MSS. Afr. S. 776 – 781,

²⁹ RH, MSS. Afr. S. 776 – 781,

carried through Africa followed by a long string of porters that has come down to us as the popular image of colonial Africa.



Machila Chiromo post office 1891, H.C. Marshall

The Machila has been defined in the following manner:

This was a hammock slung on a pole (or two poles, according to weight carried), and the traveler would recline in the hammock and doze off, his only exertions being to swat flies with his switch, while the machila team jog-trotted along, chanting a song.³⁰

Mervyn Williams, the young Oxford graduate referred to above, chose not to use the Machila during his first tour of duty in Mwinilunga in 1913 – 14. However, during his subsequent posting to Mporokoso, Williams made grateful, even if a little self-conscious, use of the Machila. Writing to his family Williams described his travelling party in the following manner:

Monday Oct. 4th 1915, 20 carriers plus a machila team of ten, as is the mos orientalis, very oriental too it feels lounging along in a machila when one is fit, until one gets the edge of sensibility rubbed off, and then one orders up the

³⁰ A.G.E Tapson, “Transport in the Early Days at Fort Jameson”, in *The Northern Rhodesia Journal*, Vol.1., No. 6., December 1952, p. 52.

machila from behind, flops in, and thinks nothing of the slaves who cover the miles with your weight as well as their own to carry.³¹

A further development of the Machila was the “Bush-cart” or garetta³², which looked much like what has become known as a Chinese wheelbarrow. A single wheeled vehicle in which the centre of gravity is situated directly above the wheel with handles at both the front and the rear. Bush-carts allowed people to easily transport goods and people along footpaths along which people usually travelled in single file.³³ A contemporary of the Bush-cart described the contraption in the following manner:

This consisted of a wooden chair, cushioned and tented, hoisted high over a bicycle wheel, with a pair of shafts fore and aft. Two Africans would ‘inspan’ themselves and propel the vehicle and it was a not uncommon sight to see ladies, beautifully rigged, going out to tea in them.³⁴

Waterborne transport

Compared to Europe, Asia, and North America, Africa has very few navigable stretches of water, and it is only on its lakes and on specific and limited stretches of the African river systems that boats could operate with sails. There where boats could be used, people were generally dependent on human power. In Zambia prior to colonisation sailing boats were to be found on lakes Mweru, Bangwelu, and Tanganyika, where they were used in the bulk transport of goods destined for the east African coast. On the Luapula river system a series of societies and economies developed that were dependent upon fishing

³¹ RH, MSS. Afr. S. 776 – 781,

³² Oxford, Rhodes house, Mss. Afr. S. 1919, Hayes, (Winifred M), Transport Chikawa District Nysasaland, 1936 – 39.

A garetta was a sort of bath chair on one wheel with a couple of metal rods sticking down in front so that the garetta could stand upright when stationery. A couple of long metal rods projected fore and aft and with a man pulling and another pushing going at a slow but steady jog trot one travelled at a very satisfactory speed: the one wheel was perfect for going along narrow native paths. I had my own garetta very soon: my husband used a bicycle.

³³ Rickshaws, being two wheeled, are dependent on broad paths or lanes, and were consequently not to be found in Zambia.

³⁴ Tapson, Transport, p. 52.

and use of the river for transport.³⁵ In western Zambia the Zambezi river was similarly used for transport though less so for fishing purposes.

The dependence of the newly establishing BSAC colonial administration of Northern Rhodesia on the goodwill and transportation abilities of the local populace is well illustrated by comments written by Hubert Harrington, District Commissioner in Fort Rosebery (Chipata). Prior to his transfer, Harrington jotted down helpful suggestions for his successor, amongst them the advice not to tax certain sections of the local population:

Mulewa Kisoni ... this village does the ferrying of the mails across Bangweulu it is not wise to be to severe with these people in collecting tax ... "Because if worried for tax & being water people they bolt to Kisi and Mbawala and leave no one to work the ferry which requires skilled paddlers as the crossing is 7 ½ miles wide taking 3 ½ hours and when the winds are on it it is a dangerous crossing".³⁶ Similarly, on another occasion Harrington, wrote of the village of Chongola on the Luapula river in the following manner:

Chongolo this is a friendly old man he is the owner of the Canoes and does the ferrying across the Luapula on the Serenji Ft Roseberry road. His people are not called out for Hut tax they being waterpeople are no use for work. Up till 1905 he lived on the Belgian side but he has now crossed to the British side. Pay him 10/- per year for keeping the ferry open. He is and always has been most loyal.³⁷

These examples indicate that, being involved in transport these people, in contrast to the remainder of the population in Northern Rhodesia, were excluded from taxation, and effectively excused from having to work for the colonial administration. Interestingly in the case of Chongolo these benefits did not prevent Chongolo and his followers from making use of the opportunities provided by the newly delineated colonial boundary

³⁵ Musambachime, Gordon

³⁶ National Archives of Zambia, KDF 3/1 Vol. 1., District Commissioner and Magistrate, Mweru – Luapula District at Fort Rosebery, December 1906, folio 21.

³⁷ National Archives of Zambia, KDF 3/1 Vol. 1., District Commissioner and Magistrate, Mweru – Luapula District at Fort Rosebery, April 1908, folio 59.

between the Belgian Congo and Northern Rhodesia and crossing over into the Belgian Congo.³⁸

The floodplains of the Zambezi river running from north to south through western Zambia formed the core lands of the Buluzi kingdom. The river was used as the prime transport route in the region. In the present the annual move of the Buluzi royal capital from the dry-season settlement of Lealui to the wet-season settlement of Limulunga, is one of Zambia's greatest national events and certainly its greatest tourist event. The move is referred to as the Ku'omboka, literally "to wade out of the water to higher ground", is initiated by the paramount chief of the Lozi, the Litunga, who boards an enormous barge powered by more than 100 paddlers, and leads the move to dry ground. The royal barge, known as the Nalikwanda is enormous, and belies the commonly held popular notion of African canoes as small dugout tree trunks precariously being paddled across streams. In Buluzi enormous barges ferried complete households for great distances along the Zambezi river and its floodplains.



The Nalikwanda as it appeared in the 1958 handbook to the federation of Rhodesia Nyasaland

³⁸ Musambachime has written extensively on the manner in which people in the area used the border to their advantage, Mwelwa Musambachims, "Escape from tyranny : flights across the Rhodesia-Congo boundary 1900-1930" in *Transafrican Journal of History*, 1989, vol. 18, p. 147-159. Mwelwa Musambachime, "Protest migrations in Mweru-Luapula 1900-1940" *Afr. Stud.*, 1988, vol. 47, no. 1, p. 19-34.

