PRE-COLONIAL TRANSPORT IN NIGERIA

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SYNOPSIS

The main theme of this thesis is a study of the role of transport in the indigenous economy of Nigeria before the colonial period. The multifarious problems which users of land and water routes experienced are described. It has been found that extensive use was made of land routes by both porters and pack animals and of water routes by canoes.

The recruitment of labour for human porterage, the breeding of pack animals and the construction of canoes are examined. It has been found that until about the end of the nineteenth century, household labour was plentiful enough to make transport less costly than has usually been assumed.

Although unavailability of statistical data limits adequate cost-benefit analyses, various factors which affected speed and cost of transport are analysed. It has been discovered that contrary to general assumptions, the transport facilities largely met the needs of the pre-colonial economy.

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I am very grateful to the Staff of the Archives and Libraries used. The Archives are listed in my "Sources". Those used are mainly the Heslop Room, the Controlled Access and the Inter-Library loan sections of the University of Birmingham; and the 'Africana' Section of the University of Ibadan.

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LIST OF ABBREVIATIONS

EHR	:	Economic History Review
GJ	:	Geographical Journal
JAA	:	Journal of African Affairs
JAH	:	Journal of African History
JAS	:	Journal of African Society
JEH	:	Journal of Economic History
JHSN	:	Journal of Historical Society of Nigeria
JRGS	:	Journal of Royal Geographical Society
JTH	:	Journal of Transport History
PRGS	:	Proceeding of Royal Geographical Society

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SECTION I

TRANSPORTATION IN THE PRE-COLONIAL ECONOMY

CHAPTER 1

Introduction: The Economics of Transporation

Introduction

As a field of serious study, transporation may be approached from various points of view. It may be studied as an engineering problem, paying attention to the construction and maintenance of railroads, highways and airports. It may be studied as a problem in business administration from the point of view of both sellers of transport services and of buyers of the services. Transport can also be studied as an economic problem, since efficient and economical transporation is recognised as basic to the success of a modern economy.[1]

Transport as an economic problem can be studied by the economist, the economic geographer, the economic historian and the agricultural economist, to mention only a few. Although the emphasis of each student may reflect his approach to the study, there is not likely to be wide gap between the approach of one student and another. This study approaches the study of transport in Nigeria as an economic problem from the viewpoint of economic history. It describes and analyses transport as it actually existed in the pre-colonial economy of modern Nigeria. The study also treats transport as a service and relates it to the economy.

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1. Westmeyer, R.E., Economics of Transporation, New York, 1952, p. 3.

Theme-Headings of Chapters

The thesis is divided into four sections of eight chapters. Section I, which comprises Chapters 1 and 2, is a background to the work. Section II deals with Land Transport and includes the description of Routes in Chapter 3, Human Porterage in Chapter 4 and Pack Animals in Chapter 5. Section III treats Water Transport, dealing with Routes in Chapter 6 and Canoes in Chapter 7. The Conclusion in Chapter 8 forms Section IV.

In the Introduction, Chapter 1, the theme-headings of the chapters in the thesis are stated; and the topic of the thesis, the period covered and the sources of information are discussed. The main focus of the chapter is the economics of transport - a discussion of the economic function of transport in the patterns of economic activities.

Chapter 2, The Pre-colonial Economy, is divided into two main sections: (1) agricultural and non-agricultural productions and (2) local and long distance exchanges. The main factors of production - land, labour (age-group, family, slave and pawn), and 'capital' - are discussed. The various currencies that were used in the internal trade of the country are treated; and a table of the currencies with their equivalents compiled. In order to avoid an imbalance in the chapters of the thesis, the economy, which is a big topic in itself, is treated in a single chapter which, unavoidably, is a long one.

Chapters 3 and 6 are devoted to the description of the problems on the land and the water routes respectively. It

is emphasized that despite the physical and human obstructions, the routes were used as trade links. The ways in which the obstacles lowered the speed and raised the cost of transport are explained.

Human Porterage - a means of transportation on land - is the theme of the fourth chapter. Attention is focused on Harrison-Church's assertion that "Porterage was a social evil, a political danger and an economic waste".[1] Circumstances that led to the making of this assertion are explored and modifications to it are suggested.

Chapter 5 is also about a means of transport on land - Pack Animals. Emphasis is laid on both the camel and the donkey because they played a more significant role than any other pack animals in the transportation of products. The donkey, compared with all other pack animals was the cheapest means of transport and the most widely used. The bullock, the ox, the mule, the hinny and the horse are other pack animals discussed. Tse-tse flies in the forest south and rainfall as obstructions to the more widespread use of pack animals are also noted.

The canoe and other types of vessel are examined in Chapter 7. Although the vessels were also important for fishing and ferrying, their roles as transporters of passengers and goods are the main foci of the chapter. The dugout canoe which had the widest distribution on creeks, rivers and lagoons is described; and its antiquity is used

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1. Harrison-Church, R. J., West Africa, London, 1966, p. 153.

to argue the antiquity of trade on the Niger and other waterways.

In Chapters 4, 5 and 7, four essential points common to all are discussed. First, the recruitment of labour by European travellers and by indigenous traders is discussed. Secondly, the problems affecting the speed of each means of transport are described and the actual speeds are compared. Thirdly, the various factors that should be considered in reckoning the cost of transport are examined and the costs of each mode of transport are analysed. Fourthly, distinctions are drawn between using a form of transport for short distances and for long distances; between using it in earlier times and using it after the end of the nineteenth century; and between its use by European travellers and by indigenous traders.

The conclusion first summarises the salient points of the study and then relates the transport facilities to the social and economic needs of the communities. The trading systems - 'relay' and long-distance trading networks - are treated in this chapter. It is argued that the transport system largely suited the economy until about the end of the nineteenth century and early twentieth century when overseas markets for agricultural exports expanded and when the railway and machine-oriented economy (e.g. the tin mining at Jos) were being introduced. Finally, it is argued that since transport is only one essential factor in an economy, it cannot, by itself, constrain the development of economy. Other possible constraints are examined. The issue of

African technology, especially the absence of the wheel, in relation to the pre-colonial economy in Nigeria is also discussed.

Transport and Specialization

Generally speaking, the economic activity of any society can follow either the principle of self-sufficiency or of division of labour-specialization.[1] If a community follows the principle of self-sufficiency, it provides all its requirements for sustenance from its available resources. But if the principle of specialization is followed, the community may specialize in particular forms of economic activities and then rely on the facilities of exchange to enable it to obtain the goods and services which it does not produce.

So far as transport is concerned, two important consequences can be seen from the adoption of one or the other of the two principles. The community which supplies all the vast range of goods and services it requires from its own resources is largely independent of all other communities. It requires little in the way of transport facilities to move goods from areas of production to areas of consumption. On the other hand, the community that adopts the principle of specialization is very dependent on other communities. It requires adequate transport facilities for the movement of goods and services which it does not produce.

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1. Milne, A. M., The Economics of Inland Transport, London, 1955, passim.

The second consequence is that a community which bases its economic activity on the principle of self-sufficiency is likely to be poor in terms of national wealth and economic welfare, because it is limited to its own production alone. In times of bad weather or any catastrophe, it is vulnerable to famine or extremely low living conditions. Because of its need for little transport the community may be faced with a vicious circle of poor transport. Since it does not require much transport, it has no urge to improve existing transport, thus transport remains poor.

Conversely, the community that adopts the principle of specialization is likely to be very much richer than the other community. At a time of bad harvests it can import more products from its neighbours. Because it has to exchange goods and services with other communities it is bound to improve its means of transport, at least to meet its needs. With improved transport facilities, it can expand its production and extend its market, thus creating more wealth and better economic welfare.

Which of the two principles a community adopts depends mainly on its ability or inability to develop its natural resources to a point at which it reaches "optimal factor combination" - the best proportion in which various factors of production can be used to give the lowest cost per unit of product.[1] This, in turn, depends, inter alia, on the

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1. Lipsey, R. G., An Introduction to Positive Economics, London, 1968, p. 272.

extent of its market, and its technological advancement, including transport.

In the discussion above, specialization has been applied to an advanced stage of an economy in which transport plays a crucial role. On the other hand, self-sufficiency is applied to the lowest stage of an economy in which transport plays a less significant role. The essential point here is that there is no type of economy in which transport can be entirely avoided. It is in the degree of use of transport that differences occur.

Specialization itself exists in various forms - horizontal, vertical, territorial - and in various economies. The form of specialization largely determines the rate of involvement of transport facilities. Horizontal specialization, by which workers specialize by products, each worker or group of workers being responsible for the production of a particular commodity, exists in simple economies.[1] For example, a group of workers or a society producing their clothes grow their cotton, spin, weave, sew and dye. It is possible for the spinning, weaving, sewing and dyeing to be done near the cotton farm. But there is no means of doing all this without moving some materials from one place to the other.

As the economy advances, it adopts a more complex form of division of labour, or vertical specialization, where different productions are divided into processes and

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1. Milne, Transport, p. 4.

sub-divided into sub-processes.[1] At this stage the role of transport becomes more significant. If the economy is to be sustained, the transport must be adequate, efficient and cheap.

Territorial specialization reflects geographical necessity. Some communities produce the goods and services for which they possess the greatest comparative advantages from. Without efficient transport, territorial specialization is impossible. This is amply exemplified by some states in the Niger Delta which specialized in producing fish and salt and transported them to the interior in exchange for agricultural and animal products which they could not produce.

Semi-specialization or seasonal specialization equally requires adequate transport facilities. In this type of specialization, workers cannot be identified with only one job but with a multiplicity of jobs. A man can be a farmer in the morning, a trader in the afternoon and an entertainer in the evening. He can also be a farmer in the wet season and a full-time weaver in the dry season. The transport required may be simple but not necessarily poor.

Economic Functions of Transport

In analysing the economic functions of transport, transport economists tend to relate it to an economy that is based entirely on specialization. Their emphasis is on the demand for transport for two essentials: for moving raw

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1. Milne, Transport, p.4.

materials to areas of production and for transporting finished products to consumers.

Bonavia, for example, stresses that "the function of transport is to carry commodities from points where their marginal utility, the significance of a little more or a little less, is relatively low to where it is relatively high".[1] He considers physical separation to be one of the greatest barriers, both on the side of demand and supply, which prevent a flow of resources from achieving maximum satisfaction.

Norton also relates transport specifically to specialization. According to him: "Transportation enables society to enjoy advantages of specialization, of resources, and the benefits of division of labour by making it possible for products to be brought great distances thus avoiding the necessity for local production of needs". In the absence of adequate transportation facilities in a country, each geographic region either produces what is needed or does without those products it cannot produce.[2] Another economist, Sharp, also emphasises the point when he says: "Transport is a key factor in the changeover from a subsistence economy to a market economy, in which specialization and exchange can take place".[3] This view is also shared by Healey who

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1. Bonavia, M.R., The Economics of Transport, Cambridge, 1954, p.2.

2. Norton, Hugh, S., Modern Transportation Economics, Ohio, 1963, p.5.

3. Sharp, Clifford, The Problem of Transport, London, 1965, p.163.

refers to transport as "geographically necessitated".[1] "The earliest demand for transportation of things arose from the fact that men wanted a variety of Nature's products ... and Nature did not provide them in one place".[2]

Many transport economists see the economic function of transport in relation not only to an economy that is based on specialization but that is mainly an industrial one. There is an outright neglect of a pre-industrial economy as if in that economy no form of transport was involved. One of the writers, Sharp, makes this point briefly without elaborating on it. According to him "Fundamentally transport in an underdeveloped country is the same as transport anywhere else ...".[3] It will be maintained below that, even if to a smaller extent, a pre-industrial society needs transport just as an industrial society needs it.

As suggested above, transport is essential for moving some factors of production from wherever they are located to the places where they are required for production. As seen in the discussion on horizontal specialization, even a cloth maker or, to give another example, a shoe-maker, needs to move some of his raw materials or his processed material from one place to another.

For an advanced economy, transport is of much more significance. Here, the gap separating different factors

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1. Healey, Kent, T., The Economics of Transportation in America, New York, 1946, p.41.
2. Ibid.
3. Sharp, Problem of Transport, p.161.

of production is likely to be wider than in the case of a simple economy. Since the essence of specialization is to produce surplus products in order to exchange them for whatever is not or cannot be produced, a great quantity of one factor of production or the other may be required. It is most unlikely that all the factors of production will be available in adequate quantity at all times and in the actual place of production.

Transport is particularly important for moving raw materials to centres of production. In producing a commodity, the capital goods can be assembled in one place and both labour and management can be housed at the production centre. But the raw materials can be so varied and scattered that at least some of them have to be moved to the place of production. This is true to some extent of both pre-industrial and industrial economies. A Kano leather worker had to move animals or their skins to the tanning centre, and the raw materials for dyeing had to be moved from different places to the tanning centre. On a greater scale, the Cadbury Company which depends on imported cocoa, had to transport it from West Africa and other places to Britain where it is used for producing chocolate and other products.

The other main economic function of transport is to move products from producers to consumers. The motive behind all production is to satisfy the needs of consumers who may be the producers themselves as well as the importers of the products. In both pre-industrial and industrial economies there exists a gap between the producer and the consumer. In both, the gaps are bridged by transport. The

main difference between the former and the latter is that the gap that transport bridges in the latter may be narrower than in the former.

By bridging the gap that exists between the producer and the consumer, transport determines not only the extent of the market for a product but also the intensity of specialization, the allocation of factors of production and so the volume of production. In other words, transport mainly determines both the supply of and the demand for a product. Transport must be adequate to the economy in order that it may perform its function properly. If transport facilities are adequate to the economy of a country, production can be expanded and the market extended.

Transport can play a significant role in restricting and in expanding production. In a country with a dense population with moderate purchasing power, potential consumers may be denied some products if transport facilities are inadequate. But with adequate transport, products can reach every consumer. Products can also reach potential consumers. Producers with adequate transport can use their factors of production to the optimum and can introduce new products.

The relationship between transport on the one hand and supply and demand on the other is determined by two major variables: speed and cost. Both are essential, first, in moving factors of production to production centres and, second, in moving finished products to the consumers. Both the speed and the cost affect the total cost of producing a product and, consequently, the selling price of the product.

The importance of speed and cost is aptly put by a marketing textbook:

> "from a marketing point of view, transportation's job is to move goods from points of production and for sale to points of consumption in the quantities required, at times needed, at a reasonable cost" (Italics, mine)[1]

The speed of transport can be measured by distance - mileages, and by time - hours. It is usual for producers to reckon the gap between them and their consumers in hours or days. For example, where mechanical forms of transport were not used, a farmer tended to reckon the distance between his farm and the market-place in days. In the same way, a modern traveller flying from London to Lagos thinks in terms of time rather than of distance.

An efficient means of transport reduces the time gap between producers and consumers. A producer wishes to move his products to the consumers as quickly as possible, particularly in the case of perishable commodities. For example, fresh vegetables can go rotten easily; and fresh butcher's meat can quickly become stale if the means of transport over long distances is slow.

Slow transport may affect both the producer and the consumer. A producer of fresh vegetables can lose his cost of production or have his profit reduced if the vegetables become rotten before they reach the consumers. The consumers may reject them or buy them at reduced prices. The loss may be considerable if a large quantity of vegetables goes rotten.

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1. Phipps, Charles F. and Duncan, Delbert J., Marketing Principles and Methods, Illinois, p.563.

Consumers, too, can suffer from slow transport. To a community that depends largely on another for its food, the late arrival or loss of food may be disastrous.

With fast movement of goods, however, not only will loss of costs of production or loss of profit be averted, but also a quick turnover of production resources can be realized. If vegetables reach consumers in good time, normal purchasers may purchase a good quantity and marginal buyers may also be attracted by the freshness of the vegetables and buy some. Potential purchasers can also be quickly reached, and the market may expand and productive resources be employed to great capacity to expand production. In a place where competition among producers is keen, a producer who has a fast means of transport at his disposal will be at an advantage over those who use slower transport.

Cost is perhaps the most crucial theme in any discussion of economics of transport. According to Milne:

> "The economic significance of the producer-consumer gap does not lie in the physical distance separating consumer from producer, as measured in miles or minutes, but in the 'economic' distance as measured in terms of cost of transport". (Italics, mine)[1]

In his article on land carriage in England, Professor Willan stresses the importance of cost in transport. According to him "the cost of carriage ... affected the location of industry, the extent of the market for agricultural products, and the capacity for the expansion of the country's economy".[2]

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1. Milne, Transport, p.23.

2. Willan, T.S., "The Justices of the Peace and the Rates of land carriage, 1692-1826", in the Journal of Transport History, Vol.5, No.4, Nov. 1962, pp. 197-204.

The cost of transport is so important to an economy that it deserves to be treated in detail. Throughout this study, emphasis will be laid on the factors that affect the cost of transport. But it is pertinent here to discuss the essential factors that determine cost of transport. Six factors are discussed: (1) the length of the gaps that separate the factors of production from the production centres, and from there to the consumers; (2) the physical condition of the gaps; (3) the amount of tolls or customs duties that have to be paid; (4) the carrying capacity of the means of transport; (5) the speed of the means of transport; and (6) the weight/value ratio of the commodity carried.

First, the length of the gaps that separate the essential factors of production from the production centre and from there to the consumers can partly determine the cost of transportation. For example, it is possible that the cost of producing chocolate in Birmingham, in England, would be reduced considerably if cocoa - an essential raw material - were cultivated in Manchester. But the cost could be as great or even greater if other factors of production - capital, labour and organisation - have to be carried to Ghana, where cocoa can be made available with a minimum cost of transport. It is possible (but not necessarily so) that the shorter the distance to be bridged by transport the lower may be the cost of transportation.

Secondly, the physical condition of the route between the producer and the consumer can affect the cost of transport. The labour and capital required to provide transport facilities

through a mountainous country may be very much greater than the resources required to carry goods and passengers over a plain. A porter and a pack animal and a paddler can move faster on the level than when ascending. The faster the means of transport the less the running cost of transport is likely to be.

Thirdly, in transporting products between one place and another, some expenses can be incurred at turnpikes or ports and at ferrying points. Apart from the delay that waiting at these points may cause, slowing down the speed of transport, the tolls paid either in kind or in cash will be an addition to the cost of transport.

Fourthly, transport cost can be affected by the carrying capacity of a means of transport. The more a vehicle can carry over a long distance the less will be the average cost per ton-mile. One of the reasons why human porterage was the most costly of all the forms of pre-colonial transport in Nigeria is the small carrying capacity of the porter. Conversely, it was mainly the comparatively high carrying capacity of canoes that made them the cheapest form of transport in the same period.

Fifthly, the speed of a means of transport is an important determinant of costs of transport. To a producer, particularly a modern producer, time is money. If a means of transport is slow as a result of delays at toll points or as a result of taking circuitous routes, the running costs of transport is likely to increase. When transport is slow a trader's average turnover is likely to be low. For example, owing to the slow movement and the low carrying capacity of a porter, human porterage

is very costly, especially for long-distance journeys. Also, mainly because of the slowness of transport, only one long-distance trading expedition could be done in a season.

Sixthly, the transport cost can be greatly affected by the value of the commodity carried. The total (gross) cost of transporting a commodity of high value may seem high and that of varrying a product of low value may seem low when the cost of transportation is not related to the value of the product. For example, if it costs 200 cowries per ton-mile to carry salt, which is up to four times the value of yams, and if it costs 100 cowries per ton-mile to carry yams, the average cost of transporting yams equal in value to a ton of salt is about double the average cost of transporting a ton of salt.[1]

If the value of a product is too low, it cannot be economically carried a long distance because its selling price may be so high that there may be little or no demand for it. But costs alone do not determine the effective demand for a product. The purchasing power of the people, inter alia, must also be taken into consideration.

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1. Assuming that a ton of salt costs 20,000 cowries and a ton of yams costs 5,000 cowries.

   If a ton of yams, which is worth 5,000 cowries, is transported at the rate of 100 cowries per ton-mile, a load of yams that is worth 20,000 cowries (i.e. the cost of a ton of salt) will be transported at a rate of $\frac{20,000 \times 100}{5,000}$ cowries = 400 cowries

   Whereas 200 cowries is spent on transporting salt that is worth 20,000 cowries, 400 cowries is spent on transporting yams that are also worth exactly 20,000 cowries, i.e. double the transport cost of salt.

Transport can perform its function properly when it is cheap. But as mentioned by Hopkins, the cost of transport is one of three ways of analysing the efficiency of a transport system. The other two, according to him are, first, "the physical availability of transport" in fixing the size of the market in geographical terms. The second way is "the freight capacity of the system" in determining the volume of goods carried.[1] Each of these ways has been described and analysed in the body of this thesis.

Modern forms of transport are so highly developed that it is difficult for us to visualize how men and merchandise were moved about by less sophisticated forms of transport. We cannot adequately imagine the high risk that travelling involved. The dangers from wild animals and highwaymen on trade routes or footpaths and by pirates on rivers made travelling hazardous. There were also numerous obstacles - flooded routes, unfordable streams, toll-collection centres and a host of other interruptions which combine to cause serious delays in travelling.

Neither can we easily imagine the extemely low speeds of transport from one place to another. It was a situation in which movement of goods took a great effort. The movement was undertaken for the most pressing needs of the people. It was not as easy as it is today to calculate precisely how

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1. Hopkins, A.G., An Economic History of West Africa, Longman Group, 1973, pp.71-5. I am grateful to Dr. Hopkins, my supervisor, for allowing me to read the transport section of his book before publication.

long a journey would take or exactly how much it would cost to transport goods per ton-mile. A journey that no men ever thought of undertaking or which would have taken weeks can now be covered in a matter of hours.

Pre-industrial forms of transport were fraught with dangers and uncertainties. Nevertheless, a great quantity of products was transported and a large number of people moved about. Kano manufactured products, for example, reached as far north as Tripoli and as far south as Lagos. So, too, did Kukawa natron and Nupe textiles. Livestock and slaves also moved or were carried in canoes to distant consumers. The means of transport were used to provide local consumers with their food and other products. With the means of transport, day-to-day and door-to-door services of essential needs were maintained.

Whereas forms of transport as they existed in a country like Britain can be studied in numerous books,[1] no serious concern has been given to such a study on Nigeria. Not more than mere passing remarks, in a few sentences or in a paragraph or two, have ever been accorded to pre-colonial transport facilities in that country. Without making any serious attempt

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1. Among such books are Jackman, W. T., The Development of Transportation in Modern England, Vol. I, Cambridge, 1916; Boulton, W. H., The Pageant of Transport Through the Ages, London; Kirkaldy, Adam W. and Evans, A. D., The History and Economics of Transport, London; Wolf, A., A History of Science, Technology and Philosophy in the Eighteenth Century, London; Dyos, H. T. and Aldcroft, D. H., British Transport - an economic survey from the seventeenth century to the twentieth, Leicester University, 1969.

to see what useful services such modes of transport made to the economy, many writers tend to condemn the facilities outright.[1]

Although a considerable amount of work has been done on modern transport facilities,[2] no effort has been made to describe and analyse transport forms in the pre-colonial period. One of the earliest studies of transport in West Africa is Professor Harrison-Church's Ph.D. thesis, "The Railways of West Africa - a Geographical and Historical Analysis", which he wrote as far back as 1943.[3] This thesis, and a few others written more recently,[4] concentrate mainly on modern forms of transport in Nigeria.

The main reason for the apparent neglect of the pre-mechanical transport seems obvious. It is due to many research problems including the dearth of documentary evidence, the problem of collecting oral information and the lack of statistical data.

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1. For assertions made on non-mechanical modes of transport, especially human porterage, see, for example, Sir F. D. Lugard's The Dual Mandate in British Tropical Africa, London, 1926, pp.461-476.

2. For example, Walker, Gilbert, Traffic and Transport in Nigeria, Colonial Research Studies, No. 27, London, 1959; Hawkins, E. K., Road Transport in Nigeria, O.U.P., London, 1957.

3. Church, R. J., "The Railways of West Africa - a Geographical and Historical Analysis", Ph.D. thesis, London, 1943.

4. Adefolalu, A. A., "Transport and Communication in Nigeria", M.A. thesis, Belfast, 1967; Hay, A. M., "Geography of Road Transport in Nigeria", Ph.D. thesis, Cambridge, 1968; Jakpa, P. E., "Transport and Communication Problems in the Delta Province of Mid-Western State of Nigeria", Ph.D. thesis, Birmingham, 1970. These have all approached their studies from a geographical viewpoint.

Despite these problems an attempt has been made here to describe and analyse the pre-colonial economy in Nigeria. In doing this, information has been gleaned mainly from nineteenth-century sources. The evidence which is contained in the nineteenth-century travellers', missionaries' and officials' journals, regarding transport facilities, is patchy and scattered, but useful.

Most of the travellers took more interest in the trading activities of the people than in the forms of transport used in carrying out the trade. The materials in the official papers in the Public Record Office also deal more with trade and political conflicts in the country than with transport. This imbalance in the reports tends to divert attention to economic activities other than transport. There is also an imbalance in the information on modes of transport. There is, for example, less information on the traditional use of pack animals than on human porterage and water transport. Travellers who passed through the places where pack animals were used by the indigenous traders made more use of porters than of pack animals. There is also very little information on the capital and running costs of transport facilities.

Use has also been made of oral information which was collected in many parts of Nigeria during a period of field research in 1971. The main problems that face a student on fieldwork in a large country like Nigeria are finance and language. No single person can understand all the diverse languages and dialects in Nigeria. Therefore much money is needed not only to travel about but also to pay informants and interpreters.

A much more difficult problem is lack of statistical data. Apart from the European traders on the coast, the economic activities in the hinterland of Nigeria were not quantified. Some figures are given on the population, the number of slaves, canoes, donkeys, porters and traders seen on trade routes. But these figures are no more than estimations based on an unsystematic approach.

These figures are probably better than no figures because they are suggestive of the quantity of trade that went on in the pre-colonial era in Nigeria. But it can also be argued that it may be better to use no statistical data at all than to use inaccurate, unreliable and misleading figures.

The question of statistical data is tied up with the approach to the writing of economic history. The issue is whether the approach should be quantitative or qualitative. In his Railroads and American Economic Growth,[1] Fogel's emphasis is on quantitative analysis. According to him, "the central concern of economic historians is with phenomena which cannot be described without measurement and with the analysis of the effects of changes in institution and processes on the measurable magnitudes of these phenomena".[2] He feels that "one cannot escape the ponderous problems of measurement in economic history by embracing qualitative analysis".[3]

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1. Fogel, R. W., Railroads and American Economic Growth, Maryland, 1964.

2. Fogel, Railroads, p.240.

3. Ibid. p.239.

On the other hand, Charles Hull argues that statistical methods belong to the natural sciences and cannot become the principal tool of historians.[1] In summarising the methodological precept of "historicism", Fogel says that it finds "expression in the view that qualitative analysis is the primary and distinctive feature of economic history".[2] This view contends that many important issues in the economic history of societies are qualitative in nature, and therefore, not susceptible to quantitative analysis.

The economic history of the pre-colonial era in Nigeria cannot be adequately based on quantitative analysis because the data are lacking. In The Economies of the Developing Countries, Myint demonstrates the unreliability of figures that are used to identify countries as developed or underdeveloped.[3] Up to the end of the nineteenth century and even now, to a large extent, many economic activities of the West African countries are not quantified.

However, lack of statistics is also a common feature of many pre-industrial societies. Transport economists tend to avoid this period and base their descriptions and analysis on the industrial economy. It is easier to apply cost-benefit analysis to an industrial economy than to a pre-industrial

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1. Charles H. Hull, "The Service of Statistics to History", Journal of the American Statistical Association, 75, (March 1914), 35, cited by Fogel, Railroads, pp.238-9.

2. Fogel, Railroads, p.239.

3. Myint, H., The Economics of the Developing Countries, Hutchinson, London, 1968, pp.10-12. Myint warns that "caution must be used in interpreting the statistics", p.12.

economy. It is also easier to calculate capital and running costs of a means of transport in an industrial economy than in a non-industrial one.

The difficulty of applying cost-benefit analysis to pre-industrial transport has tended to make works on transport of the period more descriptive than analytical. Leighton's recent work - Transport and Communication in Early Medieval Europe[1] is purely descriptive, and lacking even qualitative analysis. The works of Jackman[2] and of Dyos and Aldcroft[3] in the sections on pre-industrial transport are also descriptive. The obvious reason for this treatment is due to scarcity of statistical data. Any attempt to force quantitative analysis on a period that lacks statistical data may distort the whole picture of the economy of the period.

Since the absence of statistical data has not prevented the writing of the economic history of pre-industrial Europe, there seems to be no justification for allowing it to prevent the writing of that of Africa. By examining pre-colonial transport in Nigeria, an attempt is being made to remedy this deficiency.

In the title of the thesis, the term "Pre-colonial Nigeria" sounds anachronistic since there was no political entity known as Nigeria before the colonial era.[4] In

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1. Leighton, Albert L., Transport and Communication in Early Medieval Europe A.D. 500-1100, London, 1972.

2. Jackman, Transportation.

3. Dyos and Aldcroft, British Transport.

4. Hodgkin, Thomas, Nigerian Perspective - a Historical Anthology, O.U.P., London, 1960, pp.1-4. Also see Coleman, James S., Nigeria Background to Nationalism,California, 1958, pp.36-47.

The Times of 8 January 1897, the word "Nigeria" was first coined and defined.[1] It was in July 1899 that "the first official recognition of the name 'Nigeria' appeared in the debate of the House of Commons on the Royal Niger Company Bill".[2] It was not until 1914 that the word was applied to the whole political unit known today as Nigeria.[3]

However, there were enough historical and economic links to justify treating the area as a unit. These links mainly took the form of trading connections. It is most probable that the "states which in pre-colonial times dominated the Nigerian region were neither isolated nor self-sufficient".[4] As can be seen in Maps 1 and 2, most parts of the country had been linked by a great number of rivers and land routes as well as by many creeks and a large east-west lagoon. As will be argued in the thesis, a trade of high antiquity, connecting various, widely-scattered communities, had existed on the River Niger.

Besides, there are precedents for such a title. Szerezewski's Structural Change in the Economy of Ghana 1891-1911[5] is an example. Since the geographical area was known as Gold Coast in the period that the book covers and since it was not

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1. The Times, Friday January 8, 1897, p.6.
2. Coleman, Nationalism, p.44.
3. Coleman, Nationalism, p.46; Hodgkin, Nigerian Perspective, p.1.
4. Hodgkin, Nigerian Perspective, p.2.
5. Szerezewski, R., Structural Change in the Economy of Ghana 1891-1911, London 1945.

named Ghana until 1957, the title of the book is also an anachronism. P. T. Bauer protested against the title in his Preface to the book, but he refers to it as "the current fashion for the re-writing of history".[1]

The term "pre-colonial" is rather loose and indefinite with regard to dating. But this is generally true of any periodization of historical events. When exactly a particular human activity - political or economic - began and ended is sometimes difficult to date accurately. Although particular dates may be fixed for the beginning and the end of some events of a country, actual events usually begin and end gradually. This is particularly so in a large country such as Nigeria which was colonized piece-meal and which was granted self-government on a regional basis.

It is much more difficult to date economic activities than political events. Although it can be said that Nigeria became an independent country on 1 October 1960, no single date can be fixed for the country's change-over from the use of cowries to metal coins or when a monetary economy replaced a subsistence economy in even a small part of the country.

Transport, of all economic activities, is the most difficult to date. There is no exact date when a new form of transport replaces an old one. In Europe, the pack-horse,

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1. P. T. Bauer, who wrote a Preface to the book, says, "I wish, however, to protest against the title. In 1891-1911 the country was the Gold Coast. To call it Ghana is akin to referring to mediaeval Byzantium as Turkey ..., to nineteenth-century Palestine as Israel."

waggon transport, and the canals were not entirely replaced at one point in time by the railway.[1] In Britain, all the forms of transport were well in use up to the early nineteenth century when the economy created the need for the railway.[2]

Although pre-colonial transport is mainly pre-mechanical transport, both the mechanical and non-mechanical forms of transport exist side by side even now.[3] Similarly, the horse and the ox were used as pack animals in the Sahara desert before the introduction of the camel. Although the camel revolutionised trans-Saharan trade, it never completely replaced the previous pack animals.[4]

The study goes as far back as materials are available and on to the beginning of the twentieth century when the railway was introduced. For pre-mechanical transport, information from twentieth-century sources is as useful as information from earlier sources.

Since changes in transport are very gradual, it seems that information concerning transport facilities which were recorded by the nineteenth-century and early twentieth-century travellers can be largely extrapolated and applied to earlier centuries. The similarities between information recorded at the

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1. Milne, Transport, p.35.

2. Ibid.

3. While in Nigeria on fieldwork in 1971-2, I saw, in Kano, donkeys competing with mechanical forms of transport for the use of the highway. The ubiquitous porters can also be seen on motorways, in both the countryside and in towns.

4. For example, see Chapter 5, Pack Animals.

beginning of the nineteenth century and that recorded at the end of the century suggest a good case for extrapolation. For example, there were scarcely any changes in the forms of transport and the economic activities recorded by Clapperton in Hausaland in 1826 and by Robinson in 1896 at the same place.[1]

Extrapolation of information on pre-mechanical transport has been further justified in the thesis. For example, the high antiquity of the dugout canoe has been suggested. It is possible that the canoe was used to transport yams on the River Niger from the interior to the Niger Delta states[2] in the south. Wrigley has argued for "an ancient province of yam culture, extending over the whole forest and woodland zone of Africa".[3] It is possible (but not certain) that yams have been transported from mainland to water-logged areas (where they could not be produced) since ancient times.