From the moment that the BSAC sought to establish its presence in western Zambia, the company was dependent upon the services of paddlers and canoes in the employ of the Lozi kingdom. Colonial officials, dispatched to dispense colonial rule in western Zambia, would board canoes just to the north of the Victoria waterfalls at Livingstone and allow themselves to be transported upriver to their future places of residence.

These journeys upstream, being dependent on the muscle power of paddlers, took a minimum of at least ten days travelling time, before the first company administrative centre was reached and allowed for the new administrative officials to adapt to their new terrain, and perhaps more importantly allowed for the paddlers, and by extension their community, to gain insight into the habits, quirks, attitudes, and characters of the new men being sent to administer. As with the portage described above, the use of barges and canoes, illustrates once again the dependence of the colonial state being established on the muscle power, if not goodwill, of the local population.

As late as the early 1930s administrative staff sent to work in western Zambia would make use of the services of paddlers to transport them up the Zambezi river. Writing to his parents in 1932 the young Oxford graduate, John Patrick Law, wrote:

Gerry Curtis is going to Barotseland too. To a place further north than Kalabo called Balovale on the Zambezi. He and I start off on Tuesday in a barge or rather a barge each, which is paddled by 18 natives, and takes us right up the Zambezi to the Provincial Capital Mongu. It takes us about 3 weeks to get to Mongu, and we are entirely on our own for that time, except of course for the paddlers and our native servants. We are expected to stop several times on the way up and spend a day or two at a time hunting.³⁹

Law's letters home are littered with high hopes for "lots of marvellous shooting", and a close reading of the letters clearly shows that the 3 week boat trip was to a large extent used to develop the young man's hunting eye and shooting skills. Writing to his mother from Shesheke, his first port of call along the Zambezi, Law provide a fine description of the barge and trip up the river:

³⁹ Oxford, Rhodes Hous, MSS. Afr. S. 393, Law (Patrick John) Letters to his parents during colonial service in Northern Rhodesia 1932 - 36, 20th August 1932.

The barges are about 20 feet long and 5 feet broad at the widest part, and are propelled by 16 paddlers, 8 in the bows and 8 in the stern. Amidships there is an awning made of rush mats, and under this we recline, side by sides. All our kit is packed in behind us, or in the other barge, while our boys are perched on the top of the luggage. Its really very comfortable and perfectly cool, and the smell of native hasn't been noticeable yet! It's the most amusing and primitive way of travelling and I never realised that such a means still existed. On a good day's run you cover about 30 – 35 miles, but we haven't averaged this, as our little excursions after game have taken up time. We usually camp about 6 p.m. and move off about 8 am, but we going to try now, and get off at 6 am and stop at 4 pm, as then we shall be able to get some shooting in the evening!⁴⁰

Although Law and his colleagues did not manage to leave at six a.m., a letter written to his father two weeks later at Senanga, provides a fitting description of the travel upstream, as well as the manner in which the young administrative officers whiled away their time and came to be introduced into their new field:

We start off every morning in the barge at 7 am, having been called at 6, eaten a few biscuits and drunk a cup of tea, and then we paddle till 11, when we stop for an hour and have a meal. Then we go from 12 – 4 pm and camp. As soon as we get into camp Gerry and I dash off with guns and rifles and hunt until it gets dark about 6.30. When we get back we have a bath and then a huge dinner – once by mistake we had 5 courses! This is the bald outline of our day, and though it may not sound it, it really is a marvellous life. When you're in the barge you can read, fish or pot cormorants with the .22, and then in the evening you can shoot, and when you go out you have no idea what you are going to see – buffalo, buck, geese and duck, partridges or guinea fowl.⁴¹

⁴⁰ Oxford, Rhodes Hous, MSS. Afr. S. 393, Law (Patrick John) Letters to his parents during colonial service in Northern Rhodesia 1932 – 36, 26th August 1932.

⁴¹ Oxford, Rhodes Hous, MSS. Afr. S. 393, Law (Patrick John) Letters to his parents during colonial service in Northern Rhodesia 1932 – 36, 7 September 1932.

This form of travelling, which has within it all the elements of the best of British Boys Own narrative style, ensured that by the time the young men arrived at their places of posting, they would have formed their own ideas regarding those they were to work with.⁴² Referring to a young Nyasa man, who had been seconded to them by a timber camp manager, Law notes that he is:

... a far better hunter than these Barotse, in fact he is really wonderful and as keen as mustard. He is very quick at seeing game and is truly amazing in the way he gets you up to them. The Barotse seem cheery souls, but they are a bit lazy, and are slow hunters.⁴³

The long journey upstream, which fulfilled the necessary conditions of British ideas regarding their departure from the civilised world, would have brought about a change in perception and seeing the world on the part of the young British officials. Without wishing to labour the point, the long trip by the young men away from what they would have seen as the last outpost of civilisation at Livingstone, would have fulfilled all the ideas and notions that they might have had regarding their mission and role in Africa. At the same time it is highly unlikely that they were ever consciously aware of the fact that they were in turn dependent on the people to whom they had been dispatched to govern.

Needless to say, at the same time their fellow travellers and paddlers would have formed their own ideas regarding the new recruits. It would most certainly not have been lost upon the Africans that the young representatives of the British Empire were dependent for their every wish, whim and need on the goodwill and assistance of the Africans travelling with them. In writing home, Law admits as much when he combines the positive qualities of hunting with the ability to purchase supplies, when describing the messenger accompanying their party:

⁴² Richards, Jeffrey. "Boys' Own Empire." *Imperialism and Popular Culture*. Ed. John M. Mackenzie. Manchester: Manchester UP, 1986. Jeffrey Richards, 'Boys Own Empire: Feature Films and Imperialism in the 1930s,' It was a form of travelling that led me to jot down in my notes, "Hunt Hunt Hunt,....".

⁴³ Oxford, Rhodes Hous, MSS. Afr. S. 393, Law (Patrick John) Letters to his parents during colonial service in Northern Rhodesia 1932 - 36, 7 September 1932.

The messenger who is escorting us is a very good lad and quite keen about hunting . He also buys us eggs and milk for which we pay in salt, which is more prized than money up here.⁴⁴

Draught Animals and Tsetse Fly

As noted above, in most areas of Zambia, the use of draught and pack animals was not possible on account of the Tsetse fly and Trypanosomiasis. Nevertheless in some of the south-western districts of Zambia cattle could be safely pastured, and, hardly surprisingly in these areas all forms of animal traction were the norm. Within the Buluzi kingdom, where cattle could be pastured, the use of ox-wagons, the norm elsewhere in southern Africa, was not common, primarily on account of the deep Kalahari sands that made the dragging of ox-wagons through the sand particularly difficult. Instead, in those areas where the sand was too deep, people made use of sleds specifically constructed for the purpose. Old dugout canoes that were no longer capable of being used on water were also put to use as sleds.