Extrapolation has its obvious weaknesses. For example, it cannot be argued that the existence of yams in ancient times implies their transporation to certain consumers. In a

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1. Clapperton, Hugh, Journal of a second expedition into the Interior of Africa, from the Bight of Benin to Soccattoo, London, 1829; Robinson, C. H., Hausaland or Fifteen Hundred miles through the Central Sudan, London, 1896.

2. Duarte Pacheco Pereira, Esmeraldo de Situ Orbis, 1505-1508, Translated and edited by G. H. T. Kimble for the Hakluyt Society, London, 1937.

3. Wrigley, Christopher, "Speculations on the economic prehistory of Africa", J.A.H., I, 2, 1960, pp.189-204. Reprinted in J. D. Fage and R. A. Oliver, (Eds.) Papers in African Prehistory, Cambridge, 1970, p.69.

self-sufficient economy, a community depends entirely on whatever it produces. Even if the existence of yams is suggestive of the availability of a form of transport, the form of transport cannot be ascertained. The high antiquity of yams is not necessarily indicative of a high antiquity of dugout canoes. It is only possible (not necessarily likely) that canoes were used on the Niger before the fourteenth century when Ibn Battuta used one on the Niger at Timbuktu.[1] Neither does it follow that canoes were used on the lower Niger at the same period.

For the reasons given above, extrapolation of information can only be used cautiously. It is used in this study only in a few instances where it is very necessary.

One important advantage in the study of pre-colonial transport in Nigeria is the continuity of the modes of transport till now. The human porterage, the pack animals and the canoes described in Chapters 4, 5 and 7 are still in existence almost as they existed many centuries ago. Also some footpaths and the water routes can still be seen today. The old system of crossing streams and rivers by fording or ferrying still continues.[2]

The existence of pre-colonial transport in the post-colonial era demonstrates a fundamental issue in the modern economy. The present economy cannot strictly be divorced from the one that existed a century ago. This basic continuity

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1. Ibn Battuta, Travels in Asia and Africa, 1325-1354, Translated and selected by H. A. R. Gibb, London, 1909, p.333.

2. Based on documentary and oral evidence.

characterised not only pre-colonial Africa but also the pre-industrial world.[1] Cipolla, the general editor of the Fontana Economic History of Europe series, gives a vivid example of continuity in transportation. According to him:

> "At the end of the eighteenth century Catherine II of Russia had transported from Finland to St. Petersburg an enormous stone to a place at the base of the monument dedicated to Peter the Great; the method of transporting this huge stone was much the same as that used thousands of years before by the Ancient Egyptians when building the Pyramids."[2]

In many parts of the country which are remote from main urban centres, the land - an important factor of production - is still owned not by individuals but by families. Although domestic slave labour is not much heard of today, it still exists, to a small extent, in some places, at least. Certainly age-group and family labour still continues. Even paid labour is very cheap in certain activities and bears little or no relation to the economy.[3]

Like non-mechanical transport facilities, hand-woven cloths, hand-made pots and a host of other handicraft industries still compete with mechanical and machine made products. Traditional methods of farming, of making soap, of making palm oil

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1. Carlo M. Cipolla (Ed.), The Fontana Economic History of Europe - The Industrial Revolution, Collins/Fontana Books, London, 1973, p.8.

2. Ibid.

3. There are many cases even in Lagos where domestic housemaids are paid £2-£3 a month. Although the maids are housed, fed and partly clothed, the payment is still much lower than what workers should have in a month.

and of making many other products not only still continue but are, in fact, preferred by some people.

In the same way, traditional social obligations, extended family patterns, traditional religion and other social behaviour exist side by side with modern patterns. All these continuities make it difficult to draw any distinct line of demarcation between the pre-colonial transport or economy and the post-colonial one.

In this thesis, an attempt is made to present pre-colonial transport as a service to the pre-colonial economy, rather than an industry per se. The study has revealed to the writer that in spite of problems of collecting scattered documentary evidence and oral information and of lack of statistical data, the study of economic activities of pre-colonial Africa can be undertaken. The study also indicates that many other economic activities in the pre-colonial era in Nigeria deserve serious investigation. Studies, such as this one can only serve as small beginnings of larger, more detailed studies of the period. This is a small beginning to the study of the indigenous economic activities of the area now known as Nigeria. It is hoped that more detailed study of the topic will be continued.

CHAPTER 2

Pre-Colonial Economy in Nigeria with reference to transport

(i) Production

As stated in Chapter one[1], pre-colonial transport is treated in this study, not as an industry on its own, but as a service to the pre-colonial economy in Nigeria. Transport facilities were an aspect of the economy and part and parcel of it. Therefore, it cannot be treated in isolation. Since the production of commodities - agricultural and non-agricultural - formed the basis of economic activities, the transportation of the commodities is an essential part of the economy. Transport cannot be treated properly without an adequate treatment of the economy. This chapter is, therefore, necessary in the study. However, there is much more information on the economy than on transport facilities and efforts have had to be made to cut down the chapter to its present size.

For a critical analysis, the chapter has been divided into two main parts, apart from a short introduction and a brief conclusion. The introduction discusses the applicability, or otherwise, of economic analysis to the type of economy that existed in pre-colonial Nigeria, while the conclusion gives a brief comment on the organisation and the general characteristics of the economy. The first part of the chapter deals with production - agricultural and non-agricultural economic activities. The main factors of production and the products output are also discussed. In the second part, exchanges - local and long-distance - of the producers' outputs, are discussed, the market places used for the

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1. The relationship between transport and economy is discussed in Chapter 1.

exchanges, and the main currencies used as common measures and means of exchange are also briefly examined.

Introduction

When, in 1888, W.J. Ashley wrote part I of his An Introduction to English Economic History and Theory[1], he used terms such as "capital", "labour", "market", and "surplus"[2], without defining or explaining them. But today, unlike him, or Lipson[3], or even McPhee[4], an economic historian not only has to choose his words cautiously, but also, sometimes, has to explain them, lest he stumbles into traps set by other disciplines. If, over fifty years ago, beginners in Economic History were, according to Cunningham, "confronted with an appearance of great confusion", a beginner today is certainly faced with much greater confusion[5]. He is intricately involved in inter-disciplinary studies and with the numerous controversial issues raised in different fields by a great number of specialists.

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1. Ashley, W.J. An Introduction to English Middle Ages, Third Edition, Longmans, London, 1894.

2. Ashley, An Introduction, the words cited are widely used in the book without any effort to explain what they meant.

3. Lipson, History of England.

4. McPhee, Alan, The Economic Revolution in British West Africa, 2nd Edition, with a new Introduction by A.G. Hopkins, Frank Cass and Co.Ltd., London 1971. Hopkins, for example, says that McPhee referred, in the idiom of the time, to "natives", but he did not use the term in a pejorative sense. This is a way of querying the use of the word.

5. Cunningham, W. Hints on the Study of English Economic History, Macmillan, London, 1919, p.7.

A host of economic anthropologists[1] have disagreed on the applicability of economic analysis to primitive or peasant societies - or to what can be termed pre-industrial, simple societies in contrast to industrial complex societies[2]. Detailed analysis of the controversy is difficult for a non-anthropologist; and, in any case, seems unnecessary for the present study. All that can be done is to give a brief summary of the arguments.

Anthropologists such as Firth[3] and Dewey[4] hold the view that economic theories serve to explain and analyse the behaviour of men, whether in simple or in complex societies. They tend to stress the universality of economic principles, and assume that all men in all societies are confronted with economic problems of choice in allocating scarce resources to alternative uses. They, therefore, argue for the wider use of economic analysis[5].

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1. The works of the anthropologists are referred to below.

2. Cohen, Percy, S., "Economic Analysis and Economic Man", in Firth, Raymond, (Ed) Themes in Economic Anthropology, Tavistock Publications, London, 1967, pp.91-118.
   Cohen who looks into other anthropologists' works makes use of the terms indiscriminately, But Cunningham refers to primitive economy as "natural economy". He says "Natural Economy is, generally speaking characteristic of primitive times, and still maintains itself in many parts of the world", p.29. I have used the term 'simple' for what others term as "primitive", "natural", or "pre-industrial" economies, and "complex" for the "industrialized" or "market" economies.

3. Firth, Themes....

4. Dewey, Alice, Peasants Marketing in Java, New York, 1962.

5. Cohen, in Themes... gives a long, complicated summary of the argument.

The viewpoint of others is that economic principles apply only to complex societies - the commercialised and industrialised societies. Among the holders of this view are Malinowski[1], Polanyi[2], Dalton[3] and Cohen[4]. They reject the applicability of economic analysis to the simple societies, arguing that the theories cannot be applied universally but only to Western societies. An interesting aspect of their dissension is the distinction between the simple and complex economies.

Their argument is that in the simple economy moral obligations prevail over attempts to maximise gains; and that there is a "domestic technology"[5] which remains static from one generation to another. It is argued that economic rationality is dictated, not by demand-supply-price mechanism, but by social prescriptions, and that their "norms of economic conduct are embedded in a total set of norms" with "little autonomy for economic criteria of evaluation"[6].

Conversely, in the case of complex societies, there is a "machine technology"[7] which is made possible by the division of labour.

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1. Malinowski, B., Argonauts of the Western Pacific, George Routledge, London, cited by Cohen in Themes...

2. Polanyi, K., Arensberg, C., Peason, H.W. (eds) Trade and Market in the early Empires, Glencoe, 1957.

3. Dalton, George. "The Development of Subsistence and Peasant Economies in Africa" in Dalton, George (ed), Tribal and Peasant Economies - Readings in Economic Anthropology, New York, 1967.

4. Cohen in Themes...

5. Cohen in Themes... p.111.

6. Cohen in Themes... p.112.

7. Ibid.

Single interests bring forth "a low degree of social cohesion"[1]. Manufacturers produce for unknown buyers under acute competition and their decisions are significantly affected by market[2] fluctuations. They are concerned with a "self-regulating market system" rather than a "market-place"[3].

In short, the absence of Western technology[4] or machines[5] but the presence of market dependence[6] in the simple economies make many striking differences between them and the complex economies. It can be argued that in treating the economies of a simple society it is almost impossible to avoid using economic analysis, at least, to a certain extent. It should be realised that, according to Ashley, "no age, since men began to speculate, has been without its economic ideas"[7].

It is also crucial to note that what an economic analysis does, essentially, is to help human understanding of an existing society. For example, if a canoe is purposely made to serve as an investment-good, just like a modern steamer, it will be harmless to call it an investment-good or capital[8]. Indeed, the distinctions which the anthropologists make

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1. Cohen, in Themes... p.117.

2. "Market", as used by economists on the one hand and by the historians and anthropologists on the other is discussed below, in Part II of this chapter.

3. Neale, Walter, C. "The Market in Theory and History", in Polanyi, Trade and Market, p.364.

4. Dalton, George, "Traditional Production in Primitive African Economies" in Dalton (ed), Tribal and Peasant, p.64.

5. Dalton, (ed) Tribal and Peasant, p.65.

6. Ibid.

7. Ashley, An Introduction, p.x

8. Firth, Themes... p.93.

between simple and complex economies are found mainly among societies which are completely self-sufficient and have no contact whatsoever with the outside world, on the one hand, and those which are developed to the utmost on the other. Cohen refers to the former as 'simplest' and the latter as 'complex' societies[1]. But the societies that are dealt with here are well above the 'simplest' and below the 'most complex'.

On the other hand, it can be misleading to apply economic analysis and principles to simple economies indiscriminately. Most of the economic principles were originally the product of a particular culture; they were formulated to suit it, and they were meant to be applied to it. This culture was mainly the Western one[2]; and it was mainly an industrial, complex one where the demand-supply-price mechanism operated instead of social prescriptions. According to Ashley, "the theories of the past must be judged in relation to the facts of the past, and not in relation to those of the present"[3]. Therefore, economic principles should be used for appropriate societies and at particular points in time.

The case of the pre-colonial economy in Nigeria appears to be a complicated one, both from the viewpoint of time and extent. Hardly any fact can claim to be typical of the whole country, or, indeed, of a part of the country. While the most northerly states of Katsina, Kano, and Bornu had been exposed to external trade with the trans-Saharan traders, from about the fourteenth century at the least[4], the southern

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1. Cohen, in Themes... pp.111-112.

2. Malinowski, cited by Cohen in Themes... p.92.

3. Ashley, An Introduction, p.x.

4. The exact time is unknown - see Fage, J.D., A History of West Africa, Cambridge, 1969, pp.13-17.
   But his works on page 15, showed eleventh to fourteenth centuries.
   Also, page 34, Mande merchants and settlers had arrived in Hausaland in the fourteenth century.

kingdoms on or near the coast did not begin to experience such outside economic influences until the sixteenth century when Europeans, other than the Portuguese, began to appear on the coasts of West Africa[1]. Thus the stages of the 'natural' economy differed from kingdom to kingdom.

Yet many essential features which were characteristic of the whole economy can be identified. Indeed, the technology can be described as simple, or domestic, in contrast to complex or machine technology. To some extent, it resembled the medieval economy in Europe. Land was the dominating factor in the economy. In fact, there were very few economic activities that were not directly or indirectly closely connected with the land. Another fundamental characteristic of the economy was that it adjusted in varying degrees to the environment. Thus people who inhabited the coastal areas or lived around the creeks, rivers and lagoons tended to engage in fishing and depended largely on water transport. The mainland dwellers, on the other hand, were fully occupied in farming, gathering and hunting, and in the crafts that were dependent on them, and depended largely on human porterage and pack animals for their transport.

It is inexpedient, for many reasons, to give a detailed account of the multifarious traditional economic activities in this study. First, the pre-colonial economy is a big subject in itself and its treatment in a country as large as Nigeria must necessarily take much space and time. Second, for almost every part of the country a considerable amount of work has been done on the traditional economies which existed in the pre-colonial era. Among the authors of such works are Basden[2],

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1. Fage, A History, p.58.

2. Basden, George, T. "Notes on the Ibo country and the Ibo People Southern Nigeria", in The Geographical Journal, 39, 3, March, 1912, pp.241-247.
   Basden, G.T. Among the Ibos of Nigeria, London, 1921.
   Basden, G.T. Niger Ibos, Frank Cass, London, 1966.

Meek[1], Talbot[2], Nadel[3], Morton-Williams[4], Ojo[5] and Smith[6].

Third, there do not appear to have been many changes in the traditional simple economies such as fishing, hunting, farming and in methods applied in crafts in many parts of the country. One needs only to go to some towns and villages today to see practically what many nineteenth-century writers described in their journals[7]. For example, the type of weaving looms which Clapperton[8] saw at Ijanna in the south of modern Nigeria in 1825 were described more or less in the same detail by Talbot[9] when he was writing on the same area in 1926 - over one hundred years later. These same types of looms are still found in virtually all Yoruba towns today. Also, all the forms of transport that existed in the pre-colonial era can still be seen today[10].

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1. Meek, C.K., The Northern Tribes of Nigeria, Vol.1, OUP, London, 1925.

2. Talbot, P. Amaury, The Peoples of Southern Nigeria, OUP, London, 1926, Vol.3.
   Talbot, P.A. Life in Southern Nigeria, Macmillan, London, 1923.

3. Nadel, S.F., Black Byzantium: The Kingdom of Nupe in Nigeria, OUP London, 1942.

4. Morton-Williams, Peter, "The Yoruba Kingdom of Oyo" in Ford, Daryll and Kaberry, P.E. (eds), West African Kingdoms in the Nineteenth Century, OUP, 1967.

5. Ojo, G.J.A., Yoruba Culture. A Geographical Analysis, London, 1966. Chps. 2-4.

6. Smith, M.G. The Economies of Hausa Communities of Zaria, London,1955.
   Smith, M.G. "A Hausa Kingdon, Maradi under Dan Baskore, 1854-75" in Ford and Kaberry (eds), West African Kingdoms.

7. I had personal contact with these industries while on field work in Nigeria from June 1971 to January 1972.

8. Clapperton, Second Expedition, p.14.

9. Talbot, Southern Nigeria, Vol.III, p.939.

10. See Ojo, Yoruba Culture, Chap.4.

Fourth, most of the economies were well understood and not open to controversy. And, lastly, the methods adopted in carrying out any single economic activity such as production of soap or shea-butter were so varied from place to place that a single description cannot be given as being typical of the rest.

For these reasons, details are omitted and references are made to essential sources. Most of these works give detailed narrations but neglect the economic motive behind the activities. These narrations are not unimportant in themselves since, at the least, they indicate the vigour and skill which the people exercised in carrying out their economic activities. One or two examples of such descriptions are given where necessary, but in essence, only the economic motivations behind the activities are the concern of this chapter.

Agricultural activities

When, exactly, man in this part of the world settled down to cultivation is a question that has aroused interest among economic prehistorians. The common belief that the idea of cultivation was originally introduced to Africa from the East or Middle East has been seriously challenged. Murdock, for instance, has argued that among the people of West Africa, agriculture was developed around 4500 B.C., when it also reached the Lower Egypt. Murdock emphasises that "this was.... a genuine invention, not a borrowing from another people"[1]. He is strongly supported by Christopher Wrigley in his contention that "the antiquity of African agriculture is much greater than archaeologists

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1. Murdock, G.P. Africa Its Peoples and Their Culture History, London, 1959, p.64.

have been willing to concede"[1]. Wrigley also argues that the basic idea of rudimentary cultivation in Africa must be seen as a genuine and unique invention[2].

Thus the earliest inhabitants of modern Nigeria must have begun to cultivate the land gradually, but they probably, took several thousands of years to develop a fairly elaborate system of cultivation. With a vast area of cultivable land, and with tolerably rich soil, agriculture must have been easily established. What their cultivation yielded must have so adequately met their needs that there was scarcely any need for a drastic change in the system. The land was vast in relation to the cultivators; and when their counterparts in Europe had to organise and re-organise their land and adapt to various needs, those in modern Nigeria, indeed, in Africa, saw no occasion to do so.

Land

In discussing factors of agricultural production, land takes an unrivalled position. Land in this context is simply what the dictionary describes as the "solid part of earth's surface; ground, soil"[3]. One point that needs to be stressed here about land in Nigeria, and to an extent in West Africa[4], is that it was in family or communal rather than an individual ownership. Such communal land could not be alienated from the family by an individual; and, invariably, only the recognised head could act as the trustee of the property. He alone had the right to give permission to the members of the family and outsiders

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1. Wrigley, Christopher, "Speculations on the Economic Prehistory of Africa" in Fage, J.D. and Oliver, R.A. (Eds), Papers in African Prehistory, Cambridge Univ.Press, 1970, p.62.

2. Wrigley, in Prehistory, p.66.

3. The Concise Oxford Dictionary of Current English, Clarendon Press,1964.

4. Morgan and Pugh, West Africa, pp.70-72.

to cultivate the land or build on it. The land allotted to an outsider could be restored at will; and, in fact, for its use for cultivation the outsider had to pay an initial and annual tribute to the head of the family or community. But as long as the user did this, he was seldom disturbed on the land. Rent, as it is understood today, was unknown[1]. The land used by a single member of the family was usually small. It might be as large as five acres initially[2]; but owing to the law of inheritance, this had to be subdivided into as many as the number of wives who had children for the original owner.

Labour

The discussion of traditional labour in the pre-colonial economy of Nigeria is not confined to agriculture alone. All the known forms - family, friendly or group-organised and, most essential, slave - were used for all productive and domestic occupations. Except in a few cases where European travellers who opposed slavery paid their porters, and labourers, labour was not directly paid.

Traditional labour was particularly important for pre-colonial transport, especially, for human porterage and for paddling canoes. Without family labour, carriage of trade goods even for short distances would have been extremely difficult. Long distance trade would have also been virtually impossible without abundant slave labour. For these reasons, it is necessary to devote some space to the country's traditional labour force in the pre-colonial era.

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1. For detailed discussion on land laws, and uses, and ownership, see Morgan and Pugh, Ibid.
   Lloyd, P.C. Yoruba Land Law, OUP, London, 1964.
   Elias, T.O., Nigerian Land Law and Custom, London, 1951, p.91.
   Basden, Among the Ibos, p.32.

2. Morgan and Pugh, West Africa, p.66.

Family Labour

First and foremost, a farmer depended on his own labour and that of his immediate and extended family[1]. James Johnson, a nineteenth-century missionary, found in Yorubaland that "every man owns his own farm and all male children are put to field work as soon as they have strength enough for it"[2]. Similar comments have been made in Iboland[3], Hausaland and in Borgu[4]. Boys were seen accompanying their parents to the farms in order to get an insight into agriculture. While in Hausaland and in Borgu, in the nineteenth century, William Wallace, the agent-general of the Niger Company, saw family labour and said, "as one passes through the fertile country after the first rains, it appears as if all the world and his wife had turned out to sow corn. From the wee toddler to the greybeard, all are busy in the sodden fields"[5]. As this was an era when labour could not be hired, resort had to be made to all available hands, especially at peak seasons on the farms.

That large-scale family labour was possible at all was due to the acceptance and practice of polygamy. An African had as many wives and children as he could possibly acquire. Monogamy was an exception rather than a rule in many African societies. But the accumulation of

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1. The word 'family' is used here to mean not the nuclear-family of husband, wife and children as understood in the European context, but an extended one which includes many blood relations on the paternal and maternal sides.

2. CMS Archive, Journal, James Johnson, CA2/056, Feb.24, 1877.

3. Basden, Among the Ibos.

4. Wallace, William, "Notes on a Journey through the Sokoto Empire and Borgu in 1894", in The Geographical Journal, Vol.III, No.3, Sep.1896, p.213.

5. Ibid.

wives and children should be seen as an asset rather than as a liability[1]. When slaves were not widely used or when they became too expensive for a humble farmer or weaver, his regular source of labour was his family. The labour was not directly paid, yet it was unfailing; it was guaranteed. On the part of the members of the family, the labour was freely given because it was a filial and conjugal obligation that was sanctioned by the society. A member of the family who denied a man such an obligation would likely be scorned or even rejected by society. Family labour was very essential for transporting products from farms to villages and towns and to local market-places.

Client-patron labour

There were many other ways which were devised by each tribe and sub-tribe to get work done on the land. For example, in Yorubaland, there was the method of clientship in which a man put himself and his household under the protection of an influential chief partly for security reasons during times of social unrest but mainly for economic reasons. For the sake of clarity, it should be contrasted with the "commendation" system in the feudal age in England, in that the client was not required to render a fixed obligation to his patron, whom he could change at will. It was the patron who gave his client a helping hand when he needed it on the land, by supplying him with enough men for his work at the peak time of farm work. According to R.E. Dennett, who reported a case he saw at Abeokuta, "One of these simple folk told me that when it was time to fell the bush to make a new farm he gave a

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1. For reference on polygamy, see CMS Archive, Letter from Townsend to Trotter, CA2/085 (b) July 1863, and also Letter from Hinderer to Venn, CA2/049, 26th Oct.1855.

present to his chief, and asked him to give him some people to help. On the day fixed for their coming he prepared food for them. They cut the bush and ate and drank at his expense. He and his family then burnt the felled timber, and when the first rains came he sowed the corn"[1]. This quotation not only shows how family labour supplemented the labour supplied by a patron to his client, it also gives an idea of how cultivation of a farm was carried out from the very start.

Age-group organised labour

In various localities labour was organised in friendly or age-groups, whereby farmers bound themselves together for mutual aid. Such labour was used for all sorts of activities such as house construction. But its most important value was in cultivation, especially at peak times of harvesting or for clearing virgin land. It was a purely indigenous device designed to compensate for lack of wage labour[2]. It was particularly useful for harvesting and transporting farm products at the peak time.

Slave labour

It is well known that land and labour constitute the most crucial factors in the economic history of West Africa; and of all the forms of labour, slave labour was by far the most widely used in the nineteenth century[3]. Throughout Africa, domestic slavery has existed

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1. Dennett, R.E. Nigerian Studies, or, The religious and political system of the Yoruba, London, Frank Cass, 1968, First edition, 1910, p.142.

2. For age-group, organised labour, see Biobaku, S.O. The Egba and Their Neighbours, Oxford Uni.Press, 1957, p.8.

3. For slavery as an institution in West Africa and its comparison with serfs and the freeborn, see Fage, A History, pp.92-4. Oroge, E.A. "The Institution of slavery in Yorubaland with particular reference to the nineteenth century", Ph.D.Thesis, Univ.of Birmingham, 1971.

for production purposes since the middle ages[1]. Indeed, the use of slave labour was not confined to work on the land, it was also used for human porterage, canoe-paddling, donkey-driving, cattle-rearing, trading and even as a medium of exchange. Slaves were used for all types of domestic industries such as weaving, dyeing, pottery, production of palm-oil and shea -butter, and, in fact, for almost every conceivable economic activity. It was the slaves who provided the abundant labour that was used for carrying trade goods especially on the long-distance journeys. For this reason slave labour deserves to be discussed in this study.

Origin

The origin of domestic slavery still lies in obscurity[2]. But like other forms of servitude, such as the English peasantry[3] and Russian serfdom[4], there must have been some force which drove a large number of the common people of the society into the hands of a few powerful and influential ones for a sort of protection.

In the case of England, the barbarians who overran the Roman Empire, including England, were unable to undertake its administration effectively and many vagabonds were left uncontrolled. In Germany the individual was catered for by his kindred, but in England the tie of kinship had weakened and the monarch, who was naturally looked up to, failed to institute a firm control over every part of the kingdom.

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1. Buttner, Thea,"The economic and social character of pre-colonial States in Tropical Africa", in JHNS, Vol.IV, No.2, June 1970,p.283.

2. Oroge, "Institution of Slavery" But Oroge did not make any attempt to trace the origin of slavery.

3. Lipson, History of England, p.19.

4. Lawton, History of Russia, p.2.

Neither was the state yet in a position to carry out such function. The lords then served the need by protecting any persons who bound themselves to be clients - hence "commendation". Anyone who commended himself to a lord was adequately protected in return for services which the lord expected. This was one of the origins of villeinage in England[1].

The origin of serfdom in Russia is somewhat different. During the epoch of Russia's war against Asia, military leaders were indispensable and for this reason they were rewarded by grants of land. Then a class upon whom the peasants depended came into existence[2].

In many parts of Africa, in varying degrees and in different circumstances, the same sort of thing that happened in England and Russia could have happened. As iron weapons became widespread, a military class, which could dominate not only the common men but also the rulers, might have arisen[3]. As the case of clientship in Yorubaland has shown, thousands must have sought the protection of a few powerful and influential men. Perhaps, as Waddell said, "absolute authority on the one part, entire subjection on the other, is the theory"[4]. What is clear, however, is that slavery had long existed[5] before the international slave trade began.

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1. Lipson in his History of England p.19, gives three reasons.

2. Lawton, History of Russia, p.2.

3. For political implications of the introduction of iron metallurgy see Davidson, Basil, Old Africa Rediscovered, London, 1964. p.84.

4. Waddell, H.M., Twenty-nine Years in the West Indies and Central Africa, Frank Cass, London, 1970, p.315.

5. Denham and Clapperton, Narrative of travels and discoveries, etc., London, 1826, Vol.II p.176.

Slave recruitment

With the introduction of the slave trade, trade increased in volume and slaves were consciously sought in great numbers. Deliberate slave-raiding and kidnapping became regular devices[1]. To such slaves were added those accused of criminal offences, war prisoners and recalcitrant debtors[2]. Among the last were those who pawned[3] themselves or members of their families to their creditors. These appear to be the regular ways of recruiting slaves. But purchase of slaves became common mainly for domestic production, in the nineteenth century.[4] Slaves were bought openly in market places such as Kano[5], Iddah[6], Sokoto[7], Bauchi[8] and Bonny[9] or sold in houses as in Borgu[10] and Ibadan[11]. But it does

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1. Lugard, F.D., "Northern Nigeria Colonial Report for Sokoto and Gando", No.346, 1900-1, pp.10-11.

2. Talbot, Southern Nigeria, Vol.3, p.693.

3. "Pawning" was the system by which a debtor or his representative was made to serve his creditor, partly as an interest but mainly as a guarantee, until the debt was paid. But a pawn was freeborn.

4. Barth, Heinrich, Travels and Discoveries in North and Central Africa, Centenary Edition, London, 1965, Vol.1, p.515.

5. Ibid.

6. Whitford, John, Trading life in Western and Central Africa, With an Introduction by A.G. Hopkins . 2nd Edition, Frank Cass, 1967, p.218.

7. Clapperton, Second Expedition, p.222.

8. C.O. 879/58, Lieut. H. Bryan to the Foreign Office, 6348, March 14, 1899.

9. Adams, John, Remarks on the Country extending from Cape Palmers to the R.Congo, London, 1823, p.129.

10. Clapperton, Second Expedition, p.138.

11. CMS Archive, Journal of James Johnson, CA2/058, August, 1877.

not appear that deliberate attempts were made to rear slaves who were to be used for production. If two slaves married, the children of the union belonged to their master. If they were owned by different people, the first child went to the owner of the woman, the second to the owner of the man, and so on alternatively[1]. To a small extent domestic slaves were also obtained in Abeokuta by procreation[2].

Domestic slavery

Domestic slavery and slave trade are so commonly mingled that it is easy to mistake one for the other. The slave trade is more easily known than the state of domestic slavery; and, in any case, many recent studies have been done on the former[3]. Domestic slavery was of a comparatively mild character[4]. The slaves who formed a good proportion of the population of Africa in the nineteenth century, were treated like the freeborn in the household; and faithful slaves were honoured with high offices and prestigious positions[5]. When a useful slave died, it

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1. Robinson, Hausaland, 132.

2. Oroge, "Institution of Slavery" p.166.

3. Latham, A.J.H., "Old Calabar 1600-1891 - The Economic impact of the West upon a traditional society", Ph.D.Thesis, Uni. of Birmingham, 1970.
Dike, K.O., Trade and politics in the Niger Delta, 1830-1885: an Introduction to the economic and political history of Nigeria, Oxford, 1956.
Newbury, C.W., The Western Slave Coast and its rulers; etc.

4. Leyden, John, Historical account of discoveries and travels in Africa, Edinburgh, 1817, Vol.2, p.496.

5. An example was the Onisare of Ijanna who was a former slave of the Alafin of Oyo. He was appointed the Onisare in order that he might control the very important trade route which passed through Ijanna from Old Oyo to the coast. He was referred to as the Alafin's representative by Peter Morton-Williams, in "The Oyo Yoruba and the Atlantic Trade, 1670-1830", in JHSN, Vol.III, No.1. Dec.1964. p.37.

was a serious loss to his master, who gave him a decent burial[1]. Slaves were even often freed on important occasions. For instance, Clapperton discovered in 1824 that it was customary for private individuals to manumit a number of their slaves every year during the great feast after the Ramadhan, and also at the death of their masters[2].

Among the Ibos also, by the purchase of privileges, slaves might secure a position almost equivalent to freedom. In fact, wealthy masters often bestowed such privileges on their faithful slaves. In Bonny also, King Eyo rewarded his confidential head-slaves in this way[3]. Among the Efiks, slaves called their masters names which were equivalent to father and mother to express their relationship[4]; and in Hausaland, a slave was considered a member of the family[5]. Among the Yoruba they were not a "wholly unprivileged group whose sole concern was to perform all the menial tasks of the community"[6]. In fact, as Hopkins has pointed out, it was very difficult to demarcate slaves on the one hand and serfs and freeborn on the other[7].

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1. CMS Archive, Journal of Phillips, Charles, CA2/078, August 8, 1879.

2. Denham and Clapperton, Narrative Vol.II, 1826, pp.257, 336.

3. Waddell, Twenty-nine Years, p.317.

4. Waddell, Twenty-nine Years, p.315.

5. Barth, Travels, Vol.I, p.527; and Clapperton, Second Expedition,p.139.

6. Hopkins, 'The Lagos Strike....' p.139. Also for distinction between slave and serf labour, see p.139; and for slave labour for production of products of 'legitimate' trade, see pp.138-142.

7. Ibid. For convenience of treatment, labour of the free-born is distinguished from slave labour.

With such treatment, slave labour was guaranteed. A slave rarely ran away from his master. Indeed, the slaves themselves had to accept the situation; and the entire society saw slave labour as an integral element in the economic life of the people. If[1] a slave ran away or was forcibly manumitted, he did not win people's sympathy for he would not be recognised as a free man. He would be "stigmatised . . . as a presumptuous renegade, flaunting a liberty which was not his by right"[2]. For a society which depended solely on land cultivation and with land and human labour in abundance, domestic slavery was of paramount importance. The abundance of slave labour made human porterage possible. To leave such labour unused was to create anarchy and unrest in the society. But with the system, there were no vagabonds as everybody was sure of food and shelter; and unemployment with its social consequences were obviated. Thus the whole community was in a mutual relationship.