Although Tsetse fly was lethal to all domesticates, large numbers of African wild animals were immune to Trypanosomiasis. Not surprisingly there were attempts to domesticate wild animals in the search for draught and pack animals that would be unaffected by tsetse flies. Jared Diamond has noted elsewhere that it appears as if across the world all animals that could be domesticated, have indeed been domesticated.⁴⁵ Nevertheless attempts, all of which eventually failed, were made to domesticate animals that were resistant to Tsetse.

“...someone in Fort Jameson once thought it would be a good thing to train zebra to pull the Administrator’s carriage. A certain chap named Toby was given the task of training four spanking zebra which were reputed to be tame. After much

⁴⁴ Oxford, Rhodes Hous, MSS. Afr. S. 393, Law (Patrick John) Letters to his parents during colonial service in Northern Rhodesia 1932 – 36, 7 September 1932.

⁴⁵ Indeed where animals can be domesticated, such as the donkey, the animal has been domesticated on at least two separate occasions and at different locations in Africa.

trouble and patience one of the zebra bit him and nearly tore the muscle out of his arm. This was too much for Toby. He shot the lot.⁴⁶

Steam Train

The train has had a tremendous impact on societies across the world. In 1905 the Railway Bridge across the Zambesi river at the Victoria Falls was completed. Henceforth the territories that would make up Zambia came to be linked by rail to the harbours of South Africa and Mozambique. By 1909 the railway had been completed between Livingstone and Ndola, with a branch line continuing into Belgian Congo at Sakania and on to Fungurume. Hereby the newly emergent copper mines of Katanga came to be directly linked to the harbours of southern Africa.⁴⁷

However, for all of their power and capacity, the sad truth is that trains are always limited by the line of rail. That is, unlike cars, trains are unable to make detours to collect or deposit goods away from the line of rail. Although the railway line, linking as it did the centre of Africa to the harbours of South Africa and Mozambique, meant a tremendous reduction in travelling time for anybody living along the line of rail, its impact petered out at distances that were more than a days walk to the railway. What this meant for farmers is aptly illustrated by the following example:

...camped at Harvey's farm ...– 13 thousand bags of maize for a crop,... 100 acres of spuds in the ground and 50 acres of wheat & 90 dozen eggs going to market every week. But of course 22 miles from the rail cuts down profits.⁴⁸

The railhead was effectively the terminus and gateway to the outside world, where after goods, passengers and post had to be transported by other means and in the absence of roads by foot. In the absence of any effective means to transfer goods, such as

⁴⁶ Tapson, Transport, p. 52.

⁴⁷ The establishment of railroads were essential to the industrialization of central Africa. The standard work on the establishment of rail to central Africa is, S.E. Katzenellenbogen, *Railways and the Copper mines of Katanga*, Oxford: Clarendon Press, 1973.

⁴⁸ RH, MSS. Afr. S. 776 – 781, Chilanga September 1st 1923, My dear mother.

agricultural products, from farms to the line of rail, the development of agricultural produce remained limited to what could be consumed or traded locally, with the exception that stock could be walked to market. Writing in the late 1930s the young District Officer John Walter wrote to his wife and noted what it meant to be away from the line of rail:

Everybody says I shall like Kasama – and it is not very lonely as there are about 20 Europeans there altogether; and a good mail service. (only 2 or 3 days to railhead) Sharland's letters will take about a month to get to the railway from Mankaya in the centre of Barotseland.⁴⁹

Steam Traction Engines

In the absence of railroads and in the presence of trypanosomiasis there was one mode of transport in central Africa in the early 1900s that could and was used for bulk transport, the steam traction engine. Essentially a locomotive designed to run without rails, the steam traction engine was a product of industrial technology which I normally associate with English country fairs and had certainly not expected to find in central Africa.⁵⁰ Steam traction engines had been used to ferry troops in the Anglo-Boer war (1899 – 1902), and as early as 1904 steam traction engines had crossed the Kafue and been put to work in central Africa.⁵¹ The British South Africa Company used these vehicles to transport collected rubber from the Bangweulu and Luapula to the line of rail.⁵² Similarly the copper mine being run at Kansanshi in 1913 used a steam traction engine to transport ore to the line of rail at Mbaya in the Belgian Congo.⁵³

In the early part of the Twentieth Century the men who operated Steam Traction Engines were accorded a status akin to that which computer techies enjoyed in the

⁴⁹ RH, MSS. Afr. S. 664. Grand Hotel, Lusaka, Northern Rhodesia, 16th August 1937.

⁵⁰ As a child I traveled with my father to Kansanshi, and whilst driving through the bush we stumbled upon the remains of a steam traction engine.

⁵¹ *South Africa A weekly journal for all interested in South African affairs* May 5, 1906.

⁵² Christina Lamb, *The Africa House*, London: Penguin, 2000, pp. 92 -3.

⁵³ RH, MSS. Afr. S. 776 – 781, Kansanshi, Friday Jan 17 1913, My dear father.

booming 1990s and financially rewarded accordingly. Theodore Williams, an Oxford graduate and probationer for the BSAC administration in Northern Rhodesia in 1913, could not help but grouse in a letter that:

C.G. Dawson the traction engine driver gets 900 pounds a year – but of course he is a fairly skilled mechanic.⁵⁴

Considering that Williams with a university degree was at that stage earning no more than 250 pounds a year, Dawson's skills must have been highly regarded.⁵⁵ In addition, Kansanshi mine must have been highly profitable if it could afford to pay such wages for the transport of its ore over a distance of 90 miles to the line of rail at Mbaya.

Though very powerful and impressive Steam Traction Engines were scarcely suitable for use in the African bush. In the absence of paved all-weather roads, journeys that took 3 days to cover in the dry season could take more than a month to complete in the rainy season. Early in 1913, as the rainy season was getting into its stride, Theodore Williams jotted down the following in his diary:

Met Dawson Traction Engine – both inches deep in mud – the engine 2 or 3 feet deep in the road now and then – 2 mile short of Katandoma river – a cheery lad, and so pleased with life and the country – bucked to meet someone to talk to after a month on the Baya road with his engine.⁵⁶

Dependent upon passable roads, a constant supply of clear water, and dry fuel in the form of wood, Steam Traction Engines were far from the independent means of transport that they may have appeared to be in the first instance. Instead the Steam

⁵⁴ RH, MSS. Afr. S. 776 – 781, Kansanshi, Friday Jan 17 1913, My dear father. 900 pounds 1913 converted into contemporary money registers at around US\$ 85,000,00.