Slaves on farmlands

With this background knowledge of what domestic slavery was in pre-colonial Nigerial, it cannot be surprising that a large number of slaves were accummulated into a few hands. It was found in many parts of the country that warriors created new farms for their prisoners of war[3]; and many chiefs in Yorubaland had large farms and farm houses containing from a hundred to over a thousand slaves[4]. For example, at

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1. Orr, C.W.J. The Making of Northern Nigeria, London, Frank Cass, 1965, p.195.
2. Basden, Among the Ibos, p.110.
3. CMS Archive, Letter from Hinderer to Venn, CA2/049 (a), 26 Oct.1855.
4. Oroge, "Institution of Slavery", p.162.

Abeokuta, south of Western Nigeria, some individuals could boast of having 400 to 500 slaves on their farms in the 1880's[1]. At Ondo, also in the south west of the country, one Edun, the Lisa of Ondo, had over 800 slaves with a seraglio of about 300 to 400 women. He made use of them in his large farms and for domestic work[2]. Even a woman, Madam Efunseyitan, who was an Egba by birth and became a flourishing trader in Ibadan in the nineteenth century, owned about 2,000 slaves, in the 1870's, whom she used on her farms. She also had a great number that she employed for domestic work[3]. Indeed, the economy of Ibadan, like that of many other places, was "dominated at the close of the nineteenth century by about one hundred ruling Chieftaincy houses, which between them employed a very large number of slaves in agriculture and in the army"[4].

The large farms in Ibadan were further testified to by Henry Glover who visited Ibadan in 1859 as a Naval Officer, and noted:

> "I am of the opinion that the people of Ibadan . . . are the flower of the Yoruba people now, as they were once the flower of the great Yoruban army . . . . Their farms are the best cultivated that I have seen in this part of the country, and they are great producers for others as well as for themselves, supplying the markets of Abeokuta and Lagos"5.

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1. Evidence of J.P.L. Davies, enclosed in C.O. 147/133. Denton to Chamberlain, 4 June, 1898.

2. CMS Archive, Journal of Charles Young, CA2/098, Second Quarter, 1875.

3. Johnson, Samuel History of the Yorubas, Lagos, 1956, p.354.

4. Hopkins, "The Lagos Strike", p.140.

5. F.O. 2/32, Glover to Baikie, 20 July, 1859. Enclosed in Baikie to Malmesbury, 6 August, 1859.

Both the Egba and the Ijebu served as middlemen in the trade with the Europeans on the Coast. Therefore, they bought farm products from those in the interior. However, they, too, had their large farms. For example, between Abeokuta and Otta, both in Yorubaland, there was hardly any virgin forest left uncultivated by the 1870's. The Egbas cultivated miles and miles of farm plots, sometimes covering a distance of four days' journey from their homes[1]. Madam Tinubu of Abeokuta, like Efunseyitan of Ibadan, had a farm-village for her slaves[2].

In Iboland, influential men relied solely on their slaves to till the ground; and with slave labour huge tracts of land were planted[3]. Here, according to Basden, the slaves were granted every fourth day for their own use[4]. But probably as land for cultivatation was reduced by the increase in population, the Ibo, the Ijaw, and Kalabari slaves gave only "a quarter of their time to their masters"[5].

In Bonny, King Eyo, a famous trader on the Niger, had "many thousand slaves"[6], whom he employed to reclaim waste lands, to found towns and plant in well selected lands. Besides being a palm oil trader, he showed keen interest in farming. "He used to go with a great force to a new district, and begin the work himself, felling the woods, planting the ground, and building the houses . . . then he left the people there with a head man, to take care of themselves . . . and bring him his share

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1. CMS Archive, Journal of James Johnson, CA2/056, August, 1877; Johnson to Wright, 21 June 1878.
2. CMS Archive, Journal of James Johnson, CA2/056, January 1879.
3. Basden, Among the Ibos, p.153.
4. Ibid.
5. Talbot, Southern Nigeria, p.700.
6. Waddell, Twenty-nine years, pp.320-321.

of provisions and oil yearly[1]". If King Eyo who was such a great trader took so much active interest in farming, the amount of cultivation that must have been done in this area and on the banks of the Niger must have been enormous.

In the northern portions of the country, a great deal of slave labour was used on the land. In Bauchi farming was done on a considerable scale; and one could travel for days through continuous cultivated land[2]. Richard Lander noted that in Yawuri labourers were employed in plantations but he failed to identify what type of labourers[3]. It is however, mentioned elsewhere that the Hausa owned and used plenty of slaves in Yawuri[4]. At Adamawa, north-east of Nigeria, Barth found that in 1851 "a number of young jet-black slave girls, well-fed, and all neatly dressed in long aprons of white clean gabaga, and having their necks adorned with strings of glass beads, were marched out to their daily labour in the field"[5], The King of Bida had several villages inhabited by his slaves who were engaged in cultivating fields for him. There was also a good number of slaves who were employed in non-farming work; but they could scarcely have survived without a greater number who produced not only foodstuffs but also the raw materials such as cotton that they used for weaving.

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1. Waddell, Twenty-nine years, pp.320-321.
2. C.O. 879/58; 6348, Bryan to the F.O. March, 14, 1899.
3. Lander, Journal, Vol.II, pp.31-32.
4. Adamu, Mahdi, "A Hausa Government in Decline, Yawuri in the nineteenth century" M.A. Thesis, ABU, Zaria, 1968, p.93.
5. Barth, Travels Vol.II.p.129.

Implements for farm work

As Murdock and Wrigley[1] have suggested, the belief that hoe-cultivation was the oldest of all forms of economy[2] is a point that requires further investigation. Neolithic tools were not absent in Africa, but, in fact, the "stone axe has been found sporadically in almost every part of the continent"[3]. If it was possible for a nineteenth century community of about three thousand to support themselves with sufficient food merely by using "stone-weighted digging-sticks"[4], it was probably convenient to use such a tool for cultivation in the pre-iron age. The essential determinants of what implements a people would use are the type of soil and the technical advancement of those people. But it is interesting that the hand-hoe, which must have been used as early as iron-smelting was known, still continues to be used today in many parts of West Africa[5].

Many nineteenth century travellers saw the hoe in use[6]. While in Yorubaland in the nineteenth century, Bowen, a Baptist Missionary, observed that the only implement being used for farming was the hoe. With it the Yoruba cultivated, raising "abundant crops of everything needed in the country"[7]. The hoes varied in size ranging from small hand-hoes of about four inches square to those nearly a foot long and seven to eight inches broad. The use for which each was intended dictated the size; generally, the men used heavier tools than the women[8].

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1. Murdock, Africa its Peoples, p.64 and Wrigley, in Prehistory, pp.62,66.
2. E.q. Weber, N., General Economic History, London, 1923, p.1.
3. Wrigley, in Prehistory, p.64.
4. Ibid.
5. Morgan and Pugh, West Africa, pp.67-8.
6. Ibid.
7. Bowen, Adventures, p.306.
8. Meek, The Northern Tribes, p.126.

The plough was not used, in fact, it was unknown. But even when it was introduced in the colonial period many problems confronted its use. There was the problem of raising or diverting funds for purchasing enough ploughs. To use a plough to advantage would require vast lands; and this was made difficult by communal land-owning. Another major obstacle in the forest zone was the existence of many deep-rooted trees. The problem was not only in felling the trees but also in uprooting the stumps before ploughs could be used. The presence of tse-tse flies and the absence of fodder also made it virtually impossible to keep animals that could draw ploughs. Besides, the plough was a cpital-intensive and labour-saving device. A plough, drawn by two oxen "could till four times the area a man could hoe in the same time"[1]. But at a time when, besides family and friendly-organised labour, slave labour was abundant, it would scarcely occur to anyone to think of a labour-saving device. Although some alternative work existed, cultivation attracted the attention of a great number of the labour force. To use the plough was to throw many people out of work.

The hoe was, and still is, peculiarly suitable and was very effective in the hands of the people. With the advent of European merchants on the Coast from the sixteenth century, more iron tools penetrated into the interior of the country and the uniquitous blacksmiths converted iron into different tools such as cutlasses, axes and sickles.

Cultivation

The methods adopted in the different parts of the country in land cultivation remained essentially the same till about the last decades

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1. Morgan and Pugh, West Africa, p.511.

of the nineteenth century when new crops such as cocoa were introduced into the country and when the introduction of the railway gave impetus to greater cultivation of such crops as groundnuts[1]. By that time agricultural products were demanded for 'legitimate' trade; and the population had grown by leaps and bounds.

Shifting cultivation which was commonly used was not as wasteful of labour as is commonly held. The marked dry season made burning the easiest method of clearance of bushes and forest. Large trees withered and were allowed to remain and to serve as tie poles for yam vines. As virgin lands diminished, shifting cultivation gave way to rotational bush or grass fallowing. In this sytem, regeneration of the soil was made possible under the long-term restorative effects of nature. Thus any land used for cultivation was always rich. Hinderer remarked in 1851 at Abeokuta that "as the soil is very productive, all their home productions are so cheap"[2].

But the same could not be said of coastal areas where the soil is loose and sandy. Bowen discovered in 1850 that "the people of Badagry having a poor soil were not much addicted to farm labour"[3]. The soil in the southeast was light and sandy but was suitable for yam cultivation[4]. As Richard Lander moved from Bussa to Yawuri in 1830 he observed that the soil greatly improved[5], and the soil in Bornu, though easily exhausted, was "surprisingly fertile for the growing of bullrush millet"[6].

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1. Morgan and Pugh, West Africa, Chap.10.
2. CMS Archive, Journal of David Hinderer, CA2/049, Oct.4, 1851.
3. Bowen, Adventures, pp.98-99.
4. Waddell, Twenty-nine Years, p.324.
5. Lander, Journal, Vol.II, pp.31-2.
6. Meek, The Northern Tribes, p.124.

On the whole it can be said that the land put into cultivation was fertile. Even in the northern areas where the soil might strike the casual observer as being too sandy and light to bear crops, it did produce grain in abundance. For example, in the neighbourhood of Sokoto and Kano, "large populations of about half a million inhabitants living at an average of 300 per square mile", obtained "all the food required to keep them in robust health from the soil"[1].

The use of manure was not widespread. It occurred mainly in places where pastoralists and farmers had close contact. Animal manure was used in the crowded areas of Kano where cattle also abounded[2]. In this area donkeys were commonly employed for carrying manure. The Muri in the upper Benue were also aware of the use of animal manure. They made their farms on the lands where their cattle had remained to feed for many nights[3].

Farm products

In the pre-colonial era in Nigeria, farm crops formed the bulk of the goods carried locally and to long distances. For this reason the farm products are examined here. Until recent times, there had always been a common belief that almost every crop that is grown in West Africa was introduced from somewhere else. Even travellers who had trained neither in botanical nor archaeological sciences referred to some of these crops, with a name implying foreign origin, for example, "Indian corn". But recent studies, as already pointed out, have proved

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1. Temple, C.L. "Northern Nigeria", The Geographical Journal, 40, 2, August 1912, p.152.
2. Ibid.
3. CMS Archive, Journal of Ashcroft, CA3/05/33, August 2, 1879.

the high antiquity and the independent development of African agriculture[1]. It has been discovered that many food crops had their origins in West Africa, although no one has denied that many other crops had a foreign origin.

The type of crop that a farmer produced depended on climatic conditions. Barth found that in Bornu sweet potatoes and beans were grown but no yams; only influential persons had yams[2]. He also saw rice and corn cultivated on a large scale while passing from Wurno to Sokoto[3]; and while at Gandu the onion crop that Lander saw was "remarkable for its size and quality"[4]. In the southern sections of the country, yams, maize and cassava predominated. In the middle of the nineteenth century, Clarke, a Baptist missionary, travelled from Ila to Ilorin in the northern section of the Yorubaland and said, "for three days' journey the whole country is in a state of cultivation with the production of yams, rice, beans, peas and corn[5]". The most important food crop grown in the south was yam. To cultivate it required remarkable skill and patience for about 300 days in a year. For this reason, the arrival of new yam has always been a signal for ritual ceremonies, for family reunion and for reciprocal visits, involving gifts, particularly among the Ibos[6].

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1. The works of Murdock and Wrigley have been cited above.
2. Barth, Travels, Vol.III, p.147.
3. Ibid.
4. Lander, Journal, Vol.II, p.29.
5. Clarke, William, H., "Travels and Explorations of W.H. Clarke. Missionary to Central Africa, 1854-1858", (unpublished), (undated) p.195.
6. Basden, Among the Ibos, pp.150-154.

The oil palm and the shea

These two crops deserve special comment because of their importance as products that have been transported since early times. The oil palm (Elaeis Guineensis) and the shea (Butyrospermum Parkii) make an interesting comparison. First, both of them are, undoubtedly, of West African origin[1]. Secondly, neither was consciously planted like maize or cocoa; they were only protected. The farmers, of course, realised that the trees were too precious to be destroyed and efforts were often made to preserve them.

The land rotation system peculiarly favoured them, as a piece of land might be left fallow for up to fifteen years[2]. During this long period the trees struggled for survival, and by the time that the fallow period was over, they would have grown to full maturity, bearing fruits that were actually needed. Thirdly, both are essentially oil-producing trees. Although the oil- palm is valuable from its root to its leaves, it is the fruit, like that of the shea, that are required for oil extraction. Their oil was important for local use - as food ingredients, for lamps and soap-making. After the abolition of the slave trade, it is well known that 'legitimate' trade that replaced it on the Niger Delta was the palm oil trade.

On the other hand, the two crops belong to different zones and need different climatic conditions for luxuriant growth. While the oil palm abounds mainly where rainfall is heavy and is often over 60 inches, the domain of the shea is in the savanna areas and an annual rainfall of about 20 inches is sufficient[3]. That it was the palm oil

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1. Morgan and Pugh, West Africa, pp.92-5

2. Floyd, Barry, Eastern Nigeria - A Geographical Review, Macmillan London, 1969.

3. Morgan and Pugh, West Africa, pp.92-5.

and not the shea that seriously entered the European market is mainly due to the fact that oil palm grows in the area near the coast, where it could be easily transported to the coast by pre-colonial transport.

Kola

An important crop which provided extensive economic activity not only for the farmers but also for the internal and long-distance traders was the kola (Cola accuminata or C.nitida). Like the oil palm and the shea, its origin is West Africa. Like them, too, its cultivation needs little attention and it is grown for its seeds. It has long been grown in the forest zones of Ashanti and Yorubaland and is widely chewed in the savanna north where it cannot be grown. The gap that existed between the Ashanti Kola producers and the Hausa and Kanuri consumers was bridged by the pre-colonial transport.

Cotton

A non-edible product which was grown in many parts of the country and which was widely transported was cotton (Gossypium spp.)[1]. In determining the high antiquity of African agriculture, Wrigley has used the cultivation of cotton as an argument. He noted that cotton had probably been cultivated in Africa long before 3000 B.C.[2]. Since it is a textile plant, many Africans must have grown it for weaving cloths, for local use and for external exchange.

It was grown in Benin before the sixteenth century; but in that century a great amount of it was stored for local weaving[3].

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1. Murdock, Africa Its Peoples, p.23; Morgan and Pugh, West Africa, pp.77 & 91.

2. Wrigley in Prehistory, p.63.

3. Welsh, James, "A Voyage to Benin beyond the country of Guinea" (in 1588) in Hodgkin, Nigerian Perspectives, pp.116-117.

Also in the seventeenth century an observer remarked that Benin was "a country of cotton; the cotton trees are very productive, and the inhabitants use it for making cloths"[1]. The Yoruba, aptly described as "a fully clothed mortal"[2], cultivated much cotton. At Ila town, in the northern part of Yoruba country, William Clarke was told in the mid-nineteenth century that a man could produce not less than eighty loads of cotton in a year and that about 2,000 loads were carried from the surrounding villages to the town during the harvest seasons[3].

Abeokuta was certainly one of the greatest cotton producers in Yorubaland in the nineteenth century. It not only produced enough for local weavers but it had a considerable surplus for export by the merchants[4]. The Iwe Irohin, a local Abeokuta newspaper, in Yoruba, pointed out in 1860, regarding cotton production at Abeokuta, that

> "it is well known that cotton has been grown in this part of Africa from times immemorial, and worked up into cloth for home use. There is no need to introduce seed, to point out the time when it can be best planted, the best soil, or the like, for the natives know by lengthened experience all this"5.

In the north, farmers in Zaria province alone produced about 40,000 bales annually for local consumption. It was estimated that the whole of Northern Nigeria was capable of producing millions of bales of cotton annually[6]. It was by employing porters and pack animals that this great volume of cotton was transported.

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1. Dapper, Difert, Description de l'Afrique, Amsterdam, 1686, pp.308-313 (first published in 1668) cited in Hodgkin, Nigerian Perspectives,p.124.
2. Millson, Alva, "The Yoruba Country, West Africa", in PRGS, XIII,1891,p.586.
3. Clarke, Travels pp.184-5.
4. CMS Archive, Letter of Henry Robbin to Venn, CA2/080, July 3, 1856.
5. The Iwe Irohin (Appendix to) 25th Sept., 1860,
6. Colonial Report, Northern Nigeria, by Lugard, 1904, pp.341,416.

Tobacco

Tobacco (Nicotiana spp.) was probably introduced into West Africa in the sixteenth century[1]. This crop was grown for its leaves which were smoked or put to various uses. Because the leaves were difficult to cure and preserve, it was often costly. Barth saw it extensively cultivated only at Kabakawa, northern Katsina, in the mid-nineteenth century[2]; and a recent study of tobacco trade at the same place reveals that Kabakawa "was the most renowned tobacco-growing centre in north-central Hausaland in the late nineteenth century"[3]. The importance of market and transport is visible in this tobacco trade. The producers were stimulated by the availability of both markets in Damagaram in Zinder and donkeys for transporting it.

Non-agricultural occupations

Apart from crafts, hunting, pastoralism, fishing and salt-making are the main non-agricultural activities that will be discussed here. There are others of no less importance, but, for the reasons stated earlier, not every pre-colonial economic activity can be examined here. Those briefly discussed are hunting, pastoralism, fishing, salt-making, cloth making and other plant dependent industries, leather working, iron working, glass working, tin mining and pottery. They are discussed because of their relevance to the pre-colonial transportation in three ways.

First, travelling was involved. The producers moved with their essential belongings from their homes to places of work - the hunters to

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1. Morgan and Pugh, West Africa, p.77.
2. Barth, Travels, Vol.III, p.90.
3. Hill, Polly, Studies in Rural Capitalism in West Africa, Cambridge Uni.Press, 1970, p.142.

hunting grounds, the pastoralists to grazing grounds and the tin-miners to areas of tin deposit. Secondly, in certain cases, their raw materials had to be transported to centres of production almost as in industrial production. Potters, for example, might have to carry clay (even if for a few yards) from areas of deposit to pot-making centres. Thirdly, also like transport in industrial times, pre-colonial transport bridged the gaps between the producers and consumers of these products.

Hunting

The existence of many wild animals made hunting possible. But, as will be shown, hunters were important for more than the ordinary trapping and killing of wild animals. Among the forest dwellers who had no regular means of obtaining animal products such as meat, leather, horns, feather, and bones, the only device they could resort to was hunting wild animals. There were many ways of hunting which need no comment in this study. But an example of killing wild animals may be cited in order to illustrate the troubles that were involved in securing animal products. For trapping animals, this was a method:

> "game-pits skilfully camouflaged with sticks or mats and a covering of light earth placed on narrow game-tracks. . . These pits are arranged in groups, so that in avoiding or escaping from one the animal falls into another; they may be anything from ten to twenty feet deep and from three to four feet across"1.

With such traps and with the use of iron-pointed spears and arrows, a great many animals were caught. Hunters attempted killing more than they required for their own private consumption; and this can be seen as an economic motivation. The flesh of the bigger game could be smoked and exchanged for whatever they wanted. The animal skins were

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1. Meek, The Northern Tribes, p.104.

very important for wearing as clothes. This wearing of leather cloths was quite common among many peoples even up till this century. For example, in Nassarawa, north of the Benue "all males . . . wear a leather triangular loin covering after they have reached the age of six of eight, and possibly even earlier if the father happens to have skins to spare"[1]. There was also the ivory of the elephant which formed an essential export product in the nineteenth century, the feathers of birds and the bones of animals which could be used as clubs for killing other animals. All these must have served as products of exchange.

For pre-colonial transport in Nigeria, hunters were important for the footpaths they created unconsciously. By beating regularly the same paths which led to other places traders and other users had their first footpaths. An essential quality of a hunter was bravery, and this quality made hunters invaluable to caravan traders in time of confusion or civil wars. They provided security to traders by escorting them on their dangerous journeys. But they also provided security for the settlers from the attacks of any invaders and also from dangerous animals. In this, they served as the community's police force and army. Without some security no transport or any other economic activity could take place. Indeed, the amazing number of hunters' camps[2] that have developed into large villages is a testimony of their importance.

Pastoralism

In the parkland belt which separates the tropical forests from the desert were groups of nomads who wandered in pursuit of suitable

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1. Tremearne, A.J.N., The Tailed Head Hunters of Nigeria, London, 1912. p.103.

2. Ojo, Yoruba Culture, pp.36, 38.

grazing grounds for their herds of cattle. Among the pastoralists in Nigeria, the Fulani probably formed the majority. Next to them were the Kanembu tribes[1]. But certainly more important than both were the Tuareg of the Sahara desert[2]. The pastoralists depended on milk from their cattle and "would rather die than kill their cattle for meat"[3] for their own consumption. In this respect they were not much better off than hunters as regards animal flesh.

Pastoralists were often seen as wild nomads, living loose, unorganised lives. But they should also be seen as "gentlemen of the parklands", vigorously pursuing their economic activities according to the dictate of their professional code of conduct and etiquette. According to Meek, "the most backward, the most unclothed, the most loosely organised tribes are not the pastoralists . . . but the animistic tribes who depend entirely for their subsistence on their agricultural activities"[4]. Pastoralism must also be seen as a way of life for the society that lived in the parklands where, at least in the past, vast areas of grassland were available with a sparse population. Two men were sufficient to mind a hundred head of cattle from morning till evening, covering a wide area and without much molestation of farm crops[5].

Their economic importance lay in their regular supply of milk to their settled kin. Using calabashes, men or childless women drew milk every morning and evening from the cattle[6], and such milk could be stored in their leather bags for distribution not only to the settlers

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1. Meek, The Northern Tribes, pp.115-119.
2. The role of the Tuareg in the trans-Saharan trade is discussed in Chapter 5 -"Pack Animals".
3. Meek, The Northern Tribes, pp.115-119.
4. Meek, The Northern Tribes, pp.119.
5. Meek, The Northern Tribes, p. 116.
6. Ibid.

but also to caravan traders who might need it badly. Besides animals, animal dung used for manuring could be readily exchanged for foodstuffs with their neighbours. Most important of all, the very popular leather-works in Kano and other places depended on their regular supply of hides and skins of cattle and other animals.

With regard to the pre-colonial transport, the pastoralists, like the hunters, were noted for their services to caravan traders. As guides to traders and travellers, and breeders of pack animals, they probably played even a greater role than the hunters. Pastoralists were noted for their prowess and their ability to protect themselves and their animals from wild animals and robbers. Therefore, they could also protect traders and travellers on their journeys. Besides, they could use their intimate knowledge of local routes to guide and direct (or mis-direct) caravans.

Pastoralists also played a great role as breeders of pack animals. As will be discussed in Chapter five, "Pack Animals", pastoralists, especially the Tuareg of the Sahara, bred the camels and some donkeys which carried trade goods across the Sahara to and from northern portions of Nigeria.

It should be noted, however, that as the hunters and pastoralists were capable of rendering invaluable services to caravan traders, they could also turn to be thorns in the flesh of traders and travellers. For example, the Tuareg were more notorious as highway robbers than as guides to trans-Saharan traders[1].

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1. The roles of the Tuareg of the Sahara as guides and as breeders of pack animals rather than as robbers is examined.in Chapter 5.

Fishing

Two types of fishermen can be identified. There were those such as the Buduma of Lake Chad, and the Ijaws of the Niger Delta who lived close to water and engaged in full-time fishing. There were also professional itinerant fishermen such as the Hausa and Nupe, who obtained temporary fishing rights from local heads for payment, probably in fish. In Yola district, around the Benue, itinerant fishermen were charged fifty per cent of their catch[1]. These were seasonal fishermen.

The Buduma and Bede were the chief fishermen of Bornu, the Kede and Kakanda on the Niger and the Wurbo and Jukun on the Benue[2]. Also the Gungawa[3] and Sarkawa[4] in Kebbi spent up to four months away from their homes during the dry season on fishing expeditions. In the south fishing was most important among the Delta and Rivers communities[5]; and the Ibunos in Calabar were expert fishers. But fishing contributed very little to the economy of the Yoruba. Sea-fishing was unknown in Lagos[6]; and the bulk of fishes produced in the inland waters were for local consumption.

Like hunters, fishermen devised many methods of catching fish. For instance, on the eastern shore of Lake Chad, according to Denham

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1. Meek, The Northern Tribes, p.107.
2. Ibid.
3. Adamu, "A Hausa Government" pp.28,27.
4. Alkali, Mohammed Belbo, "A Hausa Community in Crisis - Kebbi in the 19th Century, M.A. Thesis, ABU, Zaria, 1969.
5. Alagoa, E.J., The Small Brave City - State - A History of Nembe - Brass in the Niger, Ibadan Uni.Press. 1964.
6. Moloney, Alfred, "Notes on Yoruba and the Colony and Protectorate of Lagos, West Africa", PRGS XII, 1890, p.608.

who was in Bornu in 1824, "the Bornonese (sic) make very good nets of twine spun from a Perennial plant called Kalimba"[1] for fishing. Professional fish-curers or fishermen's wives cured the fish and stored them in sealed pots where they could neither be destroyed by fire nor stolen by thieves. Such fish were exported to non-producing areas.

Like hunting and pastoralism, fishing could be useful or harmful to transport. Fishermen could cooperate with canoemen to provide efficient service on water ways. In fact, it is difficult to demarcate fishing from canoe transport. A man who used his canoe for transportation and for ferrying in the wet season could also use it for fishing in the dry season. On the other hand, fishing could run counter to transportation in the dry season. This was the season when fishermen were most active owing to the low level of water on the water routes. For the same reason, it was also the season when such interruptions of water ways could hold up canoe transport.

Salt making

Salt has always been an essential element in the diet of the people of Nigeria. It was one of the earliest articles of trade and was as highly appreciated as gold. Despite the fact that a great volume of Bilma salt was imported into the country[2], it was never nearly enough for what was needed for consumption. In fact, salt never reached many parts of the country. To those who had the knowledge of salt making, it was an immense economic activity. Many methods must

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1. Denham and Clapperton, Narrative, Vol.II, pp.88-89.
2. Fage, A History, p.16.

have been adopted but four are clear from the sources. One method was by extraction from salt-impregnated earth. At Ojogo, about 130 miles north of the Niger and Benue confluence, salt was dug from earth-pits in the dry season[1]. Also in Jukun villages, a considerable amount of salt was annually recovered from brine-springs[2]. In the shallow lakes of northern Bornu were salt and natron deposits. Natron, indeed, was an important article of trade from Bornu to Kano and to other places where it was needed for feeding horses[3] and as an ingredient for cooking food.

Secondly, salt was made from ashes of certain plants which usually grow in marshy areas. Such plants were found in Bornu in the vicinity of Lake Chad[4]. Many Bornu salt-makers had no permanent settlement. They left a place when the supply of salt-bush within a convenient radius of that area diminished[5]. Also in the vicinity of Benin, Nupe, Bauchi and Adamawa the leaves of some willow-like shrubs were collected and burnt. From the ashes salt was extracted[6]. Roots of certain trees in Nembe were also burnt for salt extraction. An important salt making centre was Fautua in Nembe in the Niger Delta[7].

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1. Hutchinson, T.J. Impression of Western Africa, 1st Ed. 1858- 2nd Ed. 1970, p.254.

2. Falconer, J.D., On Horseback Through Nigeria or Life and Travel in the Central Sudan, London, 1911, p.120.

3. Meek, The Northern Tribes, p.170.

4. Ibid.

5. Falconer, On Horseback, p.200.

6. Moloney "Notes on Yoruba", pp.598,606. Also F.O. 97/434, Baikie to Russell 13 March 1862.

7. Alagoa, History of Nembe, p.59.

The third method was simply by evaporation from sea water. In the early nineteenth century, John Adams, and later Richard Lander, saw several huts near Brass Town where the salt producers lived. This evaporation took place only in the dry season when much water had receded[1].

The fourth method which was by extraction from burnt animal dung, was rather uncommon. But it was seen by Barth in 1852, at Ngala, near Kukawa. His description was short and lucid:

> "I was greatly surprised to observe here that, salt is obtained by burning the dung of cattle. It is indeed very remarkable how the poorer people in Negroland endeavour to supply their want of this article, which in every stage of society has become such an essential ingredient of common diet"2.

Although salt was produced in certain parts of the country, many parts still knew nothing about it. Such people relied on whatever was traded with them. With the importation of good salt from Europe the home production gradually died out. The producers then diverted their energy to other economic activities. For example, it is likely that many salt producers at the Niger Delta engaged more of their canoes in transporting European salt to the interior.

Cloth-making

The function of transport as described in Chapter 1 is clear as regards the production of cloths. It was an industry which involved movement of raw materials (which cannot be collected from a single place) to particular centres of production. Cotton had to be carried

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1. Adams, John, Remarks on the Country extending from Cape Palmas to the R.Congo, London, 1823, p.118.
   Also Lander, Journal, p.237.

2. Barth, Travels, Vol.II, p.431.

in small quantities for spinning; and yarns carried to dyeing and weaving centres. Indigo and other ingredients for dyeing also had to be carried to dyeing centres. Then, some forms of transport would be used to move the finished cloths to local and long-distance consumers. Because of this involvement in transportation, cloth making has been discussed in some detail here.

Closely connected with growing of cotton was yarn-making, dyeing and weaving into cloths for wearing. Yarn-making was the work of women and many weavers depended on their wives or old slave women for their work, which consisted of ginning, carding and spinning of cotton. Spinning was so automatically done that women carriers often span as they walked[1]. In Nupe a woman's first duty after marriage was to spin cotton enough to make her husband a robe[2]. A weaver who had no regular supply of spun thread could buy it in the market-places[3].

Although cotton cultivation, yarn-making, dyeing and weaving were all dependent upon one another, each was a specific industry. Thus, there was a class of women dyers in the southern parts of the country and men dyers in Hausaland. For dyeing, the most important material needed was the indigo (Indigofera spp.) which grew luxuriantly in many areas. The leaves had to be cut and subjected to certain processes before it became useful to the dyers. Indigo-making itself was a special job for some farmers; and it was a product of trade on its own[4]. Its cultivation in Nupe, Hausaland and Bauchi so impressed Baikie

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1.. Laird, M. and Oldfield, R.A.K. Narrative of an Expedition into the interior of Africa in 1832, 1833 and 1834, London, 1837, Vol.I, pp.230-231.

2. Mockler - Ferrymen, A.F. Up the Niger, London, 1892, p.162.

3. Clarke, Travels p.248.

4. Clapperton, Expedition, p.174.

that in 1862 he recommended it for trade to the British Government[1].

The great amount of dyeing that the nineteenth-century travellers saw was indicative of the high rate at which weaving itself was done. At Ijanna in the north of Yorubaland, Clapperton and others visited three dye-houses in the early nineteenth century and saw that each one had more than twenty large pots which were in full service. In Kano and Nupe districts, dye-pits were used[2]. Besides the blue shade which was peculiar to the indigo, the dyers succeeded in getting some other colours such as red, green, yellow and purple, using camwood and other local plants[3]. Dyeing was an art which showed the high resourcefulness of the workers. It gave women a distinctive position in the society. It is also remarkable that unlike dyeing in England in the middle ages, which depended on imported materials[4], all the materials used in pre-colonial Nigeria were local.

The end-product of cotton cultivation, yarn-making and dyeing is weaving. Wherever dyeing-pots or pits were found, weavers' looms were also seen. Thus at Ijanna where Clapperton saw many dye-pots, he also saw not less than ten looms in a single house, and many houses had such looms[5]. In many parts of Iboland many local weavers also existed. As the nineteenth-century missionaries observed at Onitsha, "the people appear in their best cloths of their own manufacture from cotton grown

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1. F.O. 97/434, Baikie to Russell, 8 March, 1862.

2. Clapperton, Second Expedition, pp.15, 261.

3. Clarke, Travels, p.300.

4. McDonnell, K.G.T. "Industry, Trade and National Finances", in Thomas, M.W. (Ed) A Survey of English Economic History", Blackia, London, 1957, pp.53-4.

5. Clapperton, Second Expedition, p.14.

on their own farms"[1]. Despite the infiltration of European textiles, the use of woven cloths was common throughout the nineteenth century.

Both Schön and Crowther who accompanied the 1841 Niger Expedition were highly impressed by the weaving of cloths at Eggan in Nupe. "Nothing of African industry I ever saw was I more impressed", was Schön's remark[2]. Not less than two hundred looms were seen in various parts of the town; and as many as ten were seen in a single place[3]. Woven cloths were so good that someone who did not even see the process of weaving realised that it was only the "well-trained craftsmen who could produce merchandise like this"[4]. In the north, cloth-weaving was equally common; but it was most famous in Kano where it was highly concentrated. It has been observed that Kano clothed more than half the population of the Central Sudan[5]. In Sokoto, white cotton cloths were produced and it ranked next to leather work. They exported ready-made robes and large shirts rather than loose cloth[6].