⁵⁵ The wages paid to those working on the mines continued to rankle Williams throughout his BSAC career. At a later stage in 1917 he confided in a letter: "It gives one food for thought to see men, and many of them with no more years, brains, breed, or bluff than I have at my disposal, only with a technical training of some sort, who get anything between one and two thousand a year!". RH, MSS. Afr. S. 776 – 781, British Vice Consulate, Elizabethville, 23 January 1917., My dear Mother.

⁵⁶ RH, MSS. Afr. S. 776 – 781, Williams (Theodore R.) Administrative Officer, Northern Rhodesia: Diaries, 1912 – 21. 3 vols. 12 January 1913.

Traction Engine and its driver were totally dependent upon hordes of labourers to ensure a constant and steady supply of clear water, dry fuel, and passable roads.⁵⁷ The recruitment of the labour necessary for the logistical support of a steam traction engine is something that still needs to be investigated, but a superficial reading of the documents indicates that in the progress of one expedition between Fungurume and Sankisia, approximately 1000 labourers were employed to enable the passage of two steam traction engines.⁵⁸ The social costs of steam traction engines in central Africa in terms of labour extraction needs to be calculated, but that it was substantial cannot be doubted. A mere glance at the picture included below will be sufficient to bring home to the reader the point that I am trying to make at this point.



Women supplying water for a steam traction engine 1915 central Africa.⁵⁹

Bicycle

⁵⁷ National Archives, Kew Gardens, ADM 123/142, contains detailed reports of the Tanganyika Naval Expedition led by commander Spicer-Simpson. Of relevance here is the use of steam traction engines and the necessity of fuel, water, and a decent road.

⁵⁸ National Archives, Kew Gardens, DO 119/918, Naval Africa Expedition, Report of Progress No. 4, Sankisia 30th September 1915.

⁵⁹ Frank J. Magee, "Transporting a Navy through the jungles of Africa in war time", in *The National Geographic Magazine*, October, 1922, p. 339.

“...a broad path through the trees, with the enormous ruts a traction engine makes – no macadamized roads in this country. We had a bike with us, & I’d have used it a good deal in places – but generally let Matthew push it.”⁶⁰

“A dona who had a bicycle employed a special boy to accompany her on her rides. He carried a long forked stick. When the dona came to an incline she would say kanka, and the boy would press his forked stick against the back fork and push. He would have to keep up all the time, down hill as well as up, which wasn’t easy when the dona decided to do twelve miles per hour down hills”.⁶¹

Apart from the steam traction engine, another product of industrial technology that transformed society and made its way to central Africa prior to the arrival of the motor-car, was the “safety Bicycle”. In contrast to the steam traction engine and the gleaming limousines of the 1950s and 1960s, bicycles continue to provide reliable transport throughout present-day central Africa and Zambia.⁶² In the 1880s safety bicycles revolutionised societies in northern Europe and North America. Suddenly from one day to the next people on a bicycle could easily cover three times the distance they could normally cover whilst walking. Whereas previously people limited their activities to a radius of approximately five kilometres, people suddenly extended their activities to a radius of 15 kilometres. The transformation brought about by the bicycle in human society has led the British geneticist Steve Jones to argue that the bicycle is the most

⁶⁰ RH, MSS. Afr. S. 776 – 781,

⁶¹ Tapson, Transport, p. 52.

⁶² The social history of the bicycle is a topic that desperately needs to be written for Central Africa and Zambia, where bicycles are used for all manner of transport. On any day of the week the roads leading into Lusaka are crowded with cyclists bringing charcoal to the urban inhabitants of the city. Recently the BBC broadcast a truly devastating piece by Tim Butcher entitled *Re-charting the mighty Congo*. Butcher’s words convey the immensity of what has come to pass in the Congo:

The Ho Chi Minh trail of Congolese survival – cadaverous men we saw by the hundred wandering the forest, pushing pedal-less bicycles laden with jars of palm oil for hundreds and hundreds of kilometers for the chance of making a few pounds by trading them for another commodity like salt. These men were on six-week round trips, drinking when they passed a stream, eating what they could scavenge in the bush, and sleeping on the trail when the sun went down. There are no shops here, no houses to rest in, just the endless forest void. “There is nothing in my home town, Kongolo – this is my only chance to feed my family,” one of the men, Muke Nguy, said before heaving his tottering bike down the trail. “What’s that?” I asked, pointing at a loop of vine on his shoulder. “My bicycle repair kit,” he said. The sap makes a gummy resin, ideal for mending flat tyres. I shook my head in sorry disbelief.

See also, Nancy Rose Hunt, “Bicycles, birth certificates, and clysters: Colonial objects as reproductive debris in Mobutu’s Zaire”, paper in press with Duke UP. Has an extensive section dealing with bicycles in Congo.

important event in recent human evolution. Work conducted by Jones indicated that on account of the bicycle marriage patterns changed as the choice of potential marriage candidates expanded and were no longer limited to the immediate environs of the place of birth.⁶³

The British South Africa Company provided its officials with bicycles. After a short spell of work in Nyasaland, Frank Melland careened his way into Northern Rhodesia in late 1901:

Two miles of the Abercorn road then we struck off cross country Cross country I should think it was a rough riding as I ever want to do though much more enjoyable and certainly more exciting than a machila, I rode most of the way, through scrub and over rocks, winding, as nothing but a native path can wind – but sometimes the path was too bad even to wheel the machine... I wonder what the respectable English born bike thought of it.⁶⁴

Although Melland put on a brave face, the truth of the matter was that he arrived at his campsite covered from head to foot in soot and dust after having taken a number of falls when his pedals had struck clumps of rocks and hummocks on either side of the footpath.⁶⁵ Indeed so tumultuous was Melland's arrival by bicycle in colonial Zambia that his bicycle had, as he put it, "crooked". Henceforth he refrained from using it and much to chagrin of his carriers had himself transported by Machila.⁶⁶ Although he did not immediately succumb to the temptations of a Machila, Theodore Williams, in keeping with Melland's sentiments noted of cycling in colonial Zambia in 1913 that:

⁶³ Steve Jones, *The Language of the Genes: Biology, History and the Evolutionary Future*, Flamingo 1994. There is an indication that marriage patterns changed in northern Europe, whereas previously marriage partners had been found within a five kilometer radius, they were now found within a fifteen kilometer radius.

⁶⁴ RH, Mss. Afr. R. 192, Melland (Frank Hulme) Diary of life in north Eastern Rhodesia, 1901 – 4 3 vols.

⁶⁵ In advance of the rains and in keeping with chitimene shifting cultivation practiced by the Bemba, large tracts of the bush had been burnt to make place for agricultural fields. It is tempting, though undoubtedly un-provable, to believe that Melland's virulent opposition to and persecution of Chitemene agriculture has its roots in the dark and sooty day of his tumbled arrival in colonial Zambia.