Both men and women wove; but while the men wove on horizontal looms, the women used vertical ones. The width of the strips woven by men varied from three inchest to six inches[7]; and the length could be up to sixty yards[8]. The women's production also varied in size, it

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1. Crowther, S. and Taylor, J.C. Journals and Notices of the Native, Missionaries accompanying the Niger Expedition of 1857-1859, London, 1858, p.34.
2. Schön, J.F. and Crowther, S. Journal of. London, 1842, p.173.
3. Ibid.
4. Bindloss, Harold, In the Niger Country, together with Pinnock, James, "Benim: The Surrounding Country.....", Frank Cass, 1968, p.317.
5. Robinson, Hausaland, p.113.
6. Clapperton, Second Expedition, p.222.
7. Schön and Crowther, Journal of p.173; also Jays, T. "Yoruba Notes", C.M.S. No.XIX, Vol.II, Jan.1896, p.54.
8. Schön and Crowther, Journal of p.173.

ranged from twenty-one inches wide to about five feet and could be up to twelve feet long[1]. A weaver in Kano could produce forty to sixty yards of cloth in a day[2], and at least forty yards a day in Yorubaland[3]. If it is assumed that only a minimum of forty yards a day was woven, then it is possible to have a crude estimation of what was woven in a place such as Eggan in a day. The 200 looms seen there would produce something in the order of 2,000 yards on any working day.

An accurate computation of annual outputs is difficult because of obstacles such as seasonal variations in the amount of cotton that would be supplied and there could be social, religious and political disturbances. But this estimate can leave no doubt about the enormous volume that must have been woven in a year. The figure becomes more impressive when we realise that Eggan produced with their "exceedingly fine"[4] cotton a cloth that would attract a great demand. Apart from the external market for Eggan cloth, there was a good local market. For a robe that a man wore, about sixteen yards would be required[5]; and a man might have more than one besides other clothes. With a population of about 10,000 in the first half of the nineteenth century[6], a great deal of woven cloth must have been produced in a year for home consumption alone.

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1. Ojo. Yoruba Culture, pp.86-87; and Jays, Yoruba Notes, p.54.
2. Denham and Clapperton, Narrative, Vol.II, p.265.
3. Bowen, Adventures, p.309.
4. Laird and Oldfield, Narrative, Vol.II, p.113.
5. Schön and Crowther, Journal of, 174.
6. Allen, W. and Thompson, Narrative of the expedition into River Niger in 1841, London, 1846, (reprint 1968), Vol.II, p.99. Schön and Crowther, Journals of, p.180. I am grateful to Marion Johnson of the Centre of West African Studies, University of Birmingham, for this reference.

There were two other professionals: the tailors (to use a modern word) and the embroiderers. As Clarke observed, "Tailoring is an art in which is engaged a certain class exclusively males who cut and sew and keep on hand ready-made clothing such as robes, tunic shirts, pants and caps"[1]. They used their own locally-made needles before imported needles reached them. Another class, was the one which engaged in embroidery. Their job was a slow and painstaking one and initially they were employed only by the rulers and influential people; and strikingly, all used mainly local material.

Other plant-dependent industries

Other domestic industries that were dependent on plants include wood-working, calabash-making, mat-weaving, basket-making; indeed, the number is too large to be catalogued. Many of the industries were particularly important to transportation. The wood-workers, using big trees, were noted for building canoes which they dug out of the trunks of trees[2]. The same can be said of the calabash-makers. The calabash or gourd (Lagenaria siceraria) was grown for its large fruits. The ripe fruits were cut into halves and the lower part was indispensable to head porterage. For carrying water, palm oil and other liquids, the gourd was invaluable. Also for head porterage was the basket, woven with any pliable material. Mat-making was another specific work for women. Mats were essentially for home use and the Nupe and Ijesha mats made good articles of sale in Ijebu market-places[3]. Mats were also used for wrapping goods for transportation by porters and pack animals.

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1. Clarke, Travels, p.299.
2. Canoe-building is discussed fully below in its appropriate place.
3. Clarke, Travels and Expeditions, p.301. Also Lander, Journal, Vol.II, p.304.

Leather-working

This was an art which was dependent on animals solely. For this work, the inter-dependence of hunters, pastoralists, other animal-breeders, and butchers was noticeable. It was estimated that about 100,000 head of cattle and 40,000 sheep were available at any given time in Sokoto province alone[1]. Kano, too, was supplied its leather by its provincial villages such as Gezawa, in which Barth found, in 1851, no other work besides cattle-breeding. He said, "Nothing else was offered for sale but cattle and sheep"[2]. Many other domestic animals which were bred in Hausaland and in the north of Yorubaland also supplied skins[3]. There were people who specialised in curing, tanning and dyeing the animal skins. Like the cloth-dyers, skin-dyers depended entirely on local dyes. For instance, to get a black dye, they mixed a quantity of honey with blacksmiths' slag; and to get red, pounded sorghum stalks were mixed with other solutions[4].

The leather produced was of very high quality comparable to the commercial leather in other parts of the world[5]. Those that Barth saw in Katsina highly impressed him. His remark was, "No place in the whole Negroland is so famous for excellent leather and the art of tanning as Katsina"[6]. The Bauchi also had a considerable skill in the treatment and fashioning of hides[7].

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1. Lugard, "Northern Nigerial Colonial Report", 1900-1911,p.251.
2. Barth, Travels, Vol.I, p.529.
3. Lugard, "Colonial Report" p.121.
4. Buchanan, M. and Pugh, J.C. Land and People in Nigeria, London, 1955, p.197.
5. Clarke, Travels, p.301.
6. Barth, Travels, Vol.III, p.85.
7. Meek, The Northern Tribes, p.160.

With the skins, fine bags, sword-cases, splendid saddle-covers and slippers were made. It has been suggested that among the Yoruba the leather industry developed from using certain animal skins for encasing amulets which they wore[1]. Sandals were also made; and up to thirty pairs could be made from one large ox-hide[2]. Cushions, boots, leather mats, and aprons were also made from animal skins[3].

More closely connected with transportation among products of leather work were water-bottles used by long-distance travellers for holding drinking water. Large skin-vessels were made for carrying honey, butter and other articles needed on a journey or for sale in market-places. The panniers used for containing products for donkey transport were made of untanned hides[4]. They were double sacks, one sack lying on each side of the pack animal.

Apart from a great number of hides and skins used for the domestic crafts, a good number was also exported. From Katsina, tanned bullocks' hides were frequently exported to Fezzan and Tripoli[5]. Barth estimated that about five million tanned and dyed skins were exported from Kano annually to as far away as Tripoli[6]. In addition, Kano supplied the Sudan with hides and skins[7].

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1. Ojo, Yoruba Culture, p.93.
2. Meek, The Northern Tribes, p.161.
3. Perham and Bull, Diaries of Lugard, p.192,; Also Clapperton, Second Expedition, Vol.II, p.221.
4. Meek, Northern Tribes, pp.161-2.
5. Clapperton, Second Expedition, Vol.II, p.348.
6. Barth, Travels, Vol.I, p.514.
7. Robinson, Hausaland, p.114.

Iron-working

A combination of iron-mining, smelting, and smithing is referred to here. The origin of iron metallurgy in West Africa is another matter of interest to prehistorians. The technique of iron-working is said to have crossed the Sahara, reaching Nigeria shortly before the time of Christ[1]. Archaeologists have also pointed out that the earliest evidence of iron-smelting in West Africa came from Nok, a small village at the southern end of Zaria province, west of the Jos Plateau in Nigeria. The findings at Nok, which are termed "Nok culture" have led to the conclusion that iron-working must have existed in this part of the world as early as between 500 B.C. and A.D. 200[2].

Iron deposits were found in many parts of the country, but iron-smelting was a localised business. Deposits are known to have been worked in the Qua mountains[3], in Yawuri hills[4], in some areas of Borgu[5], at Fawa, in Katsina province[6], near Ajilete in Egbado Division of western Nigeria[7], in the Otta, Oyo[8] and Ogbomoso[9] districts of western Nigeria, among the Angas, west of Bauchi[10], and in a few other

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1. Wrigley, in Prehistory, p.71.

2. Shaw, Thurston, "The Prehistory of West Africa"in Ajayi J.F. Ade and Crowder, Michael History of West Africa, Longman, London, 1971, p.69.

3. Waddell, Twenty-nine Years, p.325.

4. Adamu, "A Hausa Government" p.24.

5. Lander, Journal, Vol.I, p.222 and Perham and Bull, Diaries of Lugard, p.214.

6. Wallace, Notes on a journey, p.214.

7. Mabogunje, A.L., "The Land and Peoples of West Africa", in Ajayi, J.F. Ade, Crowther, Michael, History of West Africa, Vol.I, Longman, London, 1971, p.13.
8. Ojo, Yoruba culture, p.96.
9. Jays, "Notes", p.54.
10. Meek, Northern Tribes, p.150.

places in the north[1]. Smelting-centres were located in the neighbourhood of mining areas. Smelting was a specialised job for certain lineages which jealously guarded their rights and passed knowledge from one generation to the other.

Iron metallurgy must have had a far-reaching economic effect on other production. Iron tools replaced stone and wooden ones in the areas where the smelting took place and to which iron tools were exported. But as economic tools were made, so also were war weapons. As Wrigley rightly asserts, "It is not for nothing that Ogun, god of smiths, is also god of war"[2]. The impact of the introduction of iron-smelting is succinctly put by Basil Davidson, that with it "practical and military concentration became possible and at least for those who would rule, desirable. Alliances of interest emerged, became fused into centres of power, acquired geographical identity, and reappeared as territorial states"[3].

The actual shaping of iron tools for specific uses was the function of the blacksmiths. Whereas iron-smelting was located in few places, possibly near the mining areas, blacksmithing was a ubiquitous craft. The earliest blacksmiths relied solely on the iron-smelters for their work. In the south-east of the country, the Awka smiths dominated the professsion throughout the area. They travelled to places far away from their homes - to Bonny, Calabar, Warri and even Lagos area. They could spend up to eight months of every year away from home[4]. Earliest

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1. Falconer, on Horseback, p.83.
2. Wrigley, in Prehistory, p.73.
3. Davidson, Basil, Old Africa Rediscovered, London, 1964, p.84.
4. Basden, Among the Ibos, p.171; Waddell, Twenty-nine Years, p.326.

settlers of a place might not need weavers or leather-workers but blacksmiths were indispensable to them. Tradition holds that among the earliest settlers in Ibadan, Western Nigeria, not less than seventy were blacksmiths[1].

Like many other domestic industries, the blacksmith did not have to import his working material. He used his family and serf or slave labour; and his tools consisted only of a stone for an anvil, an iron cudgel for a hammer; and his bellows were a couple of goat skins stretched over two wooden bowls, into which were inserted two air pipes which ran into one[2].

The blacksmith's output included tools that were used on the farm, such as hoes and cutlasses. For the wood-carvers he made axe-heads, knives and chisels; and for the hunters, iron traps,and iron spears. The introduction of European metals increased rather than diminished the work of the blacksmiths. The skill of the Awka itinerant blacksmiths in imitating imported guns and repairing them, made them famous in the east. However, it does not appear that technical knowledge gained in iron metallurgy was applied to other economic activities such as transport.[3].

Glass working

Glass working was a very rare craft. In fact, it appears that it was peculiar only to the Nupe. The glass-workers of Bida,

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1. Morgan, The History of Ibadan, Ibadan, pp.30-31.

2. Bowen, Adventures, p.309; Basden, Among the Ibos, p.172; Ojo, Yoruba Culture, pp.99-200.

3. The issue of technology is discussed in Chapter 8.

the Massaga[1], are known to have monopolised it. Glass beads [redacted] brought to Kano from Tripoli by the caravans found their way to Nupe; looking-glasses that were brought from Europe also reached Nupe; and there they were melted into different shapes. In a despatch to Britain, Baikie, who actually witnessed the smithing process, described it vividly. Arm-rings and beads worn both by men and women, were their output[2]. Although Baikie witnessed the process in 1862, glass-smithing had been going on for some hundreds of years[3].

Tin work

Another industry which was concentrated at a particular place, around the Bauchi, was the mining of tin-ore. Tin was discovered in early nineteenth century at a place called Liruein Kano by some Bornu imigrants[4]. In 1884 the Royal Niger Company agents found out that many tin-wires they throught had come from across the Sahara[5] were actually mined at Liruein-Delma in Bauchi province. The mining of tin-ore had been known to the local people much earlier than the nineteenth century[6].

Tin-ore was won by simple handwashing or by using large bucket-dredges[7]. It was then smelted in furnaces. When the Royal Niger

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1. Meek, Northern Tribes, p.157.

2. F.O. 97/434, Baikie to Russell, 5 March 1862.

3. Meek, Northern Tribes, p.160.

4. Temple, C.L. Notes on the Tribes, provinces, Emirates and States of the Northern Provinces of Nigeria", London, 1922.
   Temple, C.L.,"Northern Nigeria", The Geographical Journal, Vol.40, No.2 August, 1912, p.162.

5. "Handbook of Nigeria" Lagos, 1924, pp.104-106.

6. Falconer, On Horseback, p.83.

7. Ibid.

Company demanded tin-wires, more than they required were supplied. But people kept both the mining grounds and the art of smelting very secret. The Niger Company broke both secrets in 1902; and they were greatly surprised to find, at Liruein Delma, the Bornu imigrants with about ten tin-smelting furnaces which produced about fifty tons of metallic tin in a year[1].

Pottery

That pottery was one of the oldest crafts in Nigeria has been noted by archaeologists[2]. Traditional methods of moulding pots by hand still continue to the present day. Just as the plough was unknown to agriculture so also was the potters wheel unknown to potters.

Size of the pots varied, ranging from small tobacco-pipes to vats that were used for dyeing, for storing palm oil and drinking water. Those for carrying water and other liquids were of great importance; and in many parts of the country, there were no adequate substitutes for such pots. Despite the availability of metal and plastic utensils, pottery still holds its own. The fact that it is a brittle material and will break if dropped leads to a regular demand for it. There was scarcely any market place in the nineteenth century which did not have its own stall for pots.

For the movement of productions the transport facilities played a vital role. It stimulated extra productions which were carried to long-distance and local consumers. Before describing how the products were transported we should now examine the pattern of exchange.

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1. Falconer, On Horseback, p.83.
2. Shaw, in History, p.55.

(ii) Exchanges

In this second part, three essential features will be discussed: local exchange, exchange with traders who crossed the Sahara, and exchange with European merchants who crossed the Atlantic. Each of the three, in itself, is an important topic that requires elaborate treatment; but, as has been said in the first part, this is only a brief study of the economy that was served by the pre-colonial transport in Nigeria. Having discussed, in the first part, agricultural and non-agricultural production, it seems reasonable to explain how the outputs of producers were exchanged with goods they did not produce but which they needed. Associated with exchanges were the currencies that were used as media of exchange and standard measures of value. These, too, are briefly treated.

Attention is given to this sector of the economy because of its close relevance to transport. Pre-colonial producers did not produce for their own consumption alone, they also produced extra for exchange. To both industrial and pre-colonial producers, transport is certainly the most important factor for distribution of their products. It is clear that with pre-colonial transport, internal and international exchanges took place. Distribution and transportation of finished products are inseparable. They are treated in different chapters only for purposes of exposition.

Local Exchange

As Herskovits has noted, "To disregard internal exchanges, which in some African countries actually dominate the economies, is to distort the reality of African economic progress, aboriginal or post-colonial."[1] When exactly such internal exchanges began in what is now Nigeria is difficult to say; but the forms they took can be inferred. Here, again economic anthropologists have done a considerable amount of work. Three socio-economic principles; reciprocity, redistribution and market exchange have been regarded as the main methods.

Reciprocity has been defined as "obligatory gift- and counter gift-giving between persons who stand in some socially defined relationship to one another".[2] This gift-giving was a social obligation which sought to establish social cohesion within a community. The system prescribed that if an initial gift was accepted the recipient was obliged to make a return gift, possibly of greater volume or size. If the gift was rejected, the donor would assume a hostile motive. The intention behind reciprocity was more social than economic. It was probably born out of the "desire to cement fragile external relations with a social pattern established by ancient customs".[3] Some efforts must have been made, however, to produce a surplus for reciprocity.

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1. Herskovits, M. J., "Preface" to Bohannan and Dalton, Markets, p. xiv.

2. Dalton, Tribal and Peasant, p.71.

3. Sunderstrom, Lars, The Trade of Guinea, Lund, 1965, p.1.

Redistribution entailed obligatory payments of products and service - tributes - to an accepted head, and his own return generosity to the people. Among many societies in Africa, the head had the people's sanction to allocate or reallocate the chief means of production: land and labour. Everyone in the community regarded himself as his subject and was ready to submit himself to his service. He paid the head regular tributes in recognition of the latter's position "as the steward of tribal landholdings, and of his judicial authority".[1]

In return,the head used the accumulated wealth indirectly on behalf of the people or directly for them. He welcomes and entertained travellers. The organisation of public works, such as the construction or repair of town-walls, footpaths and market places, and digging of wells or clearing of brooks - from where drinking water was fetched - devolved on him. He used part of his wealth to entertain the people in return for their services. For instance, "The Kano Chronicle" recorded that Gijimasu, the third Sarki at Kano "slaughtered a hundred cattle on the first day" of building the city of Gazarzawa.[2] Five centuries later, Wombai Giwa, to whom Mohamma Nazaki delegated his power when he was absent from Kano, provided, every morning, "a thousand calabashes of food and fifteen oxen for the workmen till the work (expansion of Kano walls)was finished; and on "the day when the work was to be

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1. Dalton, Tribal and Peasant, p.73.

2. Palmer, H. R., "The Kano Chronicle", Journal of the Royal Anthropological Institute of Great Britain, Vol. 38, 1908, p.66.

finished the Wombai Giwa distributed among the workmen a thousand 'tobes'. He slaughtered 300 cows."[1]

Such customs were not spasmodic, but regular affairs which were carried on seasonally, year in, year out, and from generation to generation. Although there might not be any economic motives behind such forms of redistribution and reciprocity, an element of extra production, whether intended or not, can be read into the exchanges.

Market Exchange

Bohannan and Dalton in their discussion of markets have identified a threefold arrangement: marketless societies, societies with peripheral markets and societies dominated by the market principles and price mechanism.[2] Market-place, in this context, simply means "a specific site where a group of buyers and a group of sellers meet".[3] But with time, the market-place, besides its economic functions, was a place where people met "to exchange information with relatives, friends and strangers, and to engage in recreational activities".[4]

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1. Palmer, "Kano Chronicle", p.83.

2. Bohannan and Dalton, Markets, pp.1-3.

3. Ibid.

4. Smith, Robert, H. T., "West African market-places: temporal periodicity and locational spacing", in Meillassoux, C. (Ed.) The Development of Indigenous Trade and Markets in West Africa, OUP, 1971, Ch.XVI, p.319. Also in the U.K. Royal Commission on Market Rights and Rolls, 1891, market is defined as "An authorized concourse of buyers and sellers of commodities, meeting at a place more or less strictly limited or defined, at an appointed time." The question of market authority is not investigated here. But for details, see Polly Hill, "Notes on Traditional Market Authority and Market Periodicity in West Africa", J.A.H., Vol. VII, No.2, 1966, pp.295-311.

Market exchange differed widely from the exchanges by reciprocity and redistribution. Unlike reciprocal and redistributive exchanges, buyers and sellers actually met for trade transactions. The exchange was not intended for particular partners. Although the social tie was still prevalent, it was not so strong. The producer might be the seller, a member of his family, a slave or a middleman. In any case, social obligation was only partially involved. Terms of trade were haggled; and both the seller and the buyer made efforts to maximise their material advantage.

Societies with market exchange also differed from societies dominated by market principles and the price mechanism. Unlike the latter, land and labour did not directly enter the market. In the market-places, exchanges were made in face-to-face transactions by buyers and sellers. The market exchanges were only peripheral, in the sense that both sellers and buyers did not rely solely or only on market-places for their basic needs. Indeed, reciprocity and redistribution were neither completely absent nor dominant. Market-going might not be a full-time occupation as a seller could also be the producer. Therefore, both the seller and the buyer attended the market-places only when necessary.[1]

The most striking difference between the market-place and the market principle is the presence of supply-demand-price mechanism in the latter. It was not that supply and demand forces were not operative at all for price formation in market-places, it was only that such supply and demand were seriously affected

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1. Bohannan and Dalton, Markets, pp.1-9.

by a variety of social factors which infringe on price-making. Traditional norms, kinship and social obligation tended to override price formation by undermining the interplay of supply and demand forces. Unlike the price mechanism in a market-integrated economy, prices formed in the market-places did not feedback for allocation of factors of production, mainly because the major factors of production - land and labour - did not enter the market, and also because the market-places were peripherally used.[1] In short, "prices made in peripheral markets do not perform the economy-wide integrative function of the price mechanism in the Western economy".[2]

Thus the meaning that economists attach to the word 'market' is different from that given to it by historians and anthropologists. To economists the market is a mechanism which produces prices. It is the price which moves goods into the market (supply) and moves them out (demand). But at the same time prices may be affected by supply and demand, hence, they regard the market as a self-regulating system. Emphasis is on price as the determinant of decision-making regarding the complex process of production and distribution. But to historians and anthropologists the market is the market-place.[3]

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1. Dalton, Tribal and Peasant, p.75.
2. Bohannan and Dalton, Markets, p.8.
3. Neale in Trade and Market, pp.357-371.

In the context of pre-colonial Nigeria, and indeed, of pre-colonial West Africa, 'market' here means the market-place. In fact, market still means the same thing now in many parts of Africa. In 1962 Bohannan and Dalton as the editors of Markets in Africa hinted that "when most of our contributors use the term 'markets' they mean market places and not the diffuse interaction of suppliers and demanders whose activities determine prices".[1]

It is crucial for a thorough understanding of the period studied to realise that market principles as used by economists, though absent in many societies, were not absent in others. The behaviour of sellers and buyers was indicative of their economic rationality. For instance, at Kano market, in the early nineteenth century, according to Clapperton, "The merchants understood the benefits of monopoly as well as any people in the world, and if anything falls in price, it is immediately withdrawn for a few days".[2]

Market-places like Kano or Bornu in the north and Badagry or Bonny in the south were so large and attended by so many internal and international traders that social factors such as kinship, clanship and religion which were characteristics of societies with peripheral markets were, by and large, not dominant.[3] In such market-places, even as early as the

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1. Bohannan and Dalton, Markets, p.1.
2. Denham and Clapperton, Narrative, Vol. II, p.256.
3. Bohannan and Dalton, Markets, p.8.

seventeenth century or earlier, the participants were not mere 'target' marketers, engaging in "marketing sporadically to acquire a specific amount of cash income for a specific expenditure".[1] The fact that these markets continued to function proves that the participants were not 'target' marketers but effective sellers and buyers whose activities inspired continuous production.

A few characteristics were common to many of the markets of Nigeria. One common feature was that many markets were held in open spaces where freedom of walking about and of talking aloud was unimpeded and unmolested. It was only such open spaces that could accommodate the great number of persons attending.

When Barth was at Kuka, in Bornu, in 1851, he found that "from twelve to fifteen thousand people crowded together in the markets".[2] In a smaller market at Uje in Maiduguri the people he saw were about six thousand.[3] Six years later, Bowen was at Badagry and remarked that "I was fond of going to see the market, which was crowded every evening with thousands of people".[4] Richardson saw about thirty thousand people at Ejinrin, a small Ijebu market-town in Yorubaland. The stable population of Ejinrin itself was not more than two hundred.[5] Also at Ilesha, in Yorubaland, Clarke saw hundreds of caravans pouring into the town.[6]

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1. Bohannan and Dalton, Markets, p.7.
2. Barth, Travels, II, p.54.
3. Ibid. p.99.
4. Bowen, Adventures, p.97.
5. C.M.S. Archive, Letter of Richardson to Baylis, No. 7, G3/A9/0, Hausaland Mission, January 26, 1900.
6. Clarke, Travels, p.153.

With such a large number of attenders, only large open spaces could conveniently solve congestion problems. In the seventeenth century, Dapper, a Dutch writer, described several large plains between Benin and Gwato which served as market-places.[1] It was noted in the Church Missionary Gleaner in 1858 that a market was "a large area, overshadowed with trees, and low thatched roof".[2] Trees and booths provided adequate protection for the market users from the heat of the sun but not from torrential downpours. Sellers of particular products congregated in an area in an orderly fashion. In Kano the smaller wares were set out in booths in the middle; cattle and bulky commodities were exposed for sale in the outskirts of the market.[3]

This type of arrangement went a long way to quicken market transactions and movement of products since a buyer knew exactly where to go for a particular commodity. Its economic advantage was great both for the sellers and the buyers. It may also have helped in raising the standard of craftsmanship because by assembling in one area, the producers could compare and contrast their output and gain further knowledge for improvement. This encouraged healthy rivalry and competition. The buyers, too, had ample chance to choose the best seller and to haggle about price.

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1. Dapper, Olfert, Description de l'Afrique, Amsterdam, 1686, in Hodgkin, Perspective, p.128.

2. Church Missionary Gleaner, March 1858.

3. Denham and Clapperton, Narrative, II, pp.254-5.

Another feature in market-places generally in West Africa was their periodicity. Here, the works of Hodder,[1] Ottenberg,[2] Ukwu,[3] Michael Smith,[4] Polly Hill[5] and Robert Smith[6] give essential details. Available sources suggest that there were daily markets and four-day, five-day, seven-day and eight-day markets. The three-day, six-day and seventeen-day markets seem to be rather uncommon. Each zone had its characteristic periodicity.

Most of the markets that Barth found in the northern section of the country were held weekly. He found at Gummel, northeast of Kano, that a market was held every Saturday[7] and at Uje Maiduguri every Wednesday.[8] Clapperton also found at Koolfu, near Bussa, on his way to Kano, two large open spaces used as markets which were held daily. He found also two others which were attended every Monday and Saturday.[9] Uje Mabani in the

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1. Hodder, B. W., "Markets in Yorubaland", Ph.D. thesis, London, 1963. Also Hodder, "Yoruba Markets", in Bohannan and Dalton, Markets, Ch.4, pp.103-117.

2. Ottenberg, "Afrikpo Markets", in Bohannan and Dalton, Markets, Ch.5, pp.118-169.

3. Ukwu, I. U., "Markets in Iboland, Eastern Nigeria", Ph.D. thesis, Cambridge, 1965. Also, Hodder, B. W. and Ukwu, U. I., Markets in West Africa, Ibadan, 1969.

4. Smith, M. G., "Exchange and Marketing", in Markets, Ch.11, pp.299-334.

5. Polly Hill, "Notes".

6. Smith, "Market-Places" in Indigenous Trade.

7. Barth, Travels, I, p.539.

8. Barth, Travels, II, p.94.

9. Clapperton, Second Expedition, pp.135-136.

northeast of the country and Sarawa Fulfulde in Adamawa were also held every Thursday and Sunday.[1] Some of these markets can be regarded as weekly markets in the sense that each was held regularly on a particular day of the week. But actually they were attended twice every week.

It has been found that the Tiv, the Nupe, the Igala, the Iyala and certain other peoples of eastern parts of Nigeria observed a five-day market week.[2] This 'five-day' arrangement may mean in some places the four-day market week, as some people tend to count both the first and the last days of the market week, giving the impression that a four-day market was a five-day one.

Four-day and eight-day market weeks were common among the peoples of the southern section of the country and, indeed, of West Africa.[3] A controversial issue is whether or not there was any relationship at all between the four-day and the eight-day market schedules, particularly as both schedules were found in the same geographical areas. Talbot suggested that the change was from a four-day week to an eight-day one. He felt that the four-day markets were suppressed by the eight-day ones as a result of an increase in the number of markets.[4] On the other hand, Hodder, who has done a considerable amount of work on markets in Yorubaland, suggested that the change was likely to be from eight-day to four-day.

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1. Barth, Travels, II, p.150.
2. Polly Hill, "Notes", pp.302-3.
3. Ibid.
4. Talbot, Southern Tribes, III, p.869.

He felt that the four-day cycle often developed out of the eight-day cycle as rural population density increased and accessibility improved.[1] However, both cycles existed in earlier times as they do now.

Daily markets were held in large towns such as Kano, Katsina,[2] Badagry and Koolfu.[3] It was in such large towns that people could devote themselves full-time to marketing. Permanent stall-holding was a rare occurrence in many parts of the country in this period. Those who attended market-places also had other economic activities. The periodic arrangement was of economic significance for at least two reasons. It was convenient for part-time vendors who would produce or collect in small quantities from other producers whatever they sold in the market-place. Where it was a four-day circle the three days remaining would be spent on such other activities. As most of the market sellers and buyers were often women, they spend a considerable time on food processing, dyeing, pot- and soap-making, which was very time-consuming.

The other reason is more closely related to transportation. The periodic arrangement of markets was convenient to both the sellers and the buyers. It was possible for them to attend a number of market-places on different days of the week.[4]

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1. Hodder, "Yoruba Markets", in Markets, pp.108-109.
2. Denham and Clapperton, Narrative, II, p.348.
3. Clapperton, Second Expedition, pp.135-136.
4. The 'Central Place Theory' is not being advanced here. For this, see Hodder's thesis, Ukwu's thesis and Robert H. T. Smith in Indigenous Trade.

With the slow means of transport available it would have been inconvenient for sellers and buyers to attend more than one market a day if many markets fell on the same day. If a market woman attended a particular market every five days, she and her porters would have three or four days to do some work other than the heavy work of carrying and walking. This rest from carrying and walking to the market was necessary because, as will be discussed in Chapter 4, women did much more headloading than men.

The domination of market-places by women in the south was another common feature. In 1865 the Church Missionary Gleaner recorded that "one of the most characteristic features of Abeokuta is to be found in the markets, where the women, who are the chief traffickers, noisily ply their trade".[1] While Clapperton was at Koolfu, very near Bussa, he noted that the small traders were "nine out of every ten".[2] At Eggan (sometimes written as Egga) Lander observed that "women were the chief if not the only traders".[3] Although there was no water-tight division of labour, especially between sexes, market-going in the south had always been women's affair. Hodder suggested that this might have become traditional in Yorubaland by the nineteenth century, probably owing to dangers on the road, when it was unsafe for men to move about while "women enjoyed relative immunity from attacks".[4]

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1. Church Missionary Gleaner, XV, 1865, p.62.
2. Clapperton, Second Expedition, p.136.
3. Lander, Journal, I, p.108.
4. Hodder, "Thesis", pp.42-3.

Farmers and craftmen often worked in the day and sold their products in the night. Evening markets are other types that require further study. At old Oyo, Clapperton saw, in 1826, seven such markets.[1] There was also what Polly Hill has called "hidden trade".[2] This type was common in the northern areas. Polly Hill found such trade at Batagarawa in Katsina emirate. The women sold articles such as grain within the privacy of their husband's compound which constituted the equivalent of a market-place. How far back we can extrapolate the "hidden trade" and what geographical extent it covered is a matter for further research. It is important, also, to note that "extra-market transactions"[3] in houses, on road-sides and on farms were numerous in different parts of the country in varying degrees.

The market-place served both social and economic functions, but it would appear that the latter - selling and buying - predominated. To large markets such as in Kano, Kuka, Uje, Mabani, Gummel, Katsina and Sokoto in the north, pack animals and porters carried articles such as natron, salt woven cloths, leather work, various foodstuffs and manufactured products. Slave and livestock such as donkeys, camels and horses were also moved there. Some market-places were noted for particular products. For example, Gummel was "the chief market for the very extensive trade in natron which is carried on between Kukawa and Muniyo

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1. Clapperton, Second Expedition, p.59.
2. Polly Hill, "Hidden Trade in Hausaland", Man, Vol. 4, No.3, September 1969, pp.392-409.
3. Polly Hill, "Hidden Trade", p.392.

(chief producers) on the one hand and Nupe (main centre for redistribution) on the other".[1] Thus the town producing a product was not necessarily its chief distributor. Although the chief produce of Kukawa area was natron, its chief articles of trade were camels and horses. In Kano, leather work, woven cloths, and livestock dominated the market.[2]

In the middle and southern portions of the country, foodstuffs, household utensils such as pots, woven and dyed cloths and imported commodities were available in every market. In 1851, Hinderer found that one particular market was larger than others in Ibadan. This was probably Iba market.[3] There he found that European articles from Lagos were on sale. Four years later, he saw "hundreds of bags of salt ... then plates and dishes ... European and country clothes of every description".[4] Both local and foreign products were moved to Nupe and, indeed, to every market-place in the nineteenth century.[5]

Most of the large markets were highly organised. For instance, in Kano and Bornu there were brokers who stood as third parties between the sellers and the buyers. In the livestock

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1. Barth, Travels, p.539. The brackets are mine.

2. Clapperton, Second Expedition, II, p.254.

3. Iba market (or Oja'ba), named after Ibasorun Oluyole, was probably the largest market in Ibadan in the nineteenth century. See Saburi Biobaku, "Oluyole of Ibadan" in Eminent Nigerians of the Nineteenth Century, Cambridge, 1960, pp.41-49. The market is often wrongly referred to as King's Market (Oja Oba), forgetting that the ruler of Ibadan was a Bale not an Oba.