⁶⁶ RH, Mss. Afr. R. 192, Diary entry 6 October 1901.

“Still it is not quite such an obliteration of distance as is biking in England. Often there are simply too many trees across the track to make it worth while hopping off and on every 20 yards.”⁶⁷

For all of the negative experiences expressed by colonial officials in the beginning of the twentieth century, the bicycle soon developed into a popular and continuingly affordable form of transport for Zambians.⁶⁸



Bicycle in Zambia in July 2004. Note the protective plastic and paper packaging that has been retained after purchase.

Motorcycle

A development that made full use of the skills and techniques developed in both the cycle and steam industry was the motorcycle. With the development of the internal combustion engine in the 1890s many bicycle makers switched to the production of motorised vehicles. By the early 1900s the Motorcycles were being mass-produced in Europe and

⁶⁷ RH, MSS. Afr. S. 776 – 781, At another stage Williams noted:

At other times the country is hilly and the bikes the company provides are most unsuitably high geared – considering one never wants to go faster than 5 miles an hour as one has to keep with ones walk-foot gunbearers & paths finder. I have generally made a point of walking about the first 8 to 10 miles – from 6 till nearly 9 say ... after that biked as much as was likeable.

⁶⁸ In a short article Terence Ranger has discussed the impact and continuing importance of bicycles in Bulawayo, Zimbabwe, “Bicycles and the social history of Balawayo”. See also, Nancy Rose Hunt, “Bicycles, birth certificates, and clysters: Colonial objects as reproductive debris in Mobutu’s Zaire”, paper in press with Duke UP. Has an extensive section dealing with bicycles in Congo.

the United States. Considerably cheaper than a motor-car, and considerably more manoeuvrable on the trails and footpaths of colonial Zambia, the motorcycle soon became the preserve of the wealthier colonial officials.⁶⁹ By 1917 well to do colonial officials had taken to pattering around on BSAs and Nortons. The motorcycles arrived in Northern Rhodesia in crates and would then have to be portaged to their final destination. Writing of an officer in charge of bulk stores in Tete a chronicler noted that:

He thought it would be a good idea to take them out of their crates, inflate the tyres, put the gear into neutral and let two porters push the bikes to Fort Jameson. ... [unfortunately] as long hills were too much temptation for the porters, and many were the claims for damaged machines. ... A White Father padre, thinking to avoid damage to his new motor-bike, trekked down to Tete himself to take delivery and ride the machine back to Fort Jameson. On the way back he ran into a herd of elephants. He threw his bike down and retreated hastily into the bush. One of the elephants came up to the bike to sniff it. His trunk came into contact with the hot cylinder and in a rage he stamped on the machine and trampled it into a tangled heap of metal.⁷⁰

In contrast to the bicycle, the motorcycle does not appear to have had a lasting impact on Zambian societies. Effectively the motorcycle continued to be the plaything, with very little practical value, of the elite. To be sure one could attach a side car, but on the whole Motorcycles are almost by definition the epitome of individualism. Furthermore, in contrast to bicycles, motorcycles are not machines that are easily pushed with a heavy load. That is, even though a bicycle may lose its pedals and chain, it can still be and often is used to transport goods. The same does not hold for motorcycles. When they breakdown, or when they run out of fuel, the engine literally becomes a deadweight and a hindrance.

⁶⁹ RH, MSS. Afr. S. 776 – 781, Elizabethville, Congo Belge, 7th January 1917, My dear mother.

⁷⁰ Tapson, “Transport in Early Days”, p. 53.

The first Automobile

One of the less controversial of the many settler heroes of German colonialism, Paul Graetz, a.k.a “Bwana Tucka Tucka”, introduced the first motor-car to colonial Zambia in 1908, when he drove across Africa between 1907 – 1909.⁷¹ Graetz’s continuing popularity is such that re-runs of his trip with replicas of his vehicle and modern 4x4s are organised by tour-operators working out of Germany, and whole websites are devoted to Graetz and his exploits.⁷² A reading of his travelogue indicates that Graetz had his fair share of “traveller experiences”, but that which was omitted from his text and commemorative texts is the simple fact that his trip would never have been possible without African labour. Graetz’s trip from Dar es Salaam in German East Africa to Swakopmund in German South West Africa, was a trip that was only possible on account of extensive road and bridge building, and the portage of his petrol, by African labourers recruited to prepare the way and establish fuel dumps along Graetz’s intended line of travel.⁷³ Stranded at the Lukakashi river Graetz had to wait for three weeks for fuel to be brought up by rail from Bulawayo in southern Rhodesia and portaged from Broken Hill to his involuntary encampment at the Lukakashi river. In keeping with the carrying load of an individual porter, the 50 gallon drum (approximately 220 litres) had to be man-handled by 12 porters. The size and weight of the load made an indelible impact on travellers on the route between Broken Hill and Mpika, and weeks prior to the arrival of the petrol rumours of the impending arrival of an enormous drum had reached Graetz at his encampment.⁷⁴

World War One and Carriers⁷⁵

⁷¹ Paul Graetz, *Im Auto Quer Durch Afrika*, Berlin: Gustav Braunbeck & Gutenberg-Druckerei 1910.

⁷² http://www.bwana.de/deutsch/graetz/ind_ie.htm Following his trip across the African continent, Graetz later went on to make a name for himself in airships operating in the Dutch East Indies.

⁷³ National Archives of Zambia, KSD 4/1 Vol. 1, Mpika District Note Book, 1901. Entry for April 1908.

⁷⁴ Graetz, *Im Auto*, pp. 166 – 9.

⁷⁵ Geoffrey Hodges, *The Carrier Corps: Military Labor in the East African Campaign, 1914 – 1918*, Westport Connecticut: Greenwood press 1986.

Incapacitation through disease among the British was 31.4 to one for the troops and 140.8 to one for the followers.⁷⁶

The motor-car came into its own in colonial Zambia when African portage labour was unable to keep up with the demands with that most voracious and extravagant form of Capital destruction, armed conflict. Many people dealing with Africa fail to realise it, yet the First World War had a tremendous impact on African societies. Although there was very little actual fighting on the ground in northern Rhodesia, the territory and its people were most directly affected by the war. For four years between 1914 and 1918 the societies of what are now the states of Tanzania, Malawi, Kenya, Congo, and Mozambique were ravaged by the effects of warfare as competing armies criss-crossed the region. Throughout the war the competing armies dragooned men into military service, and conscripted hundreds of thousands of men and women as porters, *tenga tenga*. In addition tremendous demands and strains were placed upon the ability of communities to make available food supplies for the armies. Indeed, so harsh were these demands that by 1917 there were districts in northern colonial Zambia that were devoid of people and denuded of all agricultural produce.⁷⁷

Recruitment for service in both colonial armies, either as soldiers or as carriers, was a very direct affair. Mel Page refers to one of his informants who noted: “They used to chase people as if they were chasing chickens”, and cites a former German Askari who stated, “if they were short of soldiers they forced anyone they saw to join their forces”.⁷⁸ Carrier corps made up the bulk of the armies moving through East Africa. The work of

⁷⁶ Ann Beck, *Medicine and Society in Tanganyika 1890 – 1930: A Historical Inquiry*, Philadelphia: American Philosophical Society, 1977, p. 40.