4. C.M.S. Archive, Journal of David Hinderer, CA2/049, 9th March, 1855.

5. Lander, Journal, Vol.I,p.182.

market of Bornu the sale of camels and horses "passed through the hands of the dilelma (sic) broker, who according to the mode of announcement, takes his percentage from the buyer or the seller".[1] Robinson also referred to the brokers in Kano market; he said, "Buying and selling in the market is scarcely ever carried on without the intervention of a third person, who acts as a sort of broker and receives from the seller five per cent of the price agreed upon". In Kano there was also the Sheikh who was even more important than the broker. He had the authority of the ruler to collect rents on stalls and even to fix prices on all wares.[2] This type to organisation was found in many markets. Large as Kano market was, it was so well managed that Clapperton was highly impressed and remarked that, "There is no market in Africa so well regulated".[3]

Thus thc market-place served as a very important institution in the life of a pre-colonial Nigerian. It not only served the local producers and consumers, it also encouraged international trade. To this extent, it can rightly be called a trade-creating organ of society. The existence of a market-place in an area also meant the stimulation of production and consumption. The meeting of different people in some market-places was much more than a social benefit, it also meant the dissemination of ideas, of knowledge and of fashion which might encourage further economic activities.

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1. Barth, Travels, Vol.II,p.53.
2. Robinson, Hausaland, p.123.
3. Clapperton, Second Expedition, II, p.253.

How traders reached the market-places with their products is of central interest to this study. By using human porterage, pack animals and canoes in certain places, the market-places could be frequently visited. This transport, like modern transport, was fraught with dangers but trade goods were delivered and accepted. But before this is further investigated, there must be a brief appraisal of the trans-Saharan and trans-Atlantic international trades.

Trans-Saharan Trade

The precise time when traders began to establish routes across the Sahara is unknown.[1] But it appears that, at least the Katsina and Kano people in Hausaland had begun to receive a great trade stimulus from the fourteenth century when the traders began to arrive in their land and Hausaland became exposed to international trade. Bornu, at the extreme northeast, which had always been a strong kingdom, also gained a great advantage from the eastwards drift of the trade routes.[2] However, it is the remarkable influence which the introduction of access to the international markets had, not only on the northern fringes of the country but also on the other parts, that is especially fascinating.

Although information concerning the earliest involvement of both Bornu and the Hausa states in international commerce

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1. Fage, A History, p.13. Also H. F. C. Smith, "The Early States of the Central Sudan" in Ajayi and Crowder, History, I, p.197.

2. Fage, A History, pp.33-34.

across the desert is scanty, it appears that as early as the fourteenth century the Kanem-Bornu kingdom, around Lake Chad, had begun to have international trade links. Ibn Battuta, who visited the area by 1352, recorded that "Copper is exported from Tagadda ... to the country of Barnu, which is forty days' journey from Tagadda ... From the country came excellent slave-girls, eunuchs, and fabrics dyed with saffron".[1]

It was remarkable that one of the earliest commodities of trade from Kanem-Bornu, in particular, was slaves. The empire had always been subjected to serious pressure from Bulala invaders, who were pastoralists from the desert.[2] By the sixteenth century the greatest ambition of their rulers (mai) was to accumulate numerous horses for their defensive and aggressive wars. When Leo Africanus visited the area in the early sixteenth century, he noted that "The King of Bornu sent for the merchants of Barbary and willed them to bring him great store of horses".[3] Bornu rulers needed horses so badly and had slaves in so great a number that they used to exchange "sometimes twenty slaves for one horse".[4] So many horses were accumulated that there were not less than 3,000 horsemen in the Bornu army.[5]

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1. Ibn Battuta, Travels in Asia and Africa, 1325-1354, trans. by H. A. R. Gibb, London, 1929, p.336. Kanem is said to mean Barnu and not Bornu.

2. Fage, A History, p.33.

3. Leo Africanus, The History and Description of Africa, trans. by J. Pory, 1600, London, 1896, Vol. iii, p.833.

4. Leo Africanus, Description, ii, p.480.

5. Ibid.

Most of the slaves Bornu used to exchange for horses were perhaps war captives. It is possible that Bornu may have received many more horses than were found in the army. In the sixteenth century there was an expanding empire known as Oyo, in the savanna region, north of Yorubaland. The empire relied heavily on imported horses for its cavalry.[1] It may well be that most of these horses were exported by Bornu. Thus, besides the booty of the campaigns which the mai used the horses for, and the captives which were exported in exchange for horses, much revenue could have been realised from the export of horses southwards. The mai's court was remarkably rich as Leo Africanus saw it. He noted that "The King's spurs, his bridles, platters, dishes, pots and other vessels wherein his meat and drinks are brought to the table, are all of pure gold: yea, and the chains of his dogs and hounds are of gold also".[2]

Bornu may have collected its slaves not only from wars but also in exchange for the horses it exported southwards. Slaves are not likely to have been the only commodities of exchange, however; agricultural products, and craftmen's output must also have been exchanged for horses.

Exchange of horses with slaves was also dominant in the early trade between the Hausa kingdoms and the long-distance traders from the north. But the foreign trade of Hausaland was more diversified than that of Bornu. From the middle of

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1. Akinjogbin, I. A., "The expansion of Oyo and the rise of Dahomey, 1600-1800" in Ajayi and Crowder, History, I, p.311.

2. Leo Africanus, Description, p.834.

the fifteenth century the Fulani, the Asbenawa, the Beriberi and merchants from Gwanja were settling in Hausaland partly to spread Islam but mainly to trade.[1] For example, "The Kano Chronicle" reported that during the reign of Yakubu, the nineteenth Serki of Kano, trade so flourished that peace was deliverately pursued so as not to reduce trade. "There was no war in Hausaland in Yakubu's time",[2] "The Chronicle" reported. It further noted that "The Asbenawa came to Gobir, and salt became common in Hausaland".[3]

The Asben salt was probably exchanged with slaves and eunuchs who were always needed to serve women in the harem. Yakubu also had horses from the north. But eunuchs were a very rare, expensive commodity. In order to get enough he had to exchange with Sarkin Nupe ten horses for twelve eunuchs.[4] It has been noted that for the mai of Bornu to obtain a horse he gave as many as twenty slaves.[5] The value of twenty slaves was thus just above that of a eunuch.[6] It is reasonable that to obtain a few eunuchs, many male slaves would be required as a good number might have died while undergoing the ordeal of castration. Such was the value of horses to the Nupe cavalry,

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1. Palmer, H. R., "The Kano Chronicle", Journal of the Royal Anthropological Institute of Great Britain, Vol.38, 1908, p.66.
2. Palmer, "Chronicle", p.77.
3. Ibid.
4. Ibid.
5. Leo Africanus, Description, ii, p.480.
6. 20 slaves would be equivalent to 1.2 eunuchs.

that it was prepared to exchange more than a eunuch for a horse as early as the fifteenth century. However, apart from slaves, the Hausa states also exported locally-made textiles, and all sorts of leather work in the sixteenth century and later to places as distant as Timbuktu and Gao.[1]

The volume of trade that was carried on between the sixteenth and nineteenth centuries is difficult to estimate in the absence of trade figures. But it seems unlikely that the advent of European merchants on the coast reduced the volume of trade that went on between the trans-Saharan traders and the Hausa and Bornu states. Indeed, nineteenth-century sources tend to suggest that the trade continued on a large scale. The case of Kano, which does not necessarily stand typical of the others but on which information abounds, shows that the trade was enormous. The imports included a great deal of European goods which were carried across the Sahara.

Even as late as 1895 Robinson still noted that "Of the European goods in the (Kano) market, by far the greatest part here come across the desert from the Mediterranean. The caravans which come from the north being about twelve thousand camel-loads of goods annually."[2] The commodities that entered Kano included copper, zinc, needles, gunpowder, salt, sword-blades, mirrors, red coral beads and Arab woollen dresses.[3] In 1851 Barth

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1. Leo Africanus, Description, iii, p.828.
2. Robinson, Hausaland, pp.118-119.
3. Ibid. See Tables 6 and 7, p.270A.

estimated the number of the salt-caravans that entered Hausaland and Bornu at nearly four thousand camels.[1]

Exports in the nineteenth century from Hausaland and Bornu included korans from Bornu, slaves, leather work, including splendid dyed goatskins which were made in Sokoto and which used to be termed Moroccan leather, and woven, dyed cloths. Hausa manufactures reached far and wide. When Hausa traders arrived at Say in August 1854 Barth too was there. Their manufactures so stormed the market that prices fell to the disadvantage of Barth who wanted to sell a few indigo-dyed shirts.[2] Robinson also remarked the Kano's "manufactures are to be met from the Gulf of Guinea on the south to the Mediterranean on the north, and from the Atlantic on the west to the Nile, or even the Red Seas, on the east".[3]

A great number of slaves were carried away from Kano market by small caravans to Bornu and Nupe besides those exported to North Africa. Barth estimated that about 5,000 slaves were exported annually from Kano. This number did not include those sold into domestic slavery.[4] A considerable volume of natron passed from Bornu via Gummel to Kano. In 1851 Barth met a natron caravan from Kukawa and counted not less than five hundred loads of natron.[5] He estimated that in a year "twenty thousand loads,

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1. Barth, Travels, Vol.I, pp.452-3.
2. Barth, Travels, Vol.III, p.535.
3. Robinson, Hausaland, p.111.
4. Barth, Travels, Vol.I, p.515.
5. Barth, Travels, Vol.I, p.533.

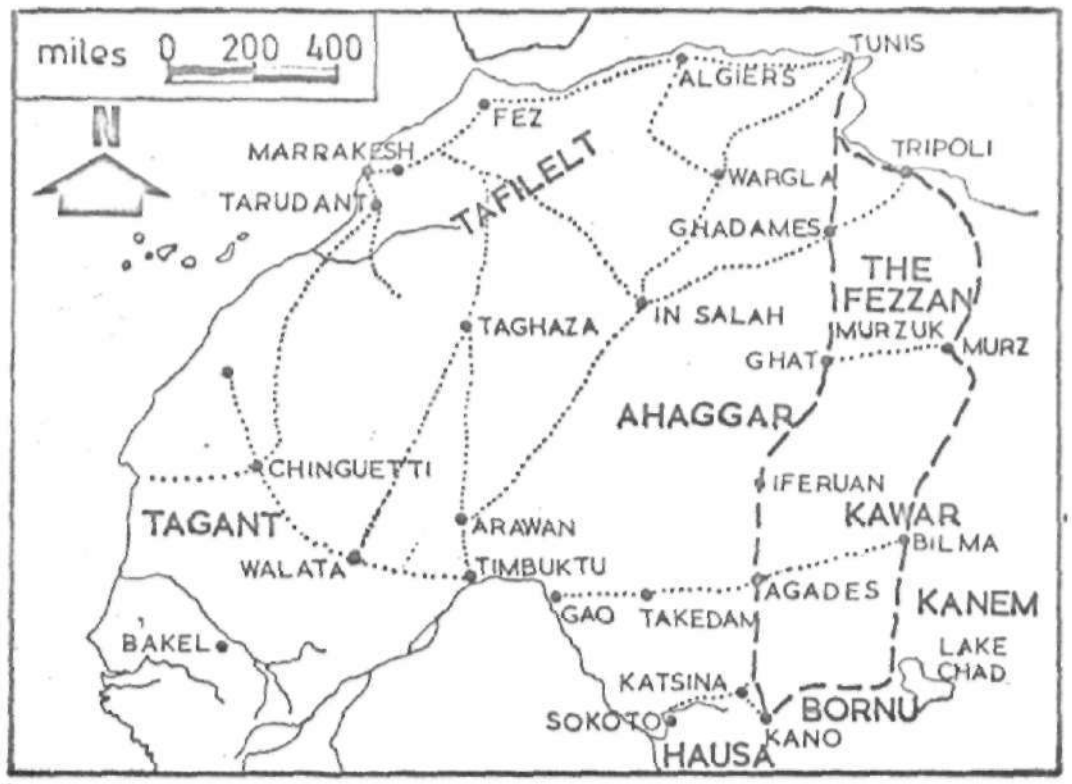
at the very least ... must annually pass through the market of Kano"[1] where redistribution to Nupe, Yorubaland, and other parts of the country took place.

Probably the most widespread of the exports of Hausaland and Bornu were textiles which were produced for home and foreign consumption and which were made in different forms and styles. According to Barth, Hausa textiles had a very extensive market, spreading to as far north as Murzuk, Ghat and Tripoli. (See Map 3.) The volume must have been enormous when we realise that about 300 camel-loads were transported to Timbuktu alone.[2] Also the Tuareg from the desert who brought salt to Sokoto had guinea corn in exchange. According to Clapperton, the Sokoto market, which he said was held daily from sunrise to sunset, was extremely well supplied. Indeed, the amount of corn that would exchange for the expensive salt must have been very great.[3]

Throughout the northern portion of the country, Kano singled itself out as the most important centre of trade. Barth referred to it as "the celebrated emporium of Central Negroland ... Kano, indeed, is a name which excites enthusiasm in every traveller in these regions ... It had been one of the great objects of our journey as the central point of commerce, as a great store-house of information".[4] It was

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1. Barth, Travels, Vol.I, p.513.
2. Barth, Travels, Vol.I, p.511.
3. Denham and Clapperton, Narrative, Vol.II, p.337.
4. Barth, Travels, Vol.I, pp.485, 488.



— — ROUTES LEADING TO NIGERIA UP TO NINETEETH CENTURY

····· OTHER ROUTES

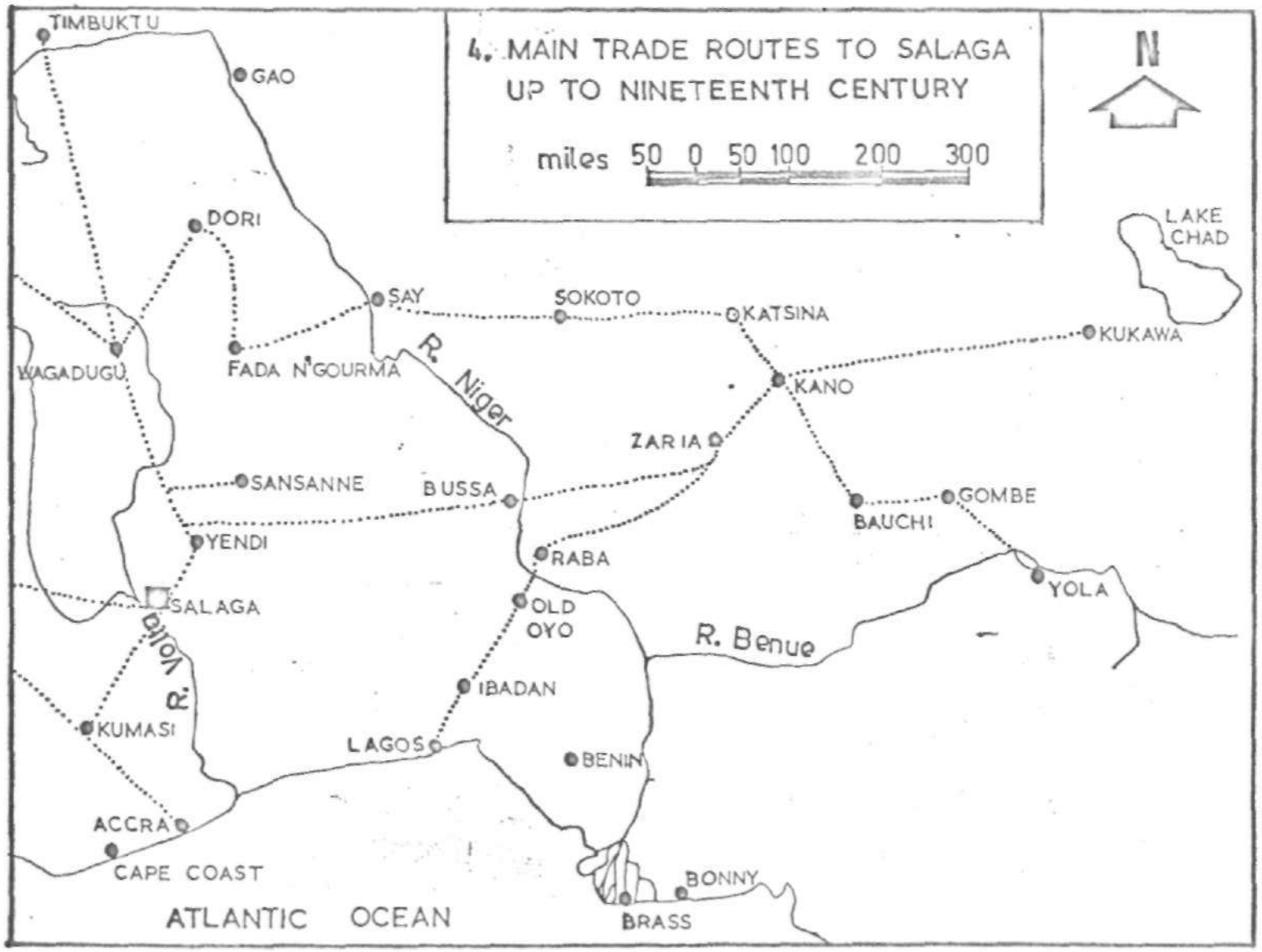
3. MAIN TRANS-SAHARAN TRADE ROUTES

the "great metropolis of the Soudan", according to Robinson.[1] He noted further that "The Tuarek (sic) of the desert comes in touch here (Kano) with the natives of Adamowa and the south: the Arab merchants meet here with traders from Lake Tchad (sic), on the one side, and the Niger or even the Atlantic seaboard, on the other. Here, too, are to be found Mussulman (sic) pilgrims from far and near on their way to or from Mecca".[2] It was estimated that up to two million people passed through Kano in a year.[3]

Hausaland also developed international trade with Gonja on the West. This was a long-established trade in kola nuts, being carried on by the Hausa merchants as early as from the fifteenth century at the latest.[4] (See Map 4.) In 1823, Clapperton noted that "Goora (i.e. Cola nitida or Gbanja or Goro) nuts are the produce of Ashantee (sic) and other parts near the western coast ... They are even in great esteem as far as Fezzan and Tripoli."[5] About thirty years later, Barth saw a caravan of kola nut traders arriving at Kano from Gonja. He estimated that "more than five hundred ass-loads" entered Kano every year.[6] Later on, kola nuts also entered Hausaland from the forest states of the south.

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1. Robinson, Hausaland, p.100.
2. Ibid. p. 112.
3. Ibid.
4. Fage, A History, p.45.
5. Denham and Clapperton, Narrative, II, p.196.
6. Barth, Travels, Vol. I, pp.498, 514. Also Wilks, Ivor, "Asante policy towards the Hausa trade in the nineteenth century" in Meillassoux, Indigenous Trade, Ch. III.


4. MAIN TRADE ROUTES TO SALAGA
UP TO NINETEENTH CENTURY
miles 50 0 50 100 200 300
N
TIMBUKTU
GAO
DORI
LAKE CHAD
SAY
SOKOTO
KATSINA
KUKAWA
WAGADUGU
FADA N'GOURMA
R. Niger
KANO
ZARIA
SANSANNE
BUSSA
BAUCHI
GOMBE
YENDI
RABA
YOLA
SALAGA
OLD OYO
R. Volta
R. Benue
IBADAN
KUMASI
LAGOS
BENIN
ACCRA
CAPE COAST
BONNY
BRASS
ATLANTIC OCEAN

Although the cultivation of the tree did not require much care (as noted above), the preparation of the nuts required skill and patience if they were to preserve freshness and taste. The kola nut is to its consumers as tea or coffee is to the Europeans or Americans.[1] Its local consumption was considerable; it was "eagerly sought after by rich and poor alike, and men will constantly spend the last cowries they possess in buying one to chew".[2] Its importance so impressed Robinson that he concluded that "The commercial power of Kano is to a very large extent dependent upon the millions of Kolas which its market contains."[3]

Transportation of kola nuts from Ashanti to Kuka, near Lake Chad (a distance of about 1,250 miles),[4] is significant to this study. In the late nineteenth century, Robinson noted that "At Gandja (sic) the average nut costs five cowries; at Say, on the Niger, seventy to eighty; at Sokoto, a hundred; at Kano, a hundred and forty to two hundred and fifty; at Kuka, on Lake Tchad (sic), two hundred and fifty to three hundred".[5] This gap between the cost price of a kola nut at Gonja and its selling price at Kuka is explained partly by the cost of transport, partly by the perishability of the product and partly by the effective demand

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1. Barth, Travels, Vol.I, pp.498, 514.
2. Robinson, Hausaland, pp.114-118.
3. Ibid.
4. C.O. 879/49, H. J. Reid, "Memorandum on the British Possessions in West Africa", 12 May 1897.
5. Robinson, Hausaland, p.117.

for it. As will be examined in the thesis, transport costs for long distances were usually proportionately higher than for short distances.

The longer a perishable product had to be carried the higher would be its selling price. The kola nut, which is a delicate commodity and which is liable to spoil on long distances is an example. In order to allow for profit, the value of the spoilt nuts had to be spread over the saleable ones.

High demand for a product could also raise its ultimate selling price. Even if the transport cost of a product is low and the product is imperishable, its selling price can still be high, if it is scarce in relation to effective demand. In northern parts of Nigeria, the kola nuts was a scarce commodity, demand for it was high, and, consequently, its selling price was high.

Trans-Atlantic Trade

Until the fifteenth century the only known international traders with what is now Nigeria were the peoples of North Africa.[1] Their trading influence was not only on the northern states but also on even the most southerly states. Until about 1600, at latest, the Nupe, Yoruba and other southerly states, even Benin, were looking to the north for their essential supplies of salt, of brass and bronze and of horses. Horses were used in a great number for military purposes in the Old Oyo kingdom. But owing to lack of fodder and prevalence of tse-tse flies, they were used only as symbols

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1. Fage, A History, p.47.

of prestige in the forest kingdoms.[1] The northward trade continued to flourish in the nineteenth century, even in spite of the Fulani jihad which began early in that century.[2] Since the trans-Atlantic traders could not supply some essential products such as horses which the jihadists greatly needed, the northward trade continued.

However, it appears that as from about 1600 the influence of trans-Atlantic trade had been well felt by, at least, the coastal and forest states of the country. The bulk of work that has been done on this trade has always focused attention mainly on the trade in slaves, giving the general reader the impression that no other commodity besides slaves was shipped across the Atlantic.

The Portuguese, the first Europeans to establish international trade with the coastal peoples of West Africa originally desired to trade in gold. But their efforts on the coast to divert gold from the trans-Saharan routes were only partly successful mainly because the gold-supplying Akany and Twifu, the adjacent forest districts in modern Ghana, still continued to supply the flourishing trade of the north in the fifteenth century.[3]

The Portuguese then shifted their interest to the coastal Lagos-Benin area, where they found an active trade in progress. In Benin, they traded in peppers and ivory. They also

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1. Fage, A History, p.45.

2. Boahen, Adu A., "The Caravan Trade in the Nineteenth Century", J.A.H., III, 2, 1962, pp.349-359; Newbury, C. W., "North African and Western Sudan trade in the nineteenth century: a re-evaluation", J.A.H., VII, 2, 1966, pp.233-246.

3. Fage, A History, p.52.

saw woven cloths and Akori beads. Fage has suggested that "when the Portuguese arrived in Lower Guinea, in the 1470's and 1480's, there was already an established trade between the Benin region and the Gold Coast, and that outstanding among the exports from the Benin region were cloth and beads, especially the beads termed Akori".[1] These Benin cloths and beads had probably reached the gold and kola nut producers through the Kano-Gonja long-distance traders. Benin might have exported them in exchange for horses, natron and other northern products. However, the Portuguese knew that the gold producers wanted both cloths and beads and they got them from Benin.

The sixteenth-century sources indicate that when English merchants, too, were not satisfied with the trickles of gold that reached the coast, they made Benin their target as a centre of lucrative trade. It was pepper rather than slaves that they loaded their ships with. They found in the court of the king up to two tons of pepper already stored and when the merchants showed interest, the king ordered more to be brought. Within thirty days they had gathered as much as eighty tons of pepper.[2]

Even in the seventeenth century, slaves were not the only commodities bought from Benin. A contemporary indicates

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1. Fage, J. D., "Some Remarks on Beads and Trade in Lower Guidea in the Sixteenth and Seventeenth Centuries", J.A.H. III, 2, 1962, p.344.

2. Eden, Richard, "Decades of the New World", 1555, from "The Voyage of M. Thomas Windham to Guinea and the Kingdom of Benin, Anno, 1553", in Richard Hakluyt, The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation, Glasgow, 1904, Vol.VI, pp.148-50, in Hodgkin, Perspectives, pp.107-110.

that the road from Gwato - where the Portuguese first established their factory in Benin area - to Benin was lined with farms of pepper and cotton trees. These were cultivated extensively both for home and external consumption. The Dutch actually exchanged their colourful cloths, drinking vessels, brass bracelets, iron bars, crystal beads, mirrors, fine coral and Indian cowries with products such as blue cloths, blue coloured beads, Acori, leopard skins and pepper. In addition, Benin sold some female slaves because nothing would induce the king to part with his male slaves whom he used for production purposes.[1]

It is striking that neither slaves nor palm oil, both of which later dominated the Atlantic trade, was originally the main object of trade for any of the earliest European merchants on the coast. The captured Negroes who first entered the international trade were perhaps not regarded as slaves. The idea was to provide a batch of pupils to be assimilated into Christian and European civilisation.[2] The question that readily leaps to mind is why was the slave rather than any of these other products for so long dominated the Atlantic trade.

Answers to such questions cannot be readily given. However, the question of demand is of crucial importance for any production since nobody can be as irrational as to supply what is not demanded or likely to be demanded. Like other consumers, the merchants were the 'kings' who could dictate

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1. Dapper, Description, in Hodgkin, Perspective, p.128.
2. Fage, A History, p.51.

whatever they wanted. When the Portuguese, for instance, demanded woven cloths and beads which they needed to exchange for gold, they obtained plenty of them. When occasion created the need for slaves, they and later other European merchants had them on a large scale.

The first few slaves that the Portuguese bought in the sixteenth century were carried not across the seas but to the Gold Coast where they were needed in mining gold and in carrying the bulky goods that were exchanged for gold from the coast to the interior.[1] Also by the 1520's the Portuguese had discovered that the fertile but sparsely occupied Cape Verde islands were suitable for the cultivation of sugar cane; their interest in the trade with the mainland of West Africa was no longer in gold but in securing slaves to work in their sugar plantations.

The discovery of the West Indies and the Americas by about 1504 and the need for labourers to work in the mines and on the plantations created the demand for slaves from West Africa, where they had already had some. "Thus, in about 1530, commenced the trans-Atlantic slave trade, the carriage by Europeans of African slaves across the Atlantic for sale in the Americas, a trade which was to be the most important single external influence on the life of West Africa for the next three and a half centuries."[2]

To the extent that there was a demand for slaves, the supply continued. Both the demand and the supply did not cease,

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1. Fage, A History, p.54.
2. Ibid. p.64.

but, in fact, may have increased after Britain had initiated treaties with other European governments to abolish the slave trade. Whereas the annual export from the Niger Delta had been about 70,000 to 80,000 in the eighteenth century, the annual export is said to have risen to 135,000 in the nineteenth century after the great powers had condemned the traffic.[1] In abolishing the trade the British government concentrated first and mainly on the demand side, realising that as long as there was demand the supply would be assured. They made treaties with African suppliers, too, particularly in such places as Bonny and Lagos.[2]

The demand for palm oil in the nineteenth century was also sufficient to stimulate its supply on a large scale. Palm oil was needed in Europe as an essential ingredient in the manufacture of soap, and candles, and as a lubricant for machines. Although the internal slave trade continued, such slaves were used for production and carriage of palm oil, cotton, ivory, and other products which were regarded as legitimate.[3] The shift from slave trade to palm oil trade was gradual but significant. In 1834, 13,945 tons of palm oil was exported; and this had risen to about 25,000 tons in

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1. Dike, Trade and Politics, pp.81-82. These figures cannot be taken as authoritative. For a detailed exposition of the Atlantic slave trade see Philip D. Curtin, The Atlantic Slave Trade, The University of Wisconsin Press, Madison, 1969.

2. Dike, Trade and Politics, p.83.

3. Hopkins, A. G., "Economic Imperialism in West Africa: Lagos, 1880-92", Economic History Review, Dec. 1968, pp.580-606. Also see Newbury, C. W., The Western Slave Coast and its Rulers, O.U.P., 1966, p.58, for Lagos exports of palm oil, ivory and cotton.

1845, although the exports fluctuated.[1] The same ports that were used for trade in slaves were transferred to the trade in palm oil.

There was also demand for cotton. Indeed, more exported cotton than was effectively demanded was supplied. Lagos export rose from 34,491 lb. in 1856 to 153,754 lb. in 1861.[2] At Abeokuta a European merchant confessed in 1856 that "We cannot buy the quantity that is daily brought into the establishment at Ake."[3] Six years later, in another part of the country, at Gbebe, at the confluence of the Niger and Benue, the son of Samuel Crowther, a Yoruba Church missionary on the Niger, recorded that "the stock for buying cotton was exhausted ... and we have to tell the people we wanted no more cotton ... they went back with their baskets of cotton on their heads greatly disappointed - not even did they cease to bring cotton".[4] At this time the American civil war raised cotton prices in Africa. Cotton was not the only product so immensely supplied. The African Times recorded that "large quantity of cotton was brought to Dr. Baikie's market at Lokoja, as well as shea butter, and ivory, and so on, but they (the producers) were sadly disappointed when they did not meet the ship, for she stopped only twelve days at the confluence".[5]

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1. Dike, Trade and Politics, p.97.
2. Newbury, Slave Coast, p.58.
3. C.M.S. Archive, Letter of Henry Robin to Henry Venn, CA2/080, 3 July, 1856.
4. C.M.S. Archive, Journal of Crowther, D.C., CA3/013/36, July 1862.
5. The African Times, 23 January 1863. (Crowther's extract for 9 September 1862.)

It could be well assumed, at least for the sake of argument, that if neither the trans-Saharan and the trans-Atlantic traders had ever had occasion to demand slaves, trade in other articles would probably have stimulated production on a greater scale. But, as Cunningham said, "We owe a debt to Thorold Rogers because of his insistence on the importance of actuality in the economic study if it is to have any practical value".[1] We are more concerned with what actually happened. As it happened, the international trade stimulated the production of whatever was demanded.

In return for the products supplied, manufactured goods were imported into the country. To what extent the manufactured goods snuffed out the domestic production is difficult to estimate. But it is remarkable that even today most of the domestic industries still continue to function. Local demands for the output of blacksmiths actually increased: they had more implements to make and also to repair because demand for tools increased as production for export grew. To this increased production, labour previously exacted on salt making or iron mining was diverted.

The increased demand for agricultural and non-agricultural output also led to a considerable use of slaves. What is significant in this is that economic links had been established before the colonial era when the country became a political unit. Slaves that were used for production left their homes forcibly or voluntarily for areas other than their own. For example, Hausa-speaking people were found in great numbers in Ibadan in the

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1. Cunningham, Hints, p.11.

nineteenth century. They were known locally as "Gambari"; and they dominated the thousands of slaves of Oluyole, the Bashorun and military ruler of Ibadan from about 1837 to 1847.[1]

Many slaves were also found in Ijebu kingdom in the south-west of the country.[2] Baikie noted in 1862 that most of the slaves sold in Bida found their way to Yorubaland where they were used for production.[3] The Yoruba too were found in places far away from their homes. Many Egba who had lived for several years as slaves in Ilorin and who possessed some knowledge of Hausa were seen by Hinderer at Abeokuta.[4] Abo and Nupe slaves were numerous in Kano, and because they were excellent tradesmen, nothing would make their masters sell them.[5]

In 1830 Richard Lander recorded that the "Queen" of Bussa had a number of Fulani slaves who were found to be the best people for minding and milking her cattle.[6] Also Aro long-distance traders and Awka craftsmen were found throughout the Iboland and its surroundings. In the nineteenth century, the Arochuku people were "the most famous trading community

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1. Akinyele, I. B., Iwe Itan Ibadan, Iwo, Ikirun, ati Oshogbo, Ibadan, 1911, p.47.

2. C.O. 147/133, Evidence of James Johnson, enclosed in Denton to Chamberlain, 4 June 1898.

3. F.O. 97/434, Baikie to Russell, 13 March 1862.

4. C.M.S. Archive, Journal of David Hinderer, CA2/049, October 1849.

5. Denham and Clapperton, Narrative, Vol. II, p.258.

6. Lander, Journal, Vol. II, p.188.

in Iboland".[1] Thus international trade encouraged the most comprehensive country-wide network of these intergroup relationships.

Producers in large numbers had to be fed adequately. The introduction of such foodcrops as cassava and maize, probably from the Americas, was another aspect of international trade of great economic significance.[2] The trade in palm oil, cotton, leather work, shea butter, woven cloths and other products was beneficial to a considerable number of producers. Unlike the slave trade, which was dominated by the district heads or rulers, the trade in the other products touched the purses of small producers. A person who could produce a small guard of palm oil or a pound of cotton had some purchasing power, however small.