⁷⁷ The same held true for the areas in the immediate vicinity of the railhead at Broken Hill. NAZ, KDA2/1 volume 1, notes of 3rd Indaba held April 1916 “Famine in parts of district...”.

⁷⁸ Page, “Introduction: Balck Men in a White Men’s War”, p. 7.

Mel Page⁷⁹, Geoffrey Hodges⁸⁰, David Killingray and others has brought to the fore the central role played by African porters in World War One in Africa. These authors have detailed the enormous sacrifices incurred by these Africans, and have, to some extent, dealt with the impact of these hordes of non-combatants. It has been estimated that no less than 1.5 million people operated as carriers in WWI in Tanganyika alone. The men of the Carrier Corps were believed to have died at the rate of 400 per month during part of the campaign.⁸¹ Dr. Horace R.A. Philp who served as government medical officer during the war and was a missionary CSM doctor in peace time, has given us a stark picture of human destruction:

Large numbers have died in base hospitals, on the roads and in the reserves after reaching home. Further, the men left for active service well and fit. Those repatriated have returned mostly physically unfit, bringing with them diseases innumerable.⁸²

Carriers were young men and women in the prime of their lives, who were withdrawn from their communities at a time when these were in desperate need of all the productive capacity that they could muster. Writing of North Eastern Rhodesia where he was based during part of the war, Williams wrote to his mother:

It is over in NER that natives have done really nobly : there they have not had a month's rest since 1915: if they were not actually humping loads they were being driven to their gardens to raise more food.⁸³

⁷⁹ Melvin E. Page (editor), *Africa and the First World War*, London: Macmillan, 1987. Melvin E. Page, *The Whiwaya War: Malawians and the First World War*, Boulder Colorado: Westview, 2000.

⁸⁰ Geoffrey Hodges, "Military Labour in East Africa and its Impact on Kenya", pp. 137 – 151, in, Page (ed.), *Africa World War*; Geoffrey Hodges, *The Carrier Corps: Military Labor in the East African Campaign, 1914 – 1918*, Westport Connecticut: Greenwood press 1986; Geoffrey Hodges, *Kariakor: The Carrier Corps: The Story of the Military Labour Forces in the Conquest of German East Africa, 1914 to 1918*, Nairobi: Nariobi University Press, 1999.

⁸¹ Geoffrey Hodges, *Kariakor: The Carrier Corps: The Story of the Military Labour Forces in the Conquest of German East Africa, 1914 to 1918*, Nairobi: Nariobi University Press, 1999.

⁸² Ann Beck, *Medicine and Society in Tanganyika 1890 – 1930: A Historical Inquiry*, Philadelphia: American Philosophical Society, 1977, p. 40.

⁸³ RH, MSS. Afr. S. 776 – 781, March 31 1919, NC office Solwezi, My dear mother.

Sir Laurence Wallace, former administrator of North-Western Rhodesia, drafted a lecture that dealt with the organization of transport in the war. It provides an excellent account of the difficulties encountered by the British:

The difficulties were that between the nearest point on the Railway and the northern border, where the Rhodesian Column was concentrated for its advance into German East Africa there were 600 miles of country covered with tsetse fly, in which no domestic animals could live and therefore no sustained ox, horse, mule or donkey transport was possible. Because of this no roads had been made suitable for wheeled traffic and motor traffic was not possible until such roads had been made. We were therefore at first limited to native carrier transport.

When war broke out some native troops were immediately sent through to the border, by various routes in order to assure food on the way, but to send the first European troops through we were forced to use ox-waggon transport knowing that the oxen could not live much longer than the outward journey, and certainly not long enough to bring the empty wagons back altogether 30 wagons with about 100 tons of stores and 600 oxen started and just got through, though none of the oxen survived the journey.

During 1915 the country had not been quite denuded of its share food and we were able by carrier transport to keep the troops in supplies, but we had to prepare for heavier demands and motor transport seemed the only way out.⁸⁴

From late 1915 onwards British forces were commanded by Major-General Sir Edward Northey, whose first and most pressing problems of command related to transport.⁸⁵ Taking up his command Northey travelled by rail to Livingstone and:

⁸⁴ PRO, CAB 45/14, East Africa Campaign Great War: Accounts of activities on and around the Northern Rhodesia Border.

⁸⁵ For further information on Northey see, G.W. Hatchell, O.B.E., "The British Occupation of the South-Western Area of Tanganyika Territory, 1914 – 1918", in *Tanganyika Notes and Records*, 1958, Number 51, pp. 131 – 155.

... spent three days interviewing many old Colonials who knew the Frontier well, and discussing and arranging the very difficult question of supply and transport over the six hundred miles from the Rhodesian Railway to the North-Eastern Border.⁸⁶

Northey was informed that “in this country, except on a few bits of road south of the Frontier, all transport had to be done by Carriers, who consume as much as they carry in one month”.⁸⁷ Administrator Wallace, who had sought to ensure the effective supply of goods and materials to the front by carriers, worked out the capacity per distance of carriers:

The average rate of travel for carriers, ... is about 15 miles per day. The net load carried is 60lbs to which has to be added cooking pots blanket etc. Their rations are 2½ lbs of meal per day. A carrier would therefore eat the full weight of his load in 24 days, that is on a 12 days journey outward (180 miles) and 12 days return.⁸⁸

Clearly the transporting of goods to the front 600 miles away could not be effectively done by carriers. Indeed, Wallace calculated that should he wish to ensure the supply of 1 ton per day at the front 600 miles from the railhead he would need no less than 71.000 carriers.⁸⁹ At the time there was a taxable population of approximately 120,000 in Northern Rhodesia of which approximately 80.000 could be recruited. However, “it was found that if more than one third of these away at a time cultivation suffered, with a consequent loss of the food we so much wanted”.⁹⁰ Not surprisingly, upon assuming command Northey sought to engineer a shift in supply from carriers to motor transport where possible:

⁸⁶ PRO, WO 95/5329, East Africa Brig Gen E. Northey's War Diary 4 Dec 1915 – 8 Apr 1916, 7 January 1916.