The products which entered internal and international trade were moved in small quantities from far and wide to central places. The enormous amount of products that was exported is indicative of the great use to which transport was put. Both palm oil and cotton had greater advantage of entering the Atlantic trade.

Oil palms grow luxuriantly not too far away from the coast and big rivers to which palm oil could be headloaded in small quantities and from which canoes could carry it in casks or puncheons to the coast. Conversely, the amount of the shea that entered the Atlantic trade was considerably smaller.

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1. Ukwu, Thesis, p.52.

2. Morgan and Pugh, West Africa, pp.75-6.

There seems to be no doubt that the shea producers could have produced a greater quantity than was produced if there had been a higher demand for it. But since the shea grows in the savanna, far away from the coast, the cost of transporting it to the coast must have been too high for the price that the Europeans would be prepared to pay for it.

Cotton had the advantage of being a light product which could be transported from long distances. Though water can easily destroy it, it can be carried for a long time in the dry season without getting spoilt.

Currency

It is beyond the scope of this work to trace each and every type of currency used before the introduction of a single uniform currency by the Colonial Government. It is discussed, firstly, because it is necessary to include the common means of exchange in any discussion of this type, and, secondly, to point out the obstacles that confronted a long-distance trader or traveller who could not rely on a common medium of exchange or a standard measure of value.

The earliest form of trade was probably by barter. By this system a person exchanged what he produced or had with what he wanted[1] either "according to established rates or by on-the-spot bargaining".[2] As late as 1830, Richard Lander saw a small town on the bank of the Niger where this direct system of exchange was used. What surprised him most was that the transaction went on

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1. Ottenberg, in Markets, p.123.
2. Lars Sundstrom, The Trade of Guinea, Lund, 1965, p.66.

without a word passing between the parties.[1] A major problem in this system was the great amount of time it consumed. The purchaser had to add more in small bits to what he wanted to exchange until an equilibrium was reached.

Barter was widely used by both indigenous and foreign travellers in Africa. It would appear that the foreign travellers naturally faced more difficulties in using it than did the indigenous traders.[2] According to Sundstrom, there is no evidence to suggest that the African "ever consciously suffered from the inefficiency of barter. Actually, the present evidence suggests that barter exchange proceeded smoothly and profitably and was usually facilitated by such financial techniques as credit and deferred payments".[3]

Although many types of currency were used in each small area of the country, particular ones were in circulation at a particular time. The nineteenth-century travellers who saw and used these currencies were themselves often in difficulties in understanding and in using them. Table 1 in the Appendix shows the nineteenth-century currencies, with their approximate equivalents, as found by the travellers. This Table gives a general idea of intricacies involved in local exchanges.

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1. Lander, Journal, Vol. III, pp. 161-3.

2. Sundstrom refers to Cameron's difficulties in hiring a boat from one Syde in Central Africa. "Syde's agent wished to be paid in ivory, of which I had none, but I found that Mohammed ibn Salib had ivory and wanted cloth. Still, as I had no cloth, this did not assist me greatly until I heard that Mohammed ibn Ghariv had cloth and wanted wire. This I fortunately had ..." Trade of Guinea, p.68, cited from Cameron, V. L., Across Africa, II, 1877, London, p.426.

3. Sundstrom, Trade of Guinea, p.68.

Many more problems faced a purchaser, for instance, a type of currency could have many variations. Talbot noted that five different patterns of 'bars' composed chiefly of copper manillas were in circulation in the nineteenth century in the Brass-Bonny region.[1] A particular type might be used by a section of the people who might refuse another type. In Iboland, Basden noted that up till the early twentieth century large cowrie shells used at Onitsha on the Niger were not acceptable in the eastern hinterland where only the small type was in circulation.[2] In the same region, at Afikpo, Ottenberg noted that cowries were not used at all;[3] and the Awka also in the southeast did not accept cowries which they did not consider as money. They used small half-inch "tin-tacks" even in acquiring slaves.[4]

Similar problems also occurred in the northeast of the country. In 1824, at Logone around Lake Chad, the currency consisted of thin plates of iron, in the shape of a horse-shoe, ten or twelve of which made a parcel and thirty of which were equivalent to a dollar or ten rottala.[5] These were not in circulation at Kuka and Bornu in the neighbourhood of Logone.[6] Whereas cowries had been introduced in Bornu as from 1848,

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1. Talbot, Southern Nigeria, p.875.
2. Basden, Among the Ibos, p.198.
3. Ottenberg, in Markets, p.124.
4. Basden, Among the Ibos, p.201.
5. Denham and Clapperton, Narrative, Vol. I, pp.17-18.
6. Ibid.

the country people refused to have them in 1851 and still preferred only shirts as a means of exchange.[1] At Adamawa in the northeast, only Leppi, a strip of cloth about two and a quarter inches wide was the standard of value.[2] On the other hand, the Gori people on the Niger would have nothing except cowries as a means of exchange.[3] In some other parts, means of exchange included slaves and salt. The rod was the main currency among the Efik on the Cross River.[4]

Of all the types of currency that were used in the nineteenth century, there was one - the cowrie (Cypraea moneta) - which was widely used in almost all parts of the country. Although different local names were given to it, the cowrie shell was widely recognised as money. A nineteenth-century traveller in Yorubaland gave the table of calculation thus:[5]

TABLE 2: Calculation of cowries in Yorubaland in the nineteenth century

40 cowries	=	1 'string'
50 strings	=	1 'head' (2,000 cowries)
10 heads	=	1 'bag' (20,000 cowries)

He added that "It is usual to value two thousand cowries at one dollar". Bowen's table agrees with the one Marion Johnson refers to as the usual nineteenth-century table.[6] But the

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1. Barth, Travels, Vol. II, p.57.
2. Ibid., p.151.
3. Schon and Crowther, Journals of, p.298.
4. Latham, A. J. H., "Currency, Credit and Capitalism on the Cross River in the Pre-Colonial Era", J.A.H., XII, 4, 1971.
5. Bowen, Adventures, p.98.
6. Marion Johnson, "The Cowrie Currencies of West Africa", in J.A,HXI, 1, 1970, pp.43-44.

cowries was calculated in a different way in Iboland. Basden's table runs thus:[1]

TABLE 3: Calculation of cowries in Iboland

6 Nkpulu (single shells)	=	1 Ekpette (or 'isi ego')
12 Nkpulu	=	Ego Nabo (or Ekpette nabo)
18 Nkpulu	=	Ego n'ato

and so on

10 Ekpette	=	Ofu ukwu (or Ekpette ili)
20 Ekpette	=	Ukwu nabo
30 Ekpette	=	Ukwu n'ato

and so on

20 Ukwu	=	Ofu akwa
20 Akwa	=	Ofu akpa (bag)

Such variations might have existed in the different localities; and this posed another problem to a trader who was unaware of such differences.

The cowrie has been studied in almost all its facets - problems of transport and calculations, its comparative advantage over barter and its benefit to a society with a low purchasing power. All this has been treated by writers such as Jones,[2] Hopkins[3] and Marion Johnson.[4]

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1. Basden, G. T., Niger Ibos, Frank Cass, 1966, London, p.338.
2. Jones, G. I., "Native ~~Narrative~~ and Trade Currencies in Southern Nigeria during the Eighteenth and Nineteenth Centuries", in Africa, Vol.28, No. 1.
3. Hopkins, A. G., "The Currency Revolution in South-west Nigeria in the late Nineteenth Century", J.H.S.N., Vol. III, No. 3, December 1966, pp.471-483.
4. Marion Johnson, "The Cowrie Currencies of West Africa", Part I, J.A.H., XI, 1, 1970, pp.17-49.

The introduction of the cowrie to West Africa can be seen as an effect of international trade. According to Marion Johnson, both the Cypraea moneta and C.annulus were Indian Ocean species; the former from the Maldive Islands, and the latter from the East African coast and islands, especially Zanzibar and the nearby islands. Cowries have been used for trade transactions on the Niger Bend possibly before the fourteenth century when Ibn Battuta saw them at Gao on the Niger and noted that "the buying and selling of its inhabitants is done with cowry shells and the same is the case in Mali".[1] Thus the trans-Saharan traders must have carried cowries southwards to the northern fringes of the country. Cowries must have been transported southwards from the north. It has been suggested that the Portuguese might have found the use of cowries in existence in Benin otherwise the Benin people might not have accepted them so readily.[2]

It is possible that cowries reached the Benin from the north via Old Oyo just as horses might have also reached them. But "some olive shells somewhat similar to cowries, but lacking the characteristic lip"[3] were found in large numbers on some West African beaches. It was possible that the shell currency which the Portuguese found in Benin consisted of these shells.

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1. Ibn Battuta, Travels, p.334.
2. Johnson, "The Cowrie", p.18.
3. Ibid.

In fact, tradition tends to suggest this. Samuel Johnson, the Yoruba historian, noted that the Oba of Benin, one of the seven children of Oduduwa the legendary father of the Yoruba, inherited money which consisted of cowries.[1] It might well be that these shells from West African beaches had penetrated the hinterland before those from the Indian Ocean were introduced by the international traders from across the Sahara and the Atlantic.

But certainly it was the cowrie imported both across the Sahara and from the Atlantic that led to its country-wide use as a currency. This was of considerable economic importance to pre-colonial Nigeria.

The use of cowries has been seen as inadequate by many observers for market transactions. Robinson's comment is certainly one of the most precise: "The cowries are indeed but a caricature of what a currency should be, lacking as they do the three characteristics which, according to political economists, a medium of exchange should possess, namely intrinsic value, scarcity and portability."[2]

As there was no governmental control of cowries their value fluctuated, sometimes violently. In fact, they could be very scarce, contrary to Robinson's generalisation. For example, in 1851, Barth found that "the dearth in Katsina is increased by the scarcity of shells in the market, which form the standard currency". He was "obliged to change a dollar for 2300 shells instead of 2500".[3] But perhaps the greatest factor

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1. Samuel Johnson, The History of the Yorubas, C.M.S., Lagos, 1921, p.8.
2. Robinson, Hausaland, pp.155-6.
3. Barth, Travels, Vol. III, p.87.

to reckon with was the cost of transporting cowries particularly on land routes. This has been investigated in Chapter 4.

Despite its lack of easy portability, the cowrie performed the function of money - as a medium of exchange. In its area of circulation the users showed a considerable amount of confidence in it and accepted it. Although, like any other money, its value sometimes appreciated or depreciated, the same cowrie shells that were used in Benin at the extreme south could also be used, nearly 900 miles away, at Kano, in the extreme north.

Money should be capable of being used as a standard of deferred payment and as a store of wealth.[1] The cowrie also performed this function. For example, Clapperton deposited a good amount of cowries with his Arab friend, Hamada ben Medoon, for a long time, which he reserved for payment to his servants. Later on, he drew a bill to recover it from his friend and bought a horse with his saved cowries.[2] Clapperton also noted "the great convenience of the cowrie, which no forgery can imitate; and which, by the dexterity of the natives in reckoning the largest sums, forms a ready medium of exchange in all transactions, from the lowest to the highest".[3] It was peculiarly suitable for small transactions to the majority of the people whose purchasing power was very small. The cowrie currency

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1. Ord, H. W., and Livingstone, I., An Introduction to West African Economics, London, 1969, Ch.18.

2. Clapperton, Second Expedition, p.173.

3. Denham and Clapperton, Narrative, Vol. II, p.254.

persisted for many centuries because, as Hopkins noted, "Its size and shape made it easy to handle, convenient to count and impossible to counterfeit, while its durability meant that it could be stored safely for many years".[1]

The other currency that came next to cowries in extensive circulation was the Spanish or South American dollar. It was another by-product of the international trade, introduced to West Africa by the trans-Atlantic traders by the close of the seventeenth century. But it did not become widely used until about the 1830's.[2] Unlike the cowrie, it had the advantage of easy portability and so could be more easily used for large transactions. Also, unlike the cowrie, the merchants who imported it into the country were ready to accept it back. However, the dollar and the cowrie were never integrated because "the dollar was on the gold standard, while the cowrie had what might be called a gastropod standard of its own".[3] Both continued in circulation in many parts of the country up to the early twentieth century, when British silver coin replaced them.[4]

Conclusion

In conclusion, it is necessary to clarify a few points regarding the organisation of the pre-colonial economy. It

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1. Hopkins, "The Currency Revolution", p.472.

2. Ibid., p.473.

3. Ibid.

4. Ibid.

is notable that no distinct specialisation existed especially in the earliest times. What existed was a sort of semi-specialisation. Farming or occupations closely connected with it took either the producers' full time or a good part of their time. Farmers who produced cotton or indigo leaves also produced their own food crops. As farming could be combined with other jobs, there were slack periods when work on the farm was much reduced and when only few hands were needed. Then non-agricultural activities were engaged in. As pointed out above, a porter could spin even while walking. The women who attended the market also produced products such as soap, pots and mats which they would sell there. Perhaps the only class of people who found it inconvenient to combine many economic activities were the long-distance traders and the itinerant vendors or workers, because they were too far away from home for any other work.

Among every settled agricultural community were some craftsmen such as smiths, weavers, dyers, potters and hunters. There were also other workers, such as priests, drummers and entertainers. For example, Basden noted that the chiefs in Iboland were "adept in the art of trumpeting on the horns and use them for communicating quite long messages ... Music is supposed to instil energy into the labourers - help them to forget the burden of their task".[1] Most of such activities were meant to minister to the needs of agriculture. But even the most self-sufficient village required some things that could not be found. This necessitated a constant movement of people

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1. Basden, Among the Ibos, p.186.

and goods within the country - from one section to another, from towns to villages and from the hinterland to the ports.

Although the basic unit of production was the family, the craftsmen were organised in guilds according to lineages. Such guilds watched entry into their crafts and ensured standard production.[1] There were also "trade chiefs" who "furthered the commercial interests of their towns, settled disputes at the markets and made rules to ensure just prices and safeguard the standards of workmanship in crafts".[2] Many such organisations must have existed all over the country in varying degrees. But to what extent they compared with the merchant and craft guilds in medieval Europe is not known. Not only this but many other aspects of pre-colonial domestic economies require further research. One of them, transport, is the subject of this study.

The movement of products is intricately interwoven with the pre-colonial economy described in this chapter. Food and many other commodities were moved to areas which did not or could not produce them. In the same way, travellers, traders, and the household labour force moved about. These movements were not just coastwards but were in all directions. What the pre-colonial transport facilities were and how they worked will now be further examined.

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1. Peter Lloyd, "Craft Organisation in Yoruba Towns", Africa, Vol. 23, No. 1, January 1953, pp.30-44.

2. Biobaku, S. O., The Egba and their neighbours, 1842-1872, Oxford, 1957, p.6.

SECTION II

LAND TRANSPORT

CHAPTER 3

LAND TRANSPORT IN PRE-COLONIAL NIGERIA:

General Characteristics of Trade Routes

Introduction

This chapter concentrates on the trade routes[1] while the next two examine the means by which the actual transportation was executed. As Hindley says, "the history of roads is also the history of the traffic that has travelled over them and the communities by which they were built"[2]. The route and the means of transport have always had reciprocal effects[3]. They are treated here under different chapters simply for the purpose of clear exposition. Irrespective of who used the routes - porters or travellers, pack-animals or cattle - some common problems existed.

The problems on the trade routes were due mainly to both physical and human obstructions. Among the physical impediments were the narrowness of the routes; the interruptions leading to their circuitousness, and the problems that occurred in the wet and dry seasons. Obstructions were also caused by human beings at the toll collecting centres and at the ferrying points. Insecurity on the routes and lack of maintenance of many routes were among other problems caused by human beings.

The main reason for focusing attention on these problems is to show the delays that they brought on travelling and on transportation of products. The hazards and the discomforts that were experienced by

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1. See Map 2 in the Folder.
2. Geoffrey Hindley, A History of Roads, London, 1971, p.1.
3. Albert Leighton, Transport and Communication in Early Medieval Europe, A.D. 500-1100, David and Charles, London 1972, p.48.

travellers and traders tend to suggest that very little intercourse and trade took place in the country. But as it will be pointed out, some comforts existed on the routes. The trading contacts among the people also suggest that the communities in Nigeria did not live as "a closed traditional society"[1] even in the pre-colonial era.

But to mix up these problems with the description of transportation by porters and pack-animals would create a serious muddle. Each of the users of the trade routes had peculiarities and problems which require critical and clear analysis. The greatest danger involved in an arrangement of this type is repetition. This has been reduced to the minimum possible by referring to what has been mentioned above or what will be treated below when it is considered absolutely necessary.

Origin of routes

An interesting question that the Akan of modern Ghana ask, as a common saying, is "the path crosses the river, the river crosses the path, which is the elder...?"[2] According to Boaten, the Akan conceded the earlier growth to the river. The river was the creation of God, whereas the path was made by man. In the mind of an Akan (or of his counterpart in many other parts of the world) the existence of the river, lagoon, or creek was regarded as the work of nature. It was realised, however, that every path that was trodden by man or animal had been consciously or unconsciously created by man or animal. It is deemed that man has always been a traveller or wanderer, carrying his belongings about from one place to another[3].

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1. H. Myint, The Economics of the Developing Countries, London, 1967,p.11.

2. Kwasi Boaten, "Trade Routes in Asante Before the Colonial Period", unpublished. I am grateful to Dr.Bolanle Awe of the Institute of African Studies, University of Ibadan, for directing my attention to the Paper.

3. Hindley, Roads, p.1.

How the multi-farious footpaths or land routes that connected farm lands, hamlets, towns and regions began cannot be traced accurately. Consequently, the nature and sequence of their early development can only be inferred. The role of hunters as the creators of some tracks has been mentioned above[1]. It has also been suggested that in Asante-land, it was the hunters' trails that first joined earliest settlements. But later, owing to constant use, the trails developed into open routes[2]. The same suggestion has been made in the case of Yorubaland. Hunters were the explorers. In pursuit of their calling, hunters reached places hitherto unknown to their people. The tracks that they repeatedly beat out in the dry seasons became known to others. These tracks connected forests and settlements and, ultimately, became footpaths trodden by farmers and traders[3]. In both Asante and Yoruba countries the routes developed into highways as trade became an important economic activity. In fact, "many modern roads followed the tracks"[4].

The story of the hunters' trails cannot be typical of every trade route in Nigeria. What the hunters did in the forest kingdoms may have been done by pastoralists in the savanna regions. Like the hunters, they moved about mainly in the dry season, when green grass and water were difficult to obtain[5]. It is possible that during such wanderings they created new tracks which later developed into trade routes, as hunters' trails developed in the south. Users of the savanna routes had to follow tracks on which water could be easily obtained[6]. It would appear that the

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1. See "Hunting" in Chap.2.
2. Boaten, Trade Routes.
3. Ojo, Culture, p.40.
4. Ibid.
5. Meek, Northern Tribes, pp.115-117.
6. Hindley, Roads, p.1.

routes taken by the caravans across the Sahara also followed water deposits, and were created by the pastoralists who first had direct access to supplies of horses, donkeys and camels[1].

The first routes may have been short ones, linking farmlands, villages and towns. Oral evidence in Yorubaland indicates that deliberate efforts were made by farmers to make tracks in order to connect one farmland to another. Extensive cultivation encouraged farmers to look for virgin lands which were far away from their settlements. They needed to cut the shortest possible route to reach their distant farms[2]. Also, the boundary lines, dividing two farmlands or separating farmland from uncultivated land, was usually a footpath.

Long trade routes, such as Kukawa-Sokoto, Kano-Gonja, Kano-Nupe or Kano-Badagry routes may have been created piecemeal. The main reason for this is that the routes were so long that they normally passed through different communities. Although there were trading contacts among the communities, the decision to build and keep routes was largely a matter for each to decide. It is possible that most of the routes were created at the same period and in the same way. The linking of the trade routes must have been the result of the ascendancy of trade as a major economic activity[3]. The origins and evolution of local and long-distance routes requires further research. Such work would throw light on the remote history of the domestic economy of the country.

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1. Fage, History, p.14.
2. Oral evidence, collected at Ibadan, Oyo. Ogbomoso, Kisi and Ilorin, gave this indication.
3. Boaten, Trade Routes.

The physical appearance of the earliest trade routes in Nigeria seems to compare with the earliest roads in England. The Nigerian routes were, essentially, for animal and pedestrian traffic[1]. In England the roads were originally created by travellers or the drivers of pack-horses, making their way as best as they could from place to place[2]. The tracks were merely cleared of obstructions or made traversable. No definite attempts were made at road construction: consequently the tracks became more and more deeply worn and many of them were described as "Holloways"[3]. As late as 1680 a traveller remarked that some of the roads were "so exceedingly narrow that we had not one inch of ground to set a foot upon to alight from the horse"[4]. Even in 1707 one Rev. Mr. Brome, Rector of Cheriton, in Kent, found the roads in Devonshire so rocky and narrow that it was not possible for the farmers to use wagons; they had to carry their corn on horseback[5]. In some places, the tracks "were worn to such an extent that the pack animals going along them were barely visible to people on the level"[6].

Narrowness of routes

The footpaths in many parts of pre-colonial Nigeria were also so narrow that they hardly allowed two people or animals to walk abreast.

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1. Hindley, Roads, p.2.
2. Jackman, Development of Transportation, p.5.
3. Kirkaldy & Evans, History of Transport, p.10.
4. Jackman, Development of Transportation, p.86.
5. Ibid.
6. Kirkaldy & Evans, History of Transport, p.10.

A seventeenth-century writer on Benin noted that "in the country one sees nothing but bushes and a few paths which are so narrow that it is difficult for two people to walk abreast"[1].

Many nineteenth-century travellers also commented on the narrowness of the routes. In 1856 the CMS Gleaner recorded that in Yorubaland travelling had to be carried out in "Indian file" on account of the narrowness of the paths[2]. The same type of description was given for other parts of the country[3]. In his description of some routes, Robinson noted that the tracks "are the same in character all over Africa. They are veritable footpaths, never over a foot in breadth, beaten as hard as adamant, and rutted beneath the level of the forest bed by centuries of native traffic"[4]. Lander referred to a path that he saw as "a gutter or hollow, misnamed pathway"[5]. The route from Kuka to Adamawa was seen by Barth as being so full of holes that a moment's inattention might bring one down into a swampy hole[6].

The narrowness of the routes made walking extremely unpleasant. On many occasions porters and beasts of burden stumbled and scattered their loads. If such a load contained grain or liquid, the whole of it would be lost. Sometimes a horse could miss its step, fall, and knock its rider to the ground.

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1. Dapper, in Hodgkin, Perspective, p.123.
2. C.M. Gleaner, Vol.XV, 1965, p.61.
3. Allen Upward, "The Province of Kabba, Northern Nigeria", JAS, No.VII, April, 1903, pp.235-260. Robinson, Hausaland, p.43.
4. Robinson, Hausaland, p.53.
5. Lander, Journal, I.p.60.
6. Barth, Travels, II, pp.109-110.

For security and social reasons, it was usual for a large number of travellers to move as a caravan, forming a long train of walkers in a file. When David Hinderer made his first visit to Ibadan in May 1851 he joined a caravan of about 4,000 people at Atadi village, about twelve miles north-east of Abeokuta[1]. The distance between one traveller and another on the route, with the space occupied by each of them was not less than one yard. The distance between the man at the forefront and the last man in this caravan would thus be nearly three miles (allowing for wider gaps in between groups of friends).

Such a caravan was often very mixed, consisting of bullocks, asses, horses, men, women and children[2]. The speed was bound to be slow, spending days on a trip that might have taken a few hours if the route had been broad enough to allow faster walkers to overtake the slower ones. When two large caravans from opposite directions met on a narrow route and not at a resting place, one party had to wait for the other. If another caravan had met Hinderer's it would have had to wait for about an hour to allow the last person to pass. In such circumstances much unnecessary time must have been spent on the trade routes. One important reason for these narrow routes is that they were meant for animal and human passage. In the absence of wheel traffic, there was little incentive to broaden them. The broader roads which were sometimes found at the approach to towns (and inside them) were probably due to the greater number of people using them.

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1. C.M. Gleaner, 1865, Vol.XV, p.26.
2. Clapperton, Second Expedition, pp.75-76.

Circuitousness of routes

The trade routes were also circuitous. What Jackman said of the earliest roads in England is true, to a large extent, of the early routes in Nigeria. English travellers "made long circuits to reach fords where they could cross the streams; they chose high ground to escape the bogs of the plain or valley; and they deviated from the straight course at all obstructions"[1]. Most of the reasons that led an Englishman to deviate from a straight course also led his counterpart in Nigeria to do the same.

The physical features of routes in Nigeria also resembled those of many other parts of Africa. An observer noted:

> "African bush paths are the same everywhere - tracks worn by naked feet . . . infinitely devious, turning aside here to dodge a thorn branch grown across the track, here to avoid a pool of the last season's rain, but in general direction pursuing a wonderfully even course from village to village"2.

A few reasons can be suggested for the circuitousness of the routes. Circuits were sometimes resorted to in order to avoid ascending high hills[3] or crossing strong streams. For instance, when Hinderer was returning to Ibadan from Oshogbo in 1859, in the month of August, when many streams had swollen considerably, he had to take a circuitous route. By doing so, he avoided crossing River Osun on two occasions[4]. An interesting example is in the traditional story of the founding of Ibadan

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1. Jackman, Development of Transportation, p.5.

2. Louis Jackson, "The Anglo-German Boundary Expedition in Nigeria", G.J. 1, 26, July, 1905, p.32.

3. S. Crowther, "Bishop Crowther's Report on the Overland Journey from Lokoja to Bida, on the R.Niger and thence to Lagos, from November 10th 1871 to February 8th 1872, London, p.7.

4. CMS Archive, Journal of David Hinderer, CA2/049, August, 1859.

by Lagelu, the legendary father of the town. When lagelu left Ile-Ife with his party, the route he took to Ipara Forest, where he first settled (the earliest site of Ibadan), was a devious one "because if they had come by the direct route from Ife to Ibadan, passing through towns like Gbongan, Ikire and Apomu, they would have had to cross some big rivers, like the River Osun on the way. To avoid these rivers, they came by way of Ejigbo"[1].

If an obstacle was too large for a man or an animal to cross, the easiest course of action was to by-pass it. Many years later the obstruction was no longer visible[2]. But by then the detour had become the main path; and a new user could hardly understand reasons for the tortuous or zigzag nature of the routes. Lander, who observed such zigzags on his way to Eggan on the Niger, accused the people of being inconsiderate and indolent[3].

Deviation from straight courses could be reasonable if there were no tools to clear the obstructions. Moreover, the same travellers might not intend to use the routes again, and so had no incentive to remove obstructions. If a detour was to be avoided the alternative that was left to the traveller was to climb over every large obstruction on the route. This could be very tiring if many had to be crossed. An Administrator's experience on a route, in the early 20th century suggested that as many as sixty-five obstacles could cause a horse-rider to dismount within twenty miles[4]. A porter had to climb over such obstructions.

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1. Morgan, History of Ibadan, pp.28-29.

2. Robinson, Hausaland, p.54.

3. Lander, Journal, I, p.107;
   Robinson, Hausaland, p.54.

4. Ward-Price, H.L. Dark Subjects, London, 1916, p.71.

This was in a forest region, from Ilaro to Ajilete, in the southwest of the country, and was not necessarily typical of the country as a whole.

In order to avoid loss of life and property, taking a circuitous route (even if it was longer) might be a rational thing to do. It is also noticeable that by taking a circuitous route some trade could be diverted from large markets situated on main routes to small markets on less used routes. Therefore, detours from main routes could have "trade creation and trade diversion"[1] effects (to use the language of international trade).

Dry Season problems

Lack of drinking water was sometimes a great inconvenience in the dry season. Whilst passing from Kano to Kuka, Barth remarked "I have had a proof of the great inconvenience which many parts of Negroland suffer with regard to water, for the well at which we watered our horses this morning measured no less than three and thirty fathoms"[2]. He found out later that this was not peculiar to the Kano-Bornu area but a common feature in the areas bordering the Sahara, where some wells were as much as three hundred and sixty feet deep[3]. Nor was lack of water restricted to the north. Hinderer also experienced it in the south, on the Abeokuta-Ibadan route which was one of the most frequented routes. Acute shortage of water, especially in the dry season could render a route entirely useless.

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1. R. Lipsey "The Theory of Customs Unions: A General Survey" in Jagdish Bhagwati (Ed). International Trade -, Penguin Books, 1972, p.219.

2. Barth, Travels, I, p.533, A fathom = 6 ft.

3. Ibid.

Some routes were also difficult to pass. In 1824, in the month of February, dry season, when Denham and his party passed through Logone near Bornu, the routes were obstructed by the branches of prickly trees and overhanging branches of thorny shrubs which not only tore their shirts and cloaks, but were also strong enough to drag down loads from the backs of their camels[1]. Usually, caravan traders walked three miles per hour[2]. But the route was so bad that they were not able to cover more than twenty-two miles in nearly twelve hours, an average speed of less than two miles per hour[3].

Wet Season problems

In the wet season travellers encountered certain obstacles. The routes which they took in the dry season because they ran through places where water was easily obtainable could become flooded in the wet season. In 1825, at Badagry, Lander found that the trade route was rendered almost impassable as a result of rains that had fallen the preceding night[4]. "It was not without experiencing considerable difficulty that we could pursue our journey. The mud and water reached, in some places, almost to the horses' shoulders"[5]. He also discovered that the road from Bussa to Wawa in Borgu, which was excellent in the dry season, became difficult in the wet season because it was so close to the river, which always overflowed its banks[6].

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1. Denham and Clapperton, Narrative, pp.10-11; 144-145.
2. Hinderer, CA2/049, August 20, 1858.
3. Denham & Clapperton, Narrative, p.10.
4. Lander, Records, I, p.73.
5. Ibid.
6. Lander, Records, I, p.141.

Almost every nineteenth-century traveller complained bitterly of flooded roads through which they passed in the wet season. Robinson's lucid remark is worth quoting:

> "Another difficulty, or at least serious inconvenience, which we met with on our march from Loko to Kaffi , was due to the large number of streams and swamps through which we had to wade . . . Scarcely a day passed without our having several times to wade through water or soft mud nearly up to our waists, the result being that our feet were ever scarcely ever dry, as no sooner had they begun to be so than another stream or marsh appeared to wet them again"1.

Sometimes the routes were so flooded that trips had to be cancelled, especially if pack animals were involved[2].

A flooded route was probably more tolerable than a swampy one. Whereas it was possible to wade through floods, it was almost impossible to walk through a swampy route. It meant lifting up one foot after the other; and if it was easy to deepen the foot inside the mud, it was most difficult to take it out! The case was worse for a loaded porter and absolutely impossible for a pack animal. Many travellers agreed that the most difficult problem on the routes was the swamps. A traveller noted, "We marched for three days through practically a continuous swamp"[3]. Flooded and muddy routes could lead to waste of time and loss of merchandise. For example, the journey that Lander did in one day with ease in the dry season occupied him two and a half days in the wet season[4]. If any load dropped into the swamp or the flood it could be completely destroyed.

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1. Robinson, Hausaland, p.51.
2. Barth, Travels, III, p.552.
3. Jackson, Expedition, p.33.
4. Lander, Records, I, p.159.

An equally serious disturbance to transportation in the rainy season was the torrential heavy downpours. Because of the climate in Nigeria, torrential rains could turn quickly routes into gutters or make them flooded and swampy. This could cause journeys to be delayed or even cancelled. Not only was the rain torrential, but it was often accompanied by very strong gales which were powerful enough to blow down trees. This types of delay was experienced by Robinson who said, "As we were in the very act of starting out, it commenced to rain with indescribable violence. It continued to pour without intermission for five hours"[1]. Even after the rain had stopped, the fear of the flood and the problem of crossing rivers and streams could lead to longer delays. It was necessary to wait until the floods and streams had subsided before starting a journey.

Also in the wet season, it was common for the paths to be very slippery. It constituted a danger to carriers who could easily slip, and drop their load[2]. Consequently, to obtain porters during rainy seasons was often a problem.

The growth of weeds along the routes could also constitute a nuisance to travellers. Weed-cutting or general repairing of routes was the concern of the village or district heads. Although some routes were well kept, the neglected ones were particularly common in the wet season when farm work was at its peak and people had less time to devote to route repairs and when weeds grew rapidly. Then the routes were covered with long grass and bush[3].

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1. Robinson, Hausaland, p.245.
2. CMS Archive, Journal of Samuel Pearse, CA2/076, 6 July, 1864.
3. Hinderer, CA2/049, August 16, 1858.

In 1830, Lander's route from Borgu to Yawuri was overgrown with tall grasses which were so high that they reached far above heads, and sprinkled a shower of water on them. Thorny shrubs tore their clothes and lacerated their flesh; and the branches of decayed trees, which had fallen across the pathway, made the route impassable[1].

In this season, ants often covered certain parts of the routes. In August 1858, on his way from Ilesha to Ile-Ife, towards the east of Yorubaland, Hinderer got into some ants which, according to him, caused the greatest troubles on his journey[2]. They easily got into clothes and long afterwards, one would still continue to feel their painful stings.

Multiplicity of routes

The multiplicity of routes in certain localities, caused trouble and delay to travellers. Routes often looked alike, though some might be less well worn. It was easy for someone who was unfamiliar with the routes to miss his way[3]. Barth noted that thirty or forty miles radius of Kukawa was intersected by many paths[4]. A difficulty could arise whenever a caravan of traders travelled. If one group went ahead, the group that took the rear could be uncertain of the way at a junction.

The traders, however, had a remedy for this by using route marks. A fresh twig of certain bushes could be laid across the branch of the route which had not been followed by the head of the caravan. The on-coming traders would see this and follow the unmarked one. But

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1. Lander, Record, II, p.109.
2. Hinderer, CA2/049, Aug.30, 1858.
3. Schon and Crowther, Journal of.., p.98.
4. Barth, Travels, II, p.92.

this tactic might aggravate rather than help the situation if there were two or more groups of different caravans. A caravan might follow the wrong marks[1].

River Crossing

There was scarcely any route that travellers took in the wet season that was not crossed by streams. Various methods, therefore, were devised in order to ensure safe crossings. These methods were dictated by the strength of the river to be crossed, the knowledge known to the people, and the means available for crossing. Despite local variations, methods were similar in the various parts of the country and even of the continent. For example, most of the methods adopted in Ethiopia and described by Pankhurst were also found in use in Nigeria[2]. The methods were by fording, by swimming, and by using bridges, calabashes (gourds), canoes, tubs and rafts.

Fording was a traditional and common method of crossing rivers. Any shallow river which was not deeper than three to four feet was always forded[3]. This was a simple method, but it was not free from dangers. Except in a few cases, where the river bed was sandy and clear, the bottoms of most rivers were swampy and rocky. Fording could turn out to be a particularly hazardous undertaking if the waters were infested with

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1. This happened to Barth's followers in 1851 on the Kano - Kukawa route. After he had gone in advance of his party, a second party of travellers who had likewise left their people behind came between Barth and his carriers. When the second party reached a junction they laid a twig across the chief route that they did not intend to follow. When Barth's porters reached the twig they thought that it had been laid for them by their leader though he knew nothing about such marks. They followed the by-way, whereas Barth went on the chief route which was marked. Much delay was thus caused.
2. R. Pankhurst, "Transport and Communications in Ethiopia, 1835-1935", (III), Journal of Transport History, Vol.V No.2. Nov, 1961, pp.166-181.
3. W.R. Miller in "C.M. Gleaner", 1900, p.138.

crocodiles. There was always the idea that if the travelling party was large its noise and splash on the water would be so great that anything dangerous would be frightened away[1].

Rivers are not uniformly deep; and although a stick might be used to gauge the depth as the party crossed, if a foot accidentally got into a hole, life and property might be endangered. If the river bed contained smooth and slippery granite, a porter, who had to support his load with his hands, might slip, lose his balance and find himself and his load in the water[2]. Usually, the tallest men in a caravan were prepared to carry children and loads across, especially when the river was narrow, deep and swift. Tall men who lived close to rivers did this for remuneration.

When beasts of burden were involved, fording was a more complicated undertaking. It was common for horses, which were often very clumsy at fording, to slip into the water with their riders[3]. It was usual for animals' loads to be taken from their backs and carried across by men. Donkeys could swim, with their heads and ears above water; and cattle and horses, too, could be made to swim across, But they had to get dry again before any journey could be resumed[4]. It was common for animals to refuse entering streams and much delay could be caused at ferrying points. When animals or men slipped into the water, it was to the great amusement of all on the journey.

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1. Tremearne, Tailed Head-Hunter, p.314.

2. Crowther, Report, pp.23-24.

3. Ibid.

4. Clapperton, Second Expedition, p.115; Robinson, Hausaland, p.246, Mockler-Ferryman, A.F., "Up the Niger.....", London, 1892, p.183.

The other traditional method that did not require the use of ferrying equipment was swimming. Whereas almost everyone, old or young, could ford a shallow stream, only those who lived along the river banks or creeks could swim[1]. On his way to Ilorin, Clarke noted that "Some active young men and good swimmers, who were on their way to the farm, made no hesitancy in taking their baskets, or whatever they had upon their heads, and swimming across with great ease"[2].

Both fording and swimming across rivers required only natural effort and skill; and no artificial aid was used. But there were deep, narrow and fast moving rivers which could neither be forded nor swum. Bridging of such rivers was an early device in the forest parts. On few occasions, big trees fell across rivers and they instantly became bridges.

Apart from such accidental cases, deliberate efforts were often made to bridge a river. Wherever a gigantic tree stood at the bank of a river, it was felled and directed over the river so that it could be used as a bridge. A bridge of this kind might submerge and people then found it difficult to walk without missing their footing. In order to avoid this, one or two strong ropes were tied strongly to trees at each end of the river. The travellers supported himself by moving his hands (or one hand, if he used one to support his load) along the ropes as he walked on the bridge. Thus he slowly crossed the river on the tree[3]. This technique was devised mainly in the forest kingdoms where suitable trees could be found at the river banks.

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1. Tremearne, Tailed Head-Hunter, p.314.

2. Clarke, Travels, p.109.

3. This method of crossing rivers was described to me at various places while I was on field work, 1971.

It appears that by the nineteenth century suitable trees had almost been exhausted. Only a few nineteenth-century travellers alluded to its use. One of them, Clarke, used bridges on two occasions in the northern part of Yorubaland and noted that those two were the only instances he saw in the country.

In areas where trees could not be felled directly over a river, wooden bridges were occasionally made. This type, too, was rarely seen in the nineteenth century. Both Clapperton[1] and his servant, Lander[2], crossed a stream over a wooden bridge on their way from Bussa to Kano, near a village called Moy-Yarrow, in 1826. Clapperton noted that "It was rudely constructed of rough branches covered with earth; long, and so narrow that two horses could not pass at one time"[3]. Both of them noted that it was the only one they saw. They crossed the bridge in the month of April, when the wet season was just commencing. What happened to the bridge later is not known. It was probably swept away by swift currents, but since the material for constructing the bridges could easily be obtained the actual construction of another would be a matter of hours.

Another traveller actually saw such "bridges of earth and wood" being rebuilt after the "swollen, rushing streams of the wet season"[4] had swept away the one that was constructed before. But in August, during the wet season, Townsend, a missionary at Abeokuta, crossed the river Owiwi

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1. Clapperton, Second Expedition, p.118.
2. Lander, Record, I.p.173.
3. Clapperton, Second Expedition, p.118.
4. John Raphel, Through Unknown Nigeria, London, (undated, but before 1914), p.222.

over a bridge near Awoyade village in Egbaland, in 1846. He described it as "a very good bridge formed of planks of about four inches thick supported by posts with a hand rail on each side"[1].

A more sophisticated bridge - a suspension one - was built for crossing River Ikpan in Ekoiland, in the southeast of the country in the early 20th century[2]. The bridge was over 130 feet long, made of "cane and tie-tie". It was tied to strong trees at either end, and it was so strong that ten to twelve carriers could walk over it at a time, across the river. Each side of the bridge was strongly tied with wire cable supplied by the Government[3]. It must have been a technical improvement over the bridges built in the earlier times.

In whatever forms the bridges were made, they were more dependable, less time-consuming and probably less risky than some other types of crossing. Travellers were able to pass without having to ford rivers of doubtful depth which contained deep holes and slippery rocks. Using a bridge makes one independent of the ferryman. However, when the caravan was large the single tree-trunk or narrow wooden bridge might be difficult to use.

Rivers were crossed in many places with large calabashes or gourds (Lagenaria Siceraria), fruits of West African origin[4]. The use of gourds as ferries was widespread in the areas where the plant was cultivated. Their use was notable in the northern section of Yorubaland.

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1. CMS Archive, Journal of Henry Townsend, July 30, 1846.

2. Talbot, P.A., "The Land of the Ekoi, Southern Nigeria", Geographical Journal, 36, 6, Dec.1910, p.645.

3. Ibid.

4. Morgan and Pugh, West Africa, p.76.

Near Lake Chad, Barth noted that it was a means of crossing rivers from Kuka to Kanem in 1851[1]. He was pushed in a yoke of three calabashes across the stream by some swimmers.

Many other nineteenth-century travellers also saw how gourds were used to cross rivers[2]. Richard Lander saw them used in 1826. His vivid description is worth quoting in full because it best explains the actual operation of crossing a river by using two calabashes sewn together.

> "Two calabashes, or gourds, of the largest size, are selected for the purpose; and, the tops of each being previously cut off, the two bodies are sewed together and rendered waterproof by the application of a kind of gum. The two gourds thus united form a hollow sphere; and are tolerably well adapted for the conveyance of passengers . . . even through the swiftest currents . . . The goods, of whatever nature they may be, are first placed on the floating gourd, and their owner then grasps the latter firmly with both arms; and a perfect equilibrium is preserved by the ferryman placing himself opposite the passanger, and laying hold of both arms. They being thus, face to face, the owner of the fragile bark propels it through the water with dexterity and despatch; and few instances are on record of accidents occurring by this means, even in the height of the rainy seasons, when the country is one of immense swamps"3.

Other observers' reports and what was practically demonstrated to the writer on River Oba, near Iwo, are in agreement with Lander's description in principle[4]. But in details, there are some differences. Instead of using two halves of a gourd, a large one could be used. The gourd seen by Bowen contained sufficient air to float three or four hundred pounds in weight[5]. To carry a load across a river, the ferryman

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1. Barth, Travels, II, p.257.
2. Lander, Records, Vol.I, pp.213-4; Bowen, Adventures, p.174; Clarke, Travels, pp.49-50, 120; Crowther, Report of... pp.23-4; James Johnson, CA2/056, June 7, 1877.
3. Lander, Records, pp.213-4.
4. A large gourd was used to demonstrate the crossing of R.Oba, near Iwo in September, 1971. I am grateful to Mr. Adeniji of Iwo who Organised it for me.
5. Bowen, Adventures, p.174.

who was also the owner or hirer of the gourd would tie the load on the gourd and direct it by swimming behind it and pushing it forward with his hands. Since the people could not sit on the gourd, paddling was impossible. Both the ferryman and his passenger immersed themselves in the water up to the neck and between them was the gourd which they had to embrace, holding each other's arms with their hands. The ferryman then pushed both the gourd and the passenger across, the passenger facing him and he facing their destination. This method appeared uncomfortable both to the ferryman and his passenger. In the 1850's, two hundred cowries, an equivalent of 5d or 6d, was charged for crossing the Ogun at a point where it was not more than sixty yards wide[1].

It is obvious that long delays could be caused in this process. Although there could be many ferrymen with their double calabashes or single gourds, if the caravan was as large as 4,000 it might take days or weeks to ferry them over a river. While waiting to cross, the cost of maintaining porters, pack-animals would increase the cost of transportation and, in turn, the selling price of the merchandise.

A more widespread method was the use of the dug-out canoes which were often operated with poles or paddles[2]. It should be noted that the use of canoes was not necessarily a technical development from the calabash. The use of each was dictated by the available material which, in turn, was due to geographical reasons. In the savanna areas where suitable trees for canoes were scarce, calabashes thrived. Therefore calabashes rather than canoes were mainly used for ferrying. But in the

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1. Bowen, Adventures, p.174.

2. A description of dug-out canoes is given in Chapter 7.

forest areas, canoes were used because suitable trees were more easily available than calabashes. The technique of ferrying depended on local materials.

When Hinderer was on a missionary tour of Abeokuta area in 1850 he found a good number of people waiting to be taken across in canoes[1]. In the nineteenth century, it was used on various occasions to ferry travellers across large rivers. Delays occurred if there were many indigenous traders and travellers to be ferried.

The main cause of the usual delays at ferrying points was insufficiency of canoes in relation to demand. As it will be shown later[2], canoe-making involved capital investment. Unlike calabashes, which needed only to be grown and be prepared for ferrying, canoe-making was a specialist job, involving skill, energy, and time. As a result only one or two canoes were often found at some ferrys[3]. At River Otshi in Nupe, where canoe-making was well developed, a traveller, Ferryman, found only two canoes to carry him and his party across. In many cases, the insufficiency of canoes for ferrying was due to their being much employed for fishing and transportation on water routes. Consequently, ferrying across the river occupied much time[4]. To transport a large number of traders with their merchandise in small canoes would be even longer.

The use of the canoe for ferrying was of utmost importance at Rabba, on the Niger[5] in the 1850s. Rabba was an important river town

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1. Hinderer, CA2/049, July 18, 1850.
2. See Chapter 7 on "Canoes".
3. Robinson, Hausaland, pp.54,68,74,246.
4. Mockler-Ferryman, Up the Niger, pp182-3.
5. Crowther and Taylor, Journals and Notices, p.95.

where caravans from Kano or any other part of the north crossed to the south in Yorubaland, via Ilorin. This meant that thousands of Hausa traders with their animals crossed the Niger, carrying natron and leather-work southwards, and returning northwards with products of the south and European manufactured goods. Rabba was also the northern terminus for an all water route on the Niger[1].

Ferrying, there, was under the ruler's control, and was not an individual operation. It was highly organised by the King, who depended mainly on the revenue from it. He monopolised the ferrying industry and attached a high prestige and respect to the posts of the ferrymen. When Crowther and Taylor were there in 1857, Ndashi, who was then the King of Rabba, took trouble to introduce them to Kolofin, who was then the chief master of the ferry and the head of Zogoshi village where the ferrymen lived[2].

The ferrymen were in the service of the King, not only as his canoemen who transported Nupe products along the Niger and produced fishes for external exchanges and internal consumption but also as "naval officers". They were also the hunters of hippopotami which were a menace to canoe transport. Their goodwill was often sought by Nupe kings[3]. They were so powerful that their disaffection partly led to the expulsion of one of their kings, Sumo Zaki. When Crowther was leaving Bida in 1856 Zaki specially warned him to pay due respect to the ferrymen[4].

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1. Nadel, Byzantium, p.320.
2. Crowther and Taylor, Journals and Notices, pp.95, 150-1.
3. Crowther and Taylor, Journals and Notices, p.202.
4. Ibid.

Ferrymen had such prestigious positions in many parts of the country that no traveller dared disrespect them. Because they had a monopolistic hold on ferrying, they could, at least in theory, charge as much as they chose or delay travellers for long periods. But in actual practice the well organised ones maintained high professional standards especially in dealing with the well-known traders who frequented the routes.

Ferrying at Rabba was properly organised. There were always many canoes and canoemen. Although there are no trade figures to enable us to calculate the average number of traders ferried daily or the size of revenue that accrued to the ruler, the high position given to the ferrymen and the commercial position of Rabba in the south-north trade indicate that a large revenue was collected by the ferrymen. In such circumstances they could not afford to lose revenue by unnecessarily delaying traders[1]. But less organised ferrying stations were more widespread all over the country. Much time and money were expended at such stations.

Large tubs were also used for crossing rivers. The tub was simply a round piece of wood that was dug out to contain one or two people or a small amount of load at a time. It was smaller and shorter than a canoe and was mainly designed for ferrying. It was generally pushed by swimmers because of its very small size. A traveller used it

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1. Unnecessary delays or even absence of the ferrymen often occurred in small ferrying stations. My guide, Mr. Adeniji, and I saw nobody to ferry us across the Oshun River on 15th August, 1971, at Owoeru village. The reason was simply that a child died in the village, where the ferrymen lived, two days before our arrival there. It was considered improper for any ferryman to do any sort of work during the days of mourning. However, a canoe was put there for the villagers' use. There were also alternative ferrying points which traders could take.

for crossing the River Oshun in Yorubaland. According to him, a man pushed the tub with his hands, swimming with this feet[1]. Henry Townsend of Abeokuta was also carried in a tub across the River Mojuba by a couple of men while going from Abeokuta to Badagry[2]. Because of its small size, the tub could be faster and more easily manoeuvred than the canoe. But unlike the canoe it was not commodious enough to ferry animals or large quantities of merchandise.

Both the canoe and the tub were often dug out of trunks of large trees. Where no such trees were obtainable the people used rafts. Rafts were constructed of grass or of planks fastened to timbers by ropes, the seams closed within and without by a plaster of tough clay or any other local material. In 1795 a European traveller who used one was pushed across by men swimming alongside just as in the case of a tub[3].

In its operation it seems more dangerous than the tub. As Tremearne noted, "The swimmers, not being steady in the water, are apt to push more violently than they intend to at times, and, as the passenger is squatting on the top of the bundle, and the centre of gravity is high out of the water, the equilibrium is anything but stable"[4]. One advantage of the raft is that it was easily constructed. Any size

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1. Rev. F.G. Toase, in "Yoruba Notes", No.IX, Vol.I, March, 1895, p.23.
2. Townsend CA2/085, July, 30, 1846.
3. Bingley, William, Travels in Africa... with remarks and observations... London, 1819, p.148.
4. Tremearne, Tailed Head-Hunters, pp.315-316.

could be built to meet the immediate needs of the user. As it will be shown later, the reed boats of Lake Chad were used for more than ferrying. In treeless grassland areas where alternatives were rare, the raft was especially important.

An important part of cost of transport was the cost of ferrying. On many occasions, the charges were arbitrary. For example, it was common for some ferrymen to charge strangers exorbitantly. When a white man wanted to cross River Kaduna, he was charged one hundred thousand cowries[1]. But Clapperton discovered that for crossing River Oli, near Bussa, traders were charged only ten cowries each and twenty cowries for a load[2]. In crossing rivers, travellers paid both in kind and in cash[3]. Although the traders were charged less than other travellers, they often gave presents to the ferrymen[4]. The system continued until the construction of modern bridges[5].

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1. Robinson, Hausaland, p.246.

2. Clapperton, Second Expedition, p.79.

3. M-Ferryman, Up the Niger, p.184.

4. Oral Information.

5. Jacob Egharevba, A Short History of Benin, 3rd Ed., Ibadan, 1960,pp.5-9. According to the Benin traditions, when Prince Oranmiyan, one of the sons of Oduduwa of Ile-Ife, the legendary father of Yoruba, was sent to found Benin, the major problem he had on his way was with the ferrymen when he wanted to cross over the River Ovia. Also when the Olowu was returning with his party from a war his greatest trouble was in crossing the Oba river. As there were no ferrymen, he had to appease the river by sacrificing his favourite wife, the daughter of the Olubadan. This legend is significant in that it indicates that river crossing had always been an acute problem.

The various methods adopted in crossing rivers were risky, but only a few instances of loss of life and property are recorded. Clarke recorded an occasion when a ferryman's calabash was upset and lost all the load belonging to a trader. According to Clarke, this was "clearly occasioned by bad management"[1]. Robinson also noted that a man was drowned at River Kaduna when he was attempting to ford it[2].

The unexpected swelling of rivers owing to sudden downpours sometimes created delays at the ferrying stations. When Robinson's party reached a river where somebody had been carried away just a day before, there was little water in it and could be crossed without difficulty. But a day later it could no longer be forded. As he noted, "Owing to a violent rainstorm, which occurred last night, the river, which we crossed yesterday, is quite unfordable, and will probably remain so for the next six months"[3]. Such was the fluctuating volume of water and strength of rivers that travellers, having begun a journey were sometimes stranded at ferrying stations.

But whether these delays were caused by the unexpected rise of the river or by the ferrymen, they sometimes resulted in the creation of further economic activities. Market places or even villages sometimes sprang up[4]. As noted before, Rabba in Nupe owed its commercial development

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1. Clarke, Travels, p.50.

2. Robinson, Hausaland, pp.246-7.

3. Ibid.

4. I visited some ferrying points along the Oshun river. One of the surviving villages was Owoeru, near Iwo, where traders from Gbongan and Ikire used to cross the Oshun to Ile-Igbo and Iwo. Some other crossing points were near Eleji village, and Ile-Igbo, Origbo and Ede towns. I am indebted to Mr. Adeniji who escorted me to these places in August 1971.

mainly to its position as a ferrying station. In 1833 its population was about 40,000, comprising many Hausa and Yoruba traders[1].

Clapperton, too, visited an unidentified village called "Comie or Wonjerque or the King's ferry"[2]. Like Rabba this village was on the Niger and also belonged to Nupe. It was a crossing point for the caravans going to and coming from Gonja. Those going there halted on the eastern bank and those returning with kola nuts waited on the western side to be ferried over the Niger. Clapperton noted that "In the village all was bustle and confusion . . . filled with horses and men dressed out in their gayest trappings"[3]. Merchants were in great number, selling horses, slaves, glass beads, cords of silk, unwrought silk and robes and turkadies. The village was also filled with drummers and dancers, drunkards and rioters[4].

It can be seen that what the traders lost in time and money owing to delays, they must have gained, at least, partly in the trade carried out at the stations. Even if the loss was greater than the gain, the traders then were not likely to have felt it as much as traders might feel it today. Except at small crossings where no trade could be transacted or shelter had for a rest, the arrival at a large ferrying station would be a relief to both porters and pack-animals. It was a rendezvous for eating, drinking and resting. Therefore, to calculate the delays as debits against the trading account, as the

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1. Laird & Oldfield, Narrative, Vol.II, p.85.
2. Clapperton, Second Expedition, p.110.
3. Ibid.
4. Ibid.

nineteenth-century travellers tended to do, is to over-simplify the nineteenth century economic activities. To the travellers, who were always in a hurry, the time spent at the stations was seen as a hinderance to their journey and as an economic waste to the people.

Toll Collection

Toll-collecting centres were so prominent on the trade routes in pre-colonial Nigeria that a description of the routes without discussing the toll stations seems inadequate. Much time was spent at the centres, and this had notable effects on the speed of transport. The tolls that were paid obviously increased a trader's cost of transportation and probably the selling price of his goods ultimately.

Tolls were duties imposed by the civic authorities on transit traders with their merchandise while passing from one place to another. Exactly when rulers began to impose the duties is not quite clear from sources.

Tolls certainly existed before the nineteenth century, when nineteenth-century travellers took notice of them. Tolls had also existed in many other parts of Africa, and were common along the main routes in medieval England. It is certain that tolls had been established before 1189 because in that year King Richard freed the burgesses of Northampton from the payment of toll throughout England[1].

In Nigeria tolls were certainly indigenous[2]. The earliest nineteenth-century travellers found tolls well established; and

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1. Jackson, Development of Transport, p.9.

2. Sundstrom, Guinea Trade, p.10.

throughout the century they were found in almost all parts of the country. In 1826 Clapperton noted that the Hausa caravans carrying kola nuts to Gonja paid tolls to the chiefs of Kiama. He also saw tolls being paid to the collectors at Rajadawa in Yawuri, at Wazo or Wazawo in Kontagora, at Womba in Katsina, at a village called Akingie, in Zaria and in Kano[1].

Later, in 1830, on Lander's journey from Badagry northwards, in Oyo Empire, he found that toll gates or turnpikes were as common as on any public road in England[2]. In 1850 Barth noted its existence in Katsina,[3] and both Hinderer[4] and Clarke[5] observed that there were toll collectors along the routes they passed through. In 1877, a missionary who travelled on Abeokuta-Ibadan route noted that tolls were collected everywhere from travellers[6]. In 1895, Robinson saw a caravan that was detained because it could not pay the toll charges[7]. This evidence suggests that toll collection was widespread and its continuity throughout the century indicates that it was firmly established.

Tolls must have been collected for various reasons. In medieval England they were imposed mainly for the upkeep of roads, the theory being that the toll collected should be sufficient to keep the road in repair and extend its length[8]. The earlier method of leaving

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1. Clapperton, Second Expedition, pp.68, 138,147,150,151,158-9, 215.
2. Lander, Journal, Vol.I, p.68.
3. Barth, Travels, I, p.456.
4. Hinderer, CA2/049, May, 18, 1851.
5. Clarke, Travels, pp.13,18,28-9, 41-2.
6. James Johnson, CA2/056, March 21, 1877.
7. Robinson, Hausaland, p.245.
8. Kirkaldy & Evans, Economics of Transport, p.11,

road repairs to the Church and guild was found to be inadequate. Efforts had also been made by statute to remedy the bad roads of the country, but the toll system was for a considerable period found to be the most satisfactory method of providing the necessary funds for both their construction and their maintenance. It seems clear that tolls were imposed not for the purpose of maintaining routes directly, although the revenue might be partly used for keeping routes. The major reason for collecting tolls was to provide revenues for the rulers. The control that some rulers had over the trade routes in their kingdoms suggests that much revenue must have accrued to them from tolls[1]. The toll probably entitled the payer to a certain amount of legal protection from violence and theft. Once the toll was paid, the chief who ordered it was bound by the laws of hospitality to give adequate protection to the travellers. The payer might also be given rights to trade and to be protected against defaulting debtors[2].

There are at least two main explanations for toll collection. First, traders needed security on the routes. The insecurities of routes owing to their infestation by highway robbers, kidnappers and slave raiders have already been mentioned. Some chiefs provided

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1. Peter Morton-Williams, "The Oyo Yoruba and the Atlantic Trade, 1670-1830", JHSN, Vol.3, No.1, December, 1964, p.41. In the seventeenth century when the old Oyo Empire became involved in the trans-Atlantic slave trade, the ruling Alafin (the ruler) of the empire controlled the route which passed through Ilaro to the coast in order to ensure that revenues from tolls reached him. According to Morton-Williams, p.41, "....the attempt, perhaps, of Ilaro to dominate its neighbours, or of many of the kings to enrich themselves at the expense of travellers and of the Alafin's dues, or merely dilatoriness in the transmission of tolls and tribute - about 1820 the Alafin strengthened his hold on the area by placing a political agent, one of his ilari (a high grade of titled slaves) in the town of Ijanna, four miles from Ilaro." The agent was known as the Onisare of Ijanna.

2. Sundstrom, Guinea Trade, pp.8-9.

security in the form of armed guards. As noted by Bowen, "The caravans were guarded from one town to another by soldiers who were sent by the chiefs to protect the traders from robbers"[1]. This encouraged traders to use the well protected routes on which tolls were exacted. It appears, however, that both the toll payers and receivers took these reasons for granted. Lugard saw the collection of caravan tolls as a means of revenue and used it as part of his system of Indirect Rule[2].

Toll revenues were not directly spent on repairs and construction of routes and bridges as might be expected. For example, a most famous caravan route and one well known for toll collection was the Abeokuta-Ibadan route. Clarke, who saw a toll collector whom he described as a "custom house officer", also described the same route as a "little winding path"[3]. Lander also noted that on the Badagry-Old Oyo route, which he and Clapperton followed, there was "a narrow footpath . . . winding through a gloomy dismal forest and rendered almost impervious to men or beast . . . by reason of entangling underwood"[4]. On this same route and at the same period he saw "carriers detained by command of the chief, until a flask of run by way of tribute, was given him"[5]. It appears that as far as the district heads who received the tolls were concerned, the toll was just a tribute they used to swell their personal income.

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1. Bowen, Adventures, p.189.
2. N.Nigeria, Colonial Report, 1900-11, (1905-6), p.425.
3. Clarke, Travels, p.13.
4. Lander, Record, I, p.57.
5. Lander, Record, I, p.60.

Tolls were, however, indirectly spent on making and keeping routes. Although, in theory the revenue belonged to the ruler, in practice he redistributed much of it, as noted in Chapter 2. Repairs and constructions of routes, when undertaken, must have been financed from this revenue. The tolls can also be seen as compensation for any damage done to farm crops and livestock near the route.

The effect of the collection of tolls on economic activities in general and on trade routes in particular is of considerable relevance to this study. Calculations are difficult in certain places because the charges were arbitrary. For example, Clapperton noted that no fixed duty was charged at Kiama. According to him, "There is no fixed duty for the merchants to pay, but the chief takes just as much as can be squeezed from them"[1]. In 1851 both Richardson[2] and Barth[3] noted that many Arab merchants never paid tolls. They only gave presents to the rulers. The Asbenawa, for example, often presented salt to the ruler instead of passage-money[4]. Clapperton also noted that the influential widow of Zuma, an Arab trader, and the richest person at Wawa in Borgu, would "not pay duty on anything"[5].

Besides, those who traded for the rulers, or the travellers who were under the protection of rulers, were exempt from paying toll. Traders who could pretend to accompany travellers would also evade duties. Lander noted that "Several strangers accompany us from town to town, in order to evade the duty which is exacted at the turnpike gates, by

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1. Clapperton, Second Expedition, p.73.
2. Richardson, F.O. 2/6, Vol.7, 1851, p.86.
3. Barth, Travels, Vol.I, p.456.
4. Ibid.
5. Clapperton, Second Expedition, p.115.

stating themselves to be of the number of our attendants"[1]. Such irregularities made any calculation of revenues that accrued to the rulers imperfect.

Some consistency can be seen in the collections, although this is not closely related to the carrying capacity of the carriers. A camel-load was charged fifty times as much as either an ass or an ox at Zinder. At Clapperton's Koolfe, whereas twenty cowries were charged on every porter, an ass-load was charged twenty per cent more. Even here, no discriminatory charge was made on what was the quantity or the quality of the commodities charged. A pack-ox or donkey passing through Katsina toll-collecting points paid 500 cowries irrespective of the volume of load placed on them.

On the Badagry-Oyo route, travellers without loads were charged nothing at toll stations[2]. This encouraged traders to dodge the collector by combining their merchandise in large parcels and placing them on a few porters when approaching the collectors. By this device, traders paid less on Oyo routes[3]. (See Map 5).

A more important counter-measure taken by transit traders was to divert the trade route from a territory with excessive toll demands[4]. For example, between Ibadan and Oru, a distance of forty-five miles by the caravan route, tolls were levied four times on a single journey, so

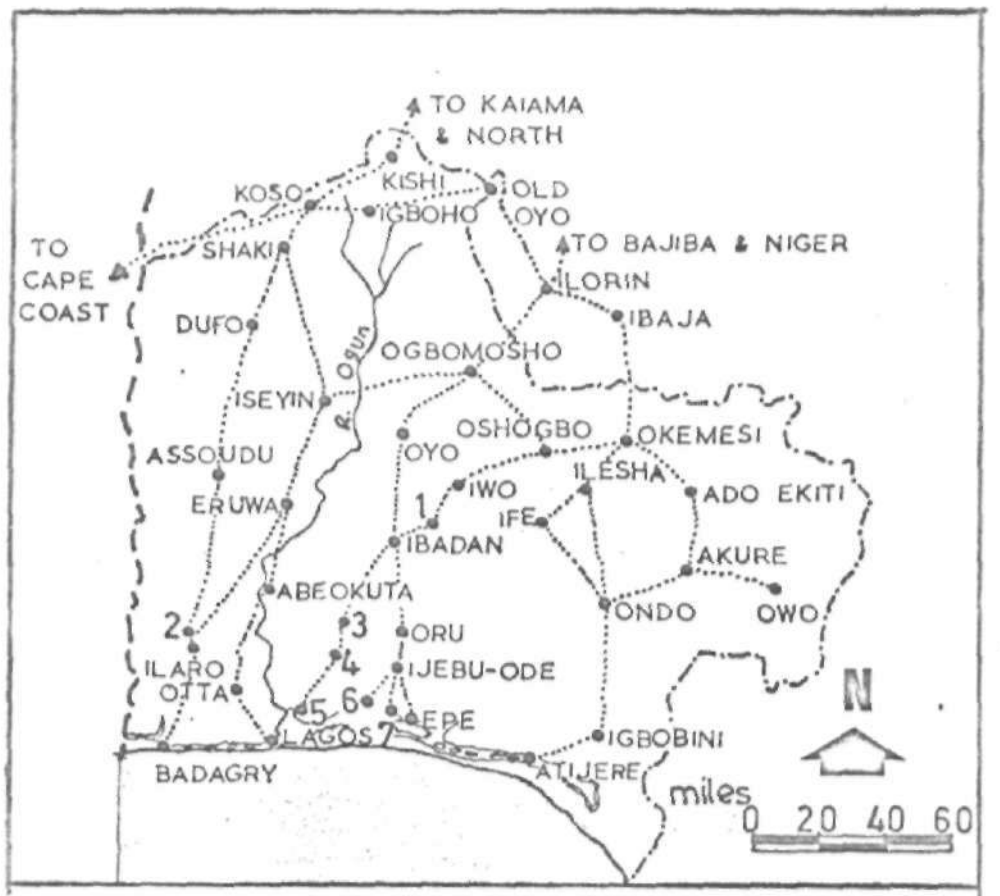
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1. Lander, Record, I, p.104.

2. Ibid.

3. Oral information. About this device, the Yoruba have a saying that "Onibode La nreje, a ki re aladapo je" - which in literal translation means "it is the toll-collector or custom officer that we cheat, not the man who has a parcel in the combined parcels". By the custom, a weak person could be cheated by returning to him less than his actual load. I am grateful to Mr. Toye Ajani of Aston University, Birmingham, for this information. Distinctions might be made between 'small' and 'big' loads.

4. N. Nigeria Colonial Report, Sundstrom, Guinea Trade, p.10; 1900-11 (1905-6), p.425.



5. MAJOR TRADE ROUTES IN YORUBALAND IN THE NINETEENTH CENTURY

that the trader had to pay eight times on a return trip[1]. If an alternative route was available, traders tended to use it, no matter how circuitous or long. Consequently, in order to save money, traders were prepared to spend extra time. It might well be that by making a detour from a toll-collecting point, a traveller or trader saved not only money but also time by avoiding a long delay at the point.