⁸⁷ PRO, WO 95/5329, East Africa Brig Gen E. Northey's War Diary 4 Dec 1915 – 8 Apr 1916, 7 January 1916.

⁸⁸ PRO, CAB 45/14, East Africa Campaign Great War: Accounts of activities on and around the Northern Rhodesia Border. Folio 2.

⁸⁹ PRO, CAB 45/14, East Africa Campaign Great War: Accounts of activities on and around the Northern Rhodesia Border. Folio 3.

⁹⁰ PRO, CAB 45/14, East Africa Campaign Great War: Accounts of activities on and around the Northern Rhodesia Border. Folio 4.

I am now arranging for carriers to enable mobile forces to get forward and for the making of roads for motor traffic for forward and lateral communication. ⁹¹

In the course of 1916 a road was cut and bridges built from the railhead at Broken Hill to two points on the border. Model T Fords were obtained via South Africa and converted into lorries able to carry 700 lbs plus a driver and his kit. The road was an earthen track, with exception of approximately 80 miles of sand where, “wheel tracks in the sand were filled with soft stone and the cars ran on two slightly sunken ribbons of Macadam thus formed”. ⁹² Although the Model T was able to transport far more than carriers the British continued to rely on carriers until the end of the war. Nevertheless, as a quick glance at the numbers makes abundantly clear, the introduction of the Model T transformed the manner in which transport came to be run in colonial Zambia.

The Socio-economic Impact of the Introduction of Motor-cars

One of the first things to happen following the introduction of the motor-car was that carrier transport came to be superseded by motorised road transport. Henceforth goods were no longer carried from A – B by the long lines of porters so beloved of cartoon depictions of African caravans and European explorers in the dark continent. Instead of a string of porters each carrying a maximum of 60 lbs on their shoulders for an absolute maximum of 15 miles a day, the Model T easily transported tenfold the amount of a porter and for far more than 15 miles a day.⁹³

⁹¹ PRO, WO 95/5329, East Africa Brig Gen E. Northey's War Diary 4 Dec 1915 – 8 Apr 1916

⁹² PRO, CAB 45/14, East Africa Campaign Great War: Accounts of activities on and around the Northern Rhodesia Border. Folio 1.

⁹³ Stephen Rockel wrote to me in 1988 with the following: “I like the story told with astonishment by a colonial official in Tanganyika about porters and a lorry in the Kilimanjaro region. Some time in the late 1920s he recruited unwilling Chagga porters to go on tour with him, only to find that they all chipped in to hire a lorry to transport his loads. This made more economic sense to them – they could make more money if they stayed behind rather than wandering around the countryside for a pittance”.

The immediate result of this introduction was an economic decline for most of the communities living along the line of travel. Prior to the introduction of the motor-vehicle the portage of goods ensured that in effect the market came to people in the villages along the line of travel. A reading of the travel reports for the routes of travel throughout the areas that make up present day Zambia indicates that along the established routes there were villages and settlements scattered along like beads on a string every 15 to 25 kilometres.⁹⁴ That is, settlements were spread along the route of travel at distances from one another that corresponded to a days walking journey for a laden caravan. Work has recently been conducted by Minetti on the efficiency of postal services based on horses; services such as the famous U.S. pony express and the pony relay networks of the Roman and Chinese empires. This work indicates that irrespective of time and place, be it the American West or Asia Minor, all of these services based on horses came to a similar average travelling distance (20 – 25 kilometres) for horses prior to their being replaced by new horses.⁹⁵ Undoubtedly the same holds true for people.⁹⁶ A thoroughly unrepresentative survey of guide books for contemporary recreational walking routes in western Europe indicates an average walking distance of 25 kilometres a day.⁹⁷

Within colonial Zambia district officials regularly went on tour. In the course of these tours taxes would be collected and attempts were undertaken to administer colonial rule. The District Notebooks stored in the National Archives in Zambia list the distances covered and the number of days taken on these tours. An overview of the available District Notebooks indicates the correlation that exists between time and distance of district tours. An analysis of 27 district tours within the District of Broken Hill indicates

⁹⁴ The district notebooks stored in the National Archives of Zambia contain a wealth of information on the various travel routes in existence in Zambia prior to the introduction of the motor-car. See in particular NAZ, KDF 3/1 Vol. 1., District Commissioner and Magistrate, Mweru – Luapula District at Fort Rosebery, Folio 106.

⁹⁵ Alberto Minetti, “Efficiency of equine express postal systems”, in *Nature*, Vol. 426, (18/25 December 2003) pp. 785 - 6.

⁹⁶ Joseph A. Amato, *On Foot: A history of walking*, New York: New York University Press 2004.

⁹⁷<http://www.snp.nl/ProductGroups/invariant/products/Category.aspx?CategoryCode=WALK&WorldPartId=15&countryId=126>.

that between 1914 and 1925 an average tour lasted 18.5 days, and that a distance of 194.148 miles was covered on an average tour. That is for every day on tour the average distance covered was 10.49 miles (16.79 kilometres).⁹⁸ The average distance travelled on travelling days will have been higher than the average, given that rest days were observed, and there were days on which the colonial official would have conducted his official business.

Whereas in the past, that is prior to the introduction of the motor-vehicle, day journeys would average around 20 kilometres a day, trips by motor-vehicle were now limited to the condition of the road and the length of the day. In effect this effectively meant that from one day to the next day trips more than doubled. Journeys that had previously taken four days of walking were now completed in a single day.⁹⁹ The distances covered in relation to days on tour changes dramatically.¹⁰⁰ The distance that had been involved in making tours suddenly appears to have lost the importance that it had previously held. Indeed, the District Notebook for Broken Hill ceases to make mention of the distance covered on tour following the introduction of the motor-car in 1925.¹⁰¹

Caravans of porters did not only bring goods to the villages and settlements they passed through, they also made use of and the purchased goods and services that were on offer in these settlements and villages. As noted above, effectively the market walked its way to the villages and settlements along the line of travel. In practice this meant that sick or lame porters could come to be replaced by new recruits, and fellow travellers

⁹⁸ NAZ, KDA2/1 Volume 1, District Notebook Broken Hill, Folio 160 ff. "District Travelling". The 27 tours dealt with spent 501 days on tour and covered 5242 miles.

⁹⁹ In this developments in colonial Zambia mirror those in colonial Namibia where, from about 1925 onwards the motor car, and with it the truck and bus, came to play an evermore important role in everyday life. Within the Namibian context, trips to outlying areas had taken the form of oxwagon and walking expeditions, sometimes taking up to three months or more. With the introduction of the car, a trip from Windhoek to the Waterberg, which would normally be done in four days, could now be done in a day.