The delay might be due to a number of reasons. First, there was the usual large size of caravans owing to insecurity of routes. On certain occasions thousands of traders could be delayed at toll stations, waiting for hours or even days[2]. On one occasion traders had to queue for a length of about five to six miles. When their patience was exhausted they besieged the collectors, and a great row ensued, causing further delays[3].

Secondly, the organisation of toll collection was itself the major cause of long delays. Many towns were surrounded by walls; and at the entrance of each town were massive gates[4]. Anyone entering or leaving the town had to pass the gatemen who were the guards[5]. The original reason for providing guards for the gates was mainly for security. These guards were to ensure that travellers who passed in and out of the town carried no war weapons and were not a danger to security. Usually

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1. C.O. 879/33, Alvan Millson to the Colonial Secretary, Encl. 1, in no.23, Feb.14, 1890.

2. Hinderer, CA2/049, May 19, 1851.

3. Clarke, Travels, p.42.

4. See the gates in the "Plan of Ilorin" Ten gates can be easily identified in the plan; and toll-collectors were stationed at the gates.
   For the "Plan of Ilorin" see The Geographical Journal, Vol.X, No.4, October, 1897, facing page 464, attached to a paper, "Nupe and Ilorin", pp.349-374, read by Seymour Vandeleur.

5. S. Johnson, History, pp.91-2.


PLAN OF
ILORIN.
OSENOAGNA GATE
DODA'S Hº
KAGANU GATE
Detached houses no wall
Open
Fine Road open
Grass
BARI GATE
BARBAR ROAD
Houses
River Asa
MARKET
ALAUA GATE
Wall broken down
YORUBA
HAUSA
HAUSA GATE
Fields
SARUMI GATE
BALOGUN'S Hº
Wall 10 feet high
Compounds
EMIR'S PALACE
Village
Compound
EJESA SOBI
Open
ALANAMA GATE
FROM OGBOMOSHO
BALOGUN'S Hº
Open
DONGALI GATE
FROM LAGOS
AKALI GATE
R. Asa
ATERI GATE
Scale for both Plans : 2 Inches = 1 Geographical Mile.
0
1000
2000
3000 Yds.

veteran warriors capable of resisting any intimidation or aggressive acts were selected for the office. They lived at the entrance and owed their prestigious offices to the ruler or the chief in charge of a specific route.

These gate-keepers were also the coll-collectors. Travellers were checked and only those they permitted could enter. The Ijebu, for example, used their gate at Oru town on Ijebu Ode-Ibadan route, not only to collect tolls but also to prevent the Ibadan and others from passing from the hinterland to the coast. They imposed stringent restrictions on the traders[1].

It appears that both the guards and the authorities who stationed them at the gates became much more interested in the collection of tolls than in maintaining security. Although some nineteenth-century travellers referred to them as soldiers[2], they were known more as toll-collectors than as security guards. They tended to charge exorbitantly so that there might be enough for periodic presentations to their chiefs and so that they might also have enough to share among themselves. In 1877, James Johnson saw a few of them at a gate on Abeokuta-Ibadan route "dividing a portion of the day's earnings"[3]. For this reason they pursued any detected evader, and, if they caught him, they beat him up; and detained those who did not pay their charges[4]. Sometimes it was the fighting ability of the toll-collector that determined the amount of tolls collected[5].

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1. C.O. 879/33, Alvan Millson to the Colonial Secretary, Encl.1, in no.23, Feb,14, 1890.

2. Hinderer, CA2/049, May, 19, 1851.

3. James Johnson, CA2/056, March 21, 1877.

4. Oral information. Also, Robinson, Hausaland, p.245.

5. Sundstrom, Guinea Trade.

In order to prevent traders from evading tolls, the collectors chose their position where traders could not elude their grasp. Only one or two collectors were at a station in order to ensure that the proceeds did not get into unauthorised hands. It seems that the officers were too highly placed to be supervised or checked for their idleness, and high handedness. They sometimes left the traders unattended to. As a caravan waited, another party joined until the queue became large and unmanageable. The traders had to pass the night at the stations[1].

For the system to work effectively and with a minimum of waste of time, the collectors would have had to be more disciplined, less powerful, and properly supervised. Perhaps the same thing could be said today of the modern customs officers.

Insecurity of routes

Insecurity of routes which could be caused by civil wars, highway robbery and any other social unrest could have about three effects on travelling: detours, neglect of routes, and desertion of settlements. These effects could, in turn, have adverse effects on trade.

On his return to Kuka from Adamawa, Barth met armed men who prevented him from passing and he was forced to make a long circuit[2]. He and his party wandered for about two hours before they returned to their normal path.

On many occasions travellers were advised by their hosts not to travel along particular paths, even when the routes were shorter.

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1. N.Nigeria Colonial Report, 1900-11, no.40, p.806.
2. Barth, Travels, II, p.213.

When Hinderer was leaving Abeokuta for Ibadan, he was advised not to travel on the direct route, "on account of the enemies, who were reported by the hunting people as being in the bush ....., but to go the more interior road of the hunters"[1]. In spite of the fact that he was escorted by half a dozen soldiers, he still followed the more tortuous route[2].

An important example, which affected the Lagos Administration in the 1860's was the Ibadan-Lagos route. There were two popular routes. The shorter was through Ijebuland and was only about three or four days' walk[3]. The longer one passed through Abeokuta and a caravan would take six to seven days[4] to cover it. The Ibadan people had to take the longer one because the shorter one was strictly controlled by the Ijebu. The loss of three or four days by each trader meant a great waste in the long run. Sometimes, a traveller spent double the time he would have spent on a shorter route. Bowen, for example, persisted in taking a shorter route infested by robbers because he would "risk the danger rather than go twice as far by a frequented route"[5]. The time lost was

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1. Hinderer, CA2/049, Dec.6th, 1854.

2. Basden, Among the Ibos, p.273.
   Preference for a longer but safer route to a shorter but more dangerous one was indicated in Iboland by the folk tale of the deer and the pig. The deer, which thought itself cleverer, once took a shorter route full of danger and got shot on the route. But the pig, which took a longer route, reached its destination safely. It was customary for traders to behave in this respect like the pig.

3. Chiefs of Ibadan to Governor Glover, Encl. 3 in no.19, Feb. 1865.p.30.

4. Tucker, Abbeokuta, p.232. Also Hinderer's Journal CA2/049, Nov.5, 1855.

5. Bowen, Adventures, p.176.

reflected in the expense of maintenance on the way.

In the nineteenth century there is a strong possibility that routes were particularly neglected during civil wars. Highway robbery, kidnapping, and slave raiding prevailed during times of unrest. As a consequence, routes were deliberately left uncared for.

One reason for leaving bushes uncut was to impede the advance of invaders. The panic-stricken inhabitants also used the bushes on or near the routes as hiding places in order to prevent being seen and kidnapped by the ubiquitous marauders[1]. For instance in the nineteenth century on the Kaffi to Zaria road, a traveller reached a place where he was told that fifteen merchants had been attacked and carried off as slaves. In fact, his party actually passed thirty men, fully armed with bows and poisoned arrows, carrying no load, apparently on the lookout for victims[2]. Lander also met a number of traders, on his way from Ijanna to Old Oyo in 1826. They complained to him that they had been robbed of all their merchandise. Luckily for the traders, Lander found the robbers where they were sharing their booty. When he fired his pistol, they fled, leaving behind three hundred pounds of salt, woven cloth, cowries, and many other articles[3].

Very few caravans began a journey without first ascertaining that there were armed men to guard them. About one hundred and fifty salt traders attached themselves to Robinson's party in order to share the protection of his rifles[4]. It was generally the duty of rulers to provide caravans with armed guards[5].

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1. Johnson, History, p.93.
2. Robinson, Hausaland, p.66.
3. Lander, Records, Vol.II, pp.230-232.
4. Robinson, Hausaland, pp.68-9.
5. Bowen, Adventures, p.189.

Because of these insecurities, diversions were made from the original routes. For example, the route that Bowen persisted in taking, from Ijaye to Abeokuta, had been closed for many years[1]. In 1852, Barth discovered that the route from Kukawa to Ngala along the south of Lake Chad, which Denham had taken almost thirty years earlier, had been entirely given up on account of the insecurity of the country. He therefore had to take a more southerly route[2]. Needless to say, routes which had been neglected for so long would be almost impassable.

Caravans had to concentrate on the few routes that were free from molestation. On the route from Ijaye to Ogbomosho, Clarke found himself in a caravan which numbered about four hundred persons[3]. On the same route Bowen saw a congregation of three thousand strong[4]. Also, on this same route which linked Oyo to Ibadan, Millson at one point saw over 4,700 people going from Ibadan to Oyo in 1890[5]. The frequent tread of so many feet on such routes was enough to keep them clear of bush.

Insecurity of routes could also lead to the desertion of settlements. In 1850, on the Abeokuta-Badagry route, Bowen counted eighteen sites of towns which had been deserted, within a distance of only sixty miles[6]. About the same time, in 1852 to be precise, Barth saw many deserted towns on the Kuka-Ngala route in "a state of utmost decay"[7]. Since the settlements were in a desolate condition, the routes leading to them would necessarily be neglected. For a route to be well frequented,

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1. Bowen, Adventures, p.176.
2. Barth, Travels, Vol.II, p.429.
3. Clarke, Travels, p.28.
4. Bowen, Adventures, p.190.
5. Alvan Millson, "The Yoruba Country, West Africa", PRGS, XIII, 1891,p.581.
6. Bowen, Adventures, p.113.
7. Barth, Travels, Vol.II, 'p.431.

it had to have some settlements along it at reasonably short distances. If a route contained no settlement for a day's journey - fifteen to twenty miles - it was not likely to be popular. Traders often preferred taking routes which flourished with settlements at short, regular intervals.

Insecurity of routes could limit the extent of both market and production. As seen from the examples cited above, the villages which had long flourished in trade could be deserted if troubles arose in the area and the routes leading to the villages were neglected. Production of Atade village, near Abeokuta, would be reduced considerably if the routes leading to it should be abandoned. This is because, like many other villagers on the route, Atade villagers mainly produced for and sold to transit traders. It is also possible that trade could be diverted from an old route to a new one.

Maintenance of Routes

From the available sources and from what can be inferred from the description of routes, one thing that emerges is the lack of consistent and systematic keeping of routes. The rulers and district heads, to a large extent, seemed to have felt unconcerned about regular repairs of routes. Unconcern on the part of authority appears to have been a general pattern in the past in other parts of the world.

In medieval England, for example, the upkeep of roads, which were, in the first instance, created by traders, was mainly the concern of the Church and partly of the guilds[1]. Although Edward I was credited with undertaking road improvements in the thirteenth century, the Act that was passed in the thirteenth year of his reign has been described as more

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1. Jackman, Development of Transportation, pp.5-8.

of a police measure than one for improvements of roads[1]. Upkeep of roads was seen by the Church "as pious and meritorious work before God". In order to encourage the public to take part in constructing or repairing roads and bridges, the Bishops often granted indulgence for a certain time to any volunteers for such public service[2].

There was also the guilds, which in some cases volunteered to repair roads and bridges. Sometimes the repair of roads had to wait until gifts from legacies of charitably disposed persons. In many other cases the roads were maintained in the immediate vicinity of a large estate by the goodwill or devotion of those to whom the adjoining land belonged[3]. It would appear that the repair of roads and bridges was largely a matter of chance. Consequently most of the roads remained impassable, particularly for almost half of the year - the winter months.

The situation in pre-colonial Nigeria was similar to that in medieval England. It does not appear that there were even such voluntary organisations as the Church or the guild which took interest in repairing routes. It does not seem that the Parakoyi, a commercial organisation in Yorubaland[4] ever took an interest in maintaining routes. Most of the routes, which were created by hunters, farmers and traders were, therefore, left to degenerate into deep ravines[5].

If there had been regular maintenance of routes most of those trodden by the various travellers in the nineteenth century, and even up to the early decades of this century would have been, at least, cleared of bushes and overhanging branches. But the descriptions revealed very

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1. Jackman, Development of Transportation, pp.5-8.
2. Ibid.
3. Ibid.
4. S.O. Biobaku, The Egba and their Neighbours 1842-1872 Oxford, 1957, p.42.
5. Clapperton, Second Expedition, p.117.

few cases of any attempt to repair the routes, even to prevent the entanglement of human or animal feet by bushes.

In a few instances repairs were carried out only once a year geared only partly to economic activities. Before the nineteenth century wars in Yorubaland, according to Yoruba traditions, (as recorded by Johnson), routes were only "annually repaired at the time of the drummers' and Egungun festivals"[1]. In this case it seems that the annual repair of routes was not directly designed to encourage economic activities but to satisfy social and religious needs.

But a few well kept routes did exist. In 1826 Clapperton described the Zaria-Kano route as "broad and good". He further said that the route was thronged with passengers, asses, and bullocks loaded with goods and grain, going to and returning from Kano. This was an important trade route which was much used by men and animals, mainly for trading purposes.[2] It must have been kept in good order all the time. Routes in the savanna region were not likely to be as weedy and narrow as those in the forest area. In the neighbourhood of Asaba, Crowther noted in 1859 that the roads which led from one division to another were "wide and in the nicest order"[3].

A more striking example of route maintenance was found in Borgu. At Wawa, Lander found road repairing being carried on even in the month of August in the height of the wet season. He saw the king "making new roads and repairing and widening the old ones leading to and from the city"[4]. But remarked that this was the only instance he and his party had seen

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1. Johnson, History, p.93.
2. Clapperton, Second Expedition, p.167.
3. Crowther and Taylor, Journals and Notices, p.40.
4. Lander, Journal, Vol.II.p.121.

"wherein even the slightest attention has been paid by a chief to the state of the public pathway"[1]. The reason the king gave Lander for engaging actively in maintaining his route was, however, military rather than economic. This provides an exception to the general rule of leaving bushes to grow wild in order to conceal people from invaders. He believed that if an enemy advanced towards his gates with hostile intentions, and found the route in poor condition, they would regard him as "a careless, slothful, cowardly governor". But if, on the contrary, the route was found "of convenient width, smooth, and free from grasses", they would regard his town as being "populous, strong, and flourishing, and its monarch watchful and brave". That would be a sufficient reason for them to check their advances and return before being discovered[2].

Although military reasons may have dominated the king's behaviour in repairing the roads in his dominions, he must have also realised that the route would be immensely used by traders. A well-kept route had the advantage of creating trading and other economic activities, while a neglected one had the adverse effect of diverting all sorts of economic activities. A route that was full of bushes was capable of concealing not only the panic-stricken inhabitants but also highway robbers and kidnappers.

Wawa was on the route leading from many parts of modern Nigeria to Gonja in modern Ghana. Direct routes from Nupe in the southwest, from Sokoto in the North, and from Kano in the north-east passed through Wawa to Gonja via Kiama and Nikki. The route from the south, from the Yorubaland, also passed through it via Kishi to the north[3]. The tolls

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1. Lander, Journal, Vol.II.p.121.
2. Ibid.
3. Oral information at Kishi and Wawa. See Map 2, showing principal trade routes up to 19th century.

collected at the town and revenues from trade must have made Wawa an affluent town. According to Lander, the inhabitants of Wawa were "supplied with many of the luxuries of life at a more reasonable rate than their countrymen in less frequented districts, and their inhabitations have consequently more pretensions to comfort than those of any people between Badagry and Soccasoo (sic)"[1]. From this, it is not difficult to see that the reason given by the king to Lander was only half of the truth. To neglect such a well trodden route was to suffer a serious setback in revenue collection and a decline in trading activities which the trade route brought to Wawa kingdom.

Another route that was described as being excellent was seen by Lander on his way eastward from Eggan towards Shaki. From a village he called Elekba to Bode Sadu, he noted that the route was "not inferior to drive round a gentleman's park in England"[2]. Morel described a good road in Hausaland. It was another example of well managed routes[3].

When a route was left unrepaired, it was as inconvenient to the people as to traders or casual travellers. Rulers were aware of their responsibility to maintain routes, and when they failed to do so they were often ready to apologise to visitors. For instance, when Hinderer apologised to the king of Ikirun for wearing a cloth that had been torn by thorns on the route leading to his town, the king said, that "it was, in fact, a reproof to him, he ought long to have sent his people to brush and clear the road"[4]. This is an indication of his awareness of the need to keep the route in good repair. Many other kings must have also been aware of this responsibility.

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1. Lander, Record, Vol.I, p.134.
2. Lander, Record, Vol.I, p.126.
3. Morel, S.D., Nigeria: Its Peoples and its Problems, London, 1912, pp.8-13
4. Hinderer, CA2/049, August 16, 1858.

Some routes were probably maintained in the period before the nineteenth century. Johnson, the Yoruba historian, noted that routes "were comparatively good" before the nineteenth century wars in Yorubaland. He noted that routes were then constructed from one town to another[1]. In 1668 Dapper described a road in Benin as "narrow" but not impassable[2].

Some rulers made efforts not only to keep their routes in good repairs but also to provide essential services which were designed for the comfort of the route users. In Benin drinking water was always available for travellers to buy. On the twenty-four-mile route from Benin city to Gwato, "the King pays people to furnish travellers with water; and his officers are careful to keep at different places large ports full of water, quite fresh and clear as crystal, with a shell for drinking. But nobody would dare to take a drop without paying, and, if the official is not there, one leaves the money on the spot and continues one's way"[3].

The Gwato-Benin route was one of the best-managed routes in the pre-colonial era in Nigeria. Like the king of Wawa in Borgu, the king of Benin kept the route open for trading purposes. The Portuguese had established a post at Gwato as early as 1486; and it had since become their trading post in Benin Kingdom[4]. From Benin city and other parts of the interior, people carried palm oil, woven cloths and other products to Gwato and carried back manufactured goods, salt and such other commodities[5].

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1. S. Johnson, History, p.93.
2. Dapper in Hodgkin, Perspective, p.123.
3. Dapper in Hodgkin, Perspective, p.124.
4. Fage, History, p.61.
5. Gallwen, H.L., "Journeys in the Benin Country, West Africa, G.J. 1, 1893, p.28.

The king, who had a strong control over the trade of his kingdom, ensured that the route, which was the lifeline of trade, was adequately maintained and made comfortable for the traders.

That some urban streets were well constructed and well kept also suggests that the people were aware of their responsibility in maintaining roads that were put into regular use. Dapper, for example, noted that in Benin town he saw "thirty main streets, very straight and 120 feet wide"[1]. Roads in many towns were probably not as wide as that of Benin, but they were wider than those which linked one town or village to another.

Urban streets were wider than the district routes because they served many social and economic functions. Streets leading to the residence of a ruler were likely to be broad enough to give room for many dancers and their drummers. During important ceremonies such as the occasion of a new ruler or the appointment of a new chief and the observance of religious festivals, a large number of people usually danced to the residences of the local heads. This would be borne in mind when constructing roads within the town.

For economic reasons, the streets leading to market-places in a town were likely to be wide. Central markets were usually located in front of rulers' residences. In addition to being regularly attended by buyers and sellers, the street would be used by everyone in the town for social and other economic activities. In short, urban streets were wider and better kept than the district routes mainly because they were put to greater use.

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1. Dapper in Hodgkin, Perspective, p.124.

How repairs were organised must have varied from locality to locality. Tradition suggests that construction and repair of routes were carried out at village level[1]. A village head would repair the routes leading from his village to the others as far as his territory ended. There was no hired labour for route maintenance. The actual work on the route was usually organised on age-grade basis, elderly men supervising the young ones. Specialist workers such as wine makers were asked to supply their products, and the drummers had to be in attendance to encourage the workers and eulogise the organisers. Women provided water for drinking and cleaning and also meals; but all this was organised by the ruler. It was such an elaborate organisation that it had to be well planned ahead. Communal work could only be occasional and had to be arranged to suit the convenience of the majority of the people if it was to succeed[2].

It was the same type of communal work that was organised to build city walls, to sink wells and to clear rivers. The wars of the nineteenth century probably led to a decline in political organisation so that only a few instances survived to be observed by the contemporary travellers. It is interesting that the state of unrest led to control of routes and to strict collection of tolls, but not to proper care of many routes.

Comforts on the routes

On the whole, the foregoing description of the general characteristics of the trade routes shows them to be unappealing and hazardous, though, of course, essential.

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1. Oral information. Also, S. Johnson, History, p.93.
2. Oral Evidence.

The problems faced were so many and varied that travelling on them should have been almost impossible if they contained no comforts at all. Without denying the fact (as gathered from evidence) that traders must have suffered on the routes it should be realized that they made the best of the routes for social and economic activities.

The heat of the sun, for example, was not as serious as might be thought because many routes passed through forests which provided shade for the travellers. Wherever shady trees lined the route, the journey was delightful and enjoyable[1].

Sometimes there were resting places where travellers found women selling food and water[2]. In 1824, for example, when Clapperton was passing from Murmur to Kano, he saw some women sitting "by the road side, offering for sale to the passing caravans, gussub water, roast meat, sweet potatoes" and other things[3]. On Ijebu Ode-Ibadan route, one traveller noticed that, like the Gwato-Benin route, water was provided for travellers. It was stored in large jars along the road, near every village, and the traveller did not even have to pay for it as he had to do along Benin-Gwato route. Beside the water pots were cooked food and other necessities that could be purchased en route at low prices[4].

Even those who had nothing to exchange with food would not starve. In certain parts of Yorubaland a traveller could stop at any farm to collect crops and cook as much as he wanted for a meal. No one would question him as long as he did not carry any crop away with him.[5] Another way of obtaining food was to buy cooked foods such as

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1. Clarke, Travels, p.22.
2. Denham & Clapperton, Narrative, Vol.II, p.234.
3. Ibid.
4. Millson, Yoruba Country, p.582.
5. Ibid.

boiled yam, perched corn and baked beans which could be eaten while walking. In the nineteenth century these foods were often laid on mats or broad leaves by the roadside. Travellers chose whatever they required and paid. Millson estimated that for forty cowries a man could fully satisfy his hunger[1]. The system continued till the early part of the 20th century[2].

Morel noticed how travellers' sufferings were relieved on a route in the north. He noted, "I have seen water handed from one party to another under circumstances which spoke of kindly appreciation of a want"[3]. Thus the interest of every user of the routes was catered for.

In addition, there were well-known caravansaries such as Atade village, on Abeokuta-Ibadan route. It was there that a large body of traders had collected before Hinderer joined them. Before he reached there, all the huts had been fully occupied; and he had to erect his own tent[4]. Life at the caravansaries, the toll stations, and the ferrying points was made lively by the great number of people who rested there after their work[5].

Some of the caravansaries on the main routes developed into market places and villages. Many villages owe their development to the routes which passed through them. Among the towns which owed their commercial importance to trade routes were Kano and Kukawa which were remarkable as terminii of the trans-Saharan routes[6], Awaye village on

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1. Millson, Yoruba Country, p.582.
2. Oral information supports Millson's observation, and it was said that the system continued till recent times.
3. Morel, Nigeria, p.13.
4. Hinderer, CA2/049, May 16, 1851.
5. e.g. in Joyce Cary's Mister Johnson, Penguin Books, 1939, p.13, Mr. Johnson, a young local clerk usually went to a ferrying station where he got interested in the ferryman's daughter.
6. Monteil, "Monteil's Journey from the Niger to Tripoli", PRGS, 14, 1892, p.471.

the Abeokuta-Igboho route[1], and Wawa on the Hausaland-Gonja route[2]. The Sapon market at Abeokuta is said to have taken its origin as a place where hospitality could be offered to groups of traders who passed through the place[3]. According to Hodder, "An important origin of Yoruba markets, indeed, was that of a resting place"[4]. In Akure area there was a place called Itaoniyan along the main route. This village, which has survived till now, used to be a popular stopping place where Iyan (pounded yam) was sold to travellers[5]. To a fatigued and exhausted traveller, a place like this was a place of great relief.

Except in the desert routes, and during upheavals, no one would suffer to the point of death on most of the routes. It was in the interest of traders to see that their porters did not suffer unduly. If small children were on a journey, they were carried for most of the day by the elderly ones. If some traders fell victim of highway robbers the victims were often tended and thoroughly cared for by local "Good Samaritans"[6]. Pregnant women who happened to have their babies delivered on the route were accorded adequate care by nearby elderly women. The mother would be released with her child only when they were capable of continuing their journey.

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1. Clarke, Travels, p.58.

2. Clapperton, Second Expedition, pp.92-3.

3. Hodder, Markets, p.52. The full name of Sapon is "Se apon l'ore", which literally means "do favours to bachelors". At Sapon, cooked food, locally brewed wine and shelter could be had on payment.

4. Hodder, Markets, p.52.

5. For this information, I am grateful to Dr. Omolade Adejnyigbe of Geography Dept. Ife Uni. Nigeria.

6. Morel, Nigeria, p.13.

As for the circuitous nature of the routes, the route was not necessarily or always prolonged. Moreover, traders got so used to route windings that, according to one traveller, when traders "cut straight paths over hill and dale, they did not at all appreciate them, remarking that they wearied of seeing too far ahead"[1]. Also, by taking circuitous routes, traders opened up more areas to trading activities[2].

Conclusion

In conclusion, it should be noted that local customs and social obligations so much entered into the economic lives of the people that cost and benefit calculations in economic activities are difficult to make. For example, the time and money spent at toll collecting or ferrying points cannot be easily calculated against any sales made at the same points. It is also necessary to note that the routes which many nineteenth century European travellers described as bad were not necessarily regarded so by the indigenous people. A road might appear good and meet the necessities of a man whose range of observations had been very limited; but the same route might appear bad to a traveller who had moved about enough to see different roads. It is necessary to consider the economic state of a district and the type of traffic using the routes. A road meant for human and animal traffic would never serve even the cartwheel adequately. Routes in pre-colonial Nigeria were used mainly by farmers and traders; and the population, which was a predominantly agricultural one, was small by modern standards.

In pre-industrial society, according to Jackman, routes "were in accord with the comparatively meagre demands of agriculture and

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1. Hall, Herbert, C., Barrack and Bush in Northern Nigeria, London, 1923, p.30.
2. N.Nigeria Report, 1900-11, No.40, p.806.

industry, which were on a small scale. The population was mainly agricultural; and the roads were of such a character as merely to satisfy the demands of the great majority of the people"[1]. What he said of roads in medieval England was, to a certain extent, true of routes in pre-colonial Nigeria where porters and pack animals were responsible for the bulk of transportation.

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1. Jackman, Development of Transportation, p.14.

TABLE 4, SOME TOLL CHARGES IN NIGERIA IN THE 19TH CENTURY

PLACE	TIME	ARTICLE	TOLLS	
Bonny	1823	A loaded ship	£150	[1]
Old Calabar	1823	"	£250	[2]
Old Oyo	1826	A hansome horse	2,000 cowries	[3]
Wazawo (Kontagora)	1826	A loaded ass, bullock, horse or mule	250 cowries	[4]
Rajadwa (Yawuri)	1826	A loaded bullock	500 cowries	[4]
" "	"	A loaded ass	300 "	[4]
Koolfe (Borgu)	"	A loaded person	20 "	[5]
" "	"	" " ass	40 "	[5]
" "	"	" " bullock	50 "	[5]
Eggan	1833	" " Canoe	20,000 "	[6]
Katsina	1851	" " ox or donkey	500 "	[7]
Gori Market	1854	Salt per bag	50 "	[8]
Bonny & New Calabar	1857	A ton of goods in a ship	5 'bars'	[9]
Old Calabar	1857	A ton of goods in a ship	20 coppers	[9]
Abeokuta	1866	1 lb of shea butter	40 cowries	[10]
"	"	1 gallon of palm oil & nut oil	40 cowries	[10]
"	"	1 lb of Ivory	120 cowries	[10]
"	"	Cotton	800 "	[10]
Oyo	19th	A big load	200 "	[11]
"	"	A small load	50 "	[11]
Between Ibadan and Oru	1890	A sheep	2.4d.	[12]
" " "	"	A goat	2.4d.	[12]
" " "	"	A fowl	1s.	[12]
" " "	"	A pig	7d.	[12]
" " "	"	Yams per load	2.4d.	[12]
" " "	"	Maize per load	2.4d.	[12]
" " "	"	Sweet potatoes per load	2.4d.	[12]
" " "	"	Egusi	1s.	[12]
" " "	"	Yam flour per load	4.8d.	[12]
" " "	"	White beans per load	4.8d.	[12]
" " "	"	Pepper per basket	2.4d.	[12]
" " "	"	Soap per basket	2.4d.	[12]

TABLE 4 - FOOTNOTES

1. Adams, Remarks, p.245.
2. " " p.248.
3. Lander, Record, I, p.223.
4. Clapperton, Second Expedition, p.147.
5. Clapperton, " " p.138.
6. Laird, Narrative, II, p.32.
7. Barth, Travels, I, p.456.
8. Allen & Thompson, Narrative, I, p.322.
9. Hutchinson, Impression, p.257.
10. C.M.S. Archive, CA2/07, 23rd March, 1866.
11. C.O. 149/5, Lagos Annual Report, C.H. Elgee, 1903, p.24.
12. C.O. 879/33, p.82, Alvan Millson's Mission to the Interior.

CHAPTER 4

Human Porterage

The main theme of this chapter is a critical examination of Harrison-Church's well-known assertion that "porterage was a social evil, a political danger and an economic waste"[1]. It is argued that this type of assertion needs modification.

In order to understand how human porterage worked in the pre-colonial era in Nigeria, distinctions have to be made between the employment of porters for short distances and for long ones; between the use of family and slave porters by the indigenous traders and the use of paid porters by the European travellers. In the chapter, problems connected with estimating speed of porters and cost of transportation are also analysed.

The oldest and most widespread form of transport in many parts of the world is human porterage - the carriage of goods by man at the same time as he transports himself by walking[2]. The trade routes that have been described in the previous chapter were far more widely used by porters than by pack-animals. Whereas the use of canoes was and is still restricted to the availability of navigable creeks, rivers and lagoons and that of pack-animals to areas which were free from infestation of tsetse flies, the porter walked on any available path. Although most riverain people used canoes and the savanna and desert dwellers used pack-animals to transport part of their products, there was hardly any part of the country where human porterage was unknown.

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1. Harrison-Church, R.J., West Africa, Longman, 5th Edition, 1966,p.153.
2. Boulton, Pageant, pp.7-8.

In many parts of the country human porterage was the only means of transporting goods in the pre-colonial era. Porterage, therefore, has attracted more observations and comments than any other form of pre-colonial form of transport in Africa. As well as being described as wasteful[1], it has been seen as a sustainer of slave trade[2]. It has also been compared with the railway with respect to its high cost and small capacity for carriage[3]. The views have been accepted and repeated by later writers[4], without any serious investigation of porterage. In this chapter an attempt is made at this investigation.

Today, with all technical advancement in transport human porterage still prevails. Then, in the period when no modern form of transport facilities existed, reliance must have been heavy on human porterage. There were short and long-distance journeys. A day's journey is usually reckoned to be of the order of 15 to 20 miles. A return journey to a distance of about 10 miles could be done in a day, and it can be regarded as a short journey. Short journeys were made to farmlands, market places, villages or towns; but long-distance journeys could take a week or more to the traveller's desination.

Among the earliest long-distance travellers were the migrants in search of new settlements - traditional instances are Oranmiyan[5] and Lagelu[6] both of Ile-Ife - or on a military campaign as in the tradition of Olowu of Owu[7]. But there were also long-distance traders such as the

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1. Lugard, Mandate, p.474.
2. Robinson, Hausaland, G.J., pp.205-210.
3. Lugard, Mandate, p.463.
4. E.g. Adedeji, A. A Survey of Highway Development in the Western Region of Nigeria, 1960, p.10.
5. Egharavba, Benin, pp.5-9.
6. Morgan, Ibadan, pp.28-29.
7. Morgan, Ibadan, pp.50-57.

Dyula of Mande, the Hausa fatake, and Nupe, Yoruba and Aro traders[1]. To a great extent, they relied on their porters for carrying their personal belongings and trade goods from one place to another. Whereas women and children were often employed for short distances, slaves (or paid porters in the case of European travellers) were largely engaged for long-distance journeys.

With the notable exception of the Guari around Kontagora and Kaduna who carried loads on their shoulders[2], the majority of the people used their heads or backs to carry loads which they could not carry by hand[3]. In the north, where pack-animals were used, smaller packages weighing about twenty to thirty pounds were headloaded[4]. Many people got so used to headloading that even when the pack was so small and light that it could be carried by hand, preference was often given to its being borne on the head[5].

Various containers - leather bags, pots, baskets and calabashes - were used for carrying products. Calabashes, pots, and leather bags were suitable for containing liquids such as palm oil, whilst baskets could be used to contain yams, plantains and such larger products. Special cages were made to transport fowl, pigeons and other birds. For each type of product there was a special container for head carriage. The average weight carried by a porter ranged from 50 lb to 90 lb, depending on the

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1. Fage, History, pp.40-44.
2. The Guari, Whom I saw on my field work in the north, still carry their loads on their shoulders.
3. The Kanuri depended mainly on pack-animals and were not accustomed to headloading. Denham & Clapperton, Expedition, II, p.195.
4. Denham & Clapperton, Expedition, Vol.II, p.187.
5. Lander, Journal, Vol.I, p.91.

carrying capacity of individuals