¹⁰⁰ NAZ, KDG 5/1 Volume 1 Chipata District Notebook, 10 – 19 June 1919, lists a ten day tour in which 196 miles were covered by motor and 50 by walking.

¹⁰¹ NAZ, KDA 2/1, Vol. 1, Broken Hill, 12 – 17 Sept. 1925.

could come to be replaced by others. More often than not, caravans did not consist solely of porters, but also of family members and servants who accompanied the porters as cooks and general taggers on, but also people merely travelling from one village to the next and seeking the company and security of a large travelling party. In effect the arrival of a caravan of porters and travellers heralded the opportunity to sell and trade all manner of goods and services for villages and settlements along the route of travel. Now with the introduction of the motor-vehicle villages and settlements situated at distances of 15 to 20 kilometres along the line of travel were passed by in favour of settlements further along the line.

Throughout the course of the 1920s and 1930s colonial officials make mention of the fact that fields and villages are being abandoned along the route of travel. Indeed, the work of Audrey Richards commissioned in the 1930s, dealt specifically with the perceived decline in agricultural production and argued that this related directly to the mass migration of young men to the burgeoning copper mines of the Copperbelt.¹⁰² Some of the colonial officials shared this analysis of what was happening. A fine example of this is provided by Spencer Reeve Denny who was stationed in the Kasempa district in the late 1920s and wrote the following in a letter home:

I believe it is a fact that the gardens are much smaller now than in the years previously. And this is not to be wondered at, when none of the men are there to do the manual labour of the gardens. The young men may return from the mines in July and August, when the beer is plentiful but that is just the time when the trees have to be felled and burnt and the ground tilled. And that is man's work. But having done six months at Nchanga they refuse to work still more at home. Consequently the extent of cultivated land is reduced. Unless some rule is made that so many men must remain in a villaged during the important seasons, there is going to be a bad famine in the next few years. As it is in many villages the inhabitants are existing on honey and mushrooms and odd vermin that they manage to trap or spear and now and then a buck or two that one hunter may

¹⁰² Audrey I. Richards, *Land, Labour and Diet in Northern Rhodesia: An economic study of the Bemba tribe*, London: Oxford University Press, 1939.

shoot. In parenthesis it is remarkable how accurate they are with their old muzzle loaders.¹⁰³

In addition colonial officials complained bitterly about the difficulty and expense of finding labour in their districts and blamed this on the mines, which they claimed had spoilt the market with the wages and conditions on offer.

...the mines find they cannot get the labour unless they both pay and feed their boys well. Consequently, you find them paying 15 to 20 shillings a month for work that the Boma only gives 12/6 for, and which is not worth more. Moreover they are given meat three times a week and vegetables and tobacco, and it goes without saying that the housing has to be good. The boys are also encouraged to bring their wives with them and to make a long stay.

...

Then there is the Govt. We must have carriers for travelling, bringing up stores, road work, general labour, and mail carrying. But we cannot afford to pay the wages that outsiders pay. Consequently it is becoming more and more difficult to get the munt to in of his own accord to work for the Boma. Time was when every Monday morning there was a queue outside waiting to be extra mail runners. Today I could not get one, and men who had been out to get them said they refused to come in. In fact, to get the labour we are having to use methods which are strangely like forced labour. True they get paid, but a messenger, who is equivalent to a constable has to go and bring them – and then some of them manage to run away. And in many cases the men are not there to be pressed. In many villages only the old and the indigent are at home and the women are doing all the work, including work that is always accepted to be men's work – collecting honey, killing cane rats and other tasks.¹⁰⁴

¹⁰³ Rhodes House, Oxford, Mss.afr.s.79, Denny (Spencer Reeve). Typed extracts from letters home, Northern Rhodesia, 1929 – 31, 17th February 1930.

¹⁰⁴ Rhodes House, Oxford, Mss.afr.s.79, Denny (Spencer Reeve). Typed extracts from letters home, Northern Rhodesia, 1929 – 31, 17th February 1930.

The work of Richards, and later Moore and Vaughan, both see the development of the mines and their rapacious demand for labour as being responsible for the changes being wrought in what is today the Northern Province of Zambia.¹⁰⁵ However, it could also be argued that the ending of the caravan trade freed up substantial amounts of labour for the mines. The reduction in employment opportunities (in terms of portage, agricultural produce, and services) that was brought about by the cessation of portage caravans, led to a freeing up of labour for the newly emergent mines. That is, that it was not so much the mines that were draining the hitherto vibrant rural communities that had allegedly existed, but that it was the ending of the caravan trade that forced rural inhabitants to look for trade elsewhere, and in this instance found employment in the mines many kilometres away from their original home villages. A vicious circle started functioning from the mid 1920's onwards in colonial Zambia when the copper mines of the Copperbelt started and the motor-vehicle was introduced. As the mines drew labour, it further limited the amount of labour available for transport, which in turn furthered a reliance on mechanical transport, which in turn further decreased a demand for transport labour.

In summation

The introduction of motor-vehicles into central Africa from the 1890s onwards greatly transformed African societies. The introduction of the train in the first decade of the twentieth century allowed for the industrial development of the copper mines in Katanga, Belgian Congo. Within colonial Zambia the impact of the train was limited to the line of rail, however the Katangese copper mines which became operational in 1908 had an impact throughout central Africa as the mines began to attract labour. The further products of the industrial world, the bicycle and the steam traction engine, impacted on the central African societies. The Steam Traction Engine required enormous amounts of labour for wood, water and road-building along the route of travel, a reliance on African labour that severely curtailed the operational possibilities of the Steam Traction Engine. In contrast, the bicycle had a lasting impact on the manner in which goods and people

¹⁰⁵ Megan Vaughan and Henrietta L. Moore, *Cutting down trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890 – 1990*, London: James Currey, 1993.

were transported in central Africa. Bicycles, dependent as they are upon human muscle power, continue to form one of the prime forms of transport in central Africa throughout the 20th Century. The motor-cycle, in contrast to the bicycle, does not appear to have had a lasting impact upon transport in central Africa. The introduction of the motor-car, coming as it did when the effectiveness of human caravan portage was found to be wanting, radically transformed central African transport systems. Effectively from one day to the next the manner in which goods and people were transported over distances greater than 25 kilometres was radically transformed. Settlements and villages that had lain at walking day intervals along the route of travel were ignored and came to be abandoned for “nodal points” more fitting for the new form of travel. Essentially the ending of caravan portage brought about a decline in employment and marketing opportunities for rural populations and freed up labour that would come to be used in the Katangese and newly emergent mines of the Copperbelt. The large scale introduction of the Motor-vehicle, in the form of cars and trucks, into central Africa in the aftermath of the First World War, led to a decline in rural opportunities and heralded the establishment of Zambia’s mining proletariat.

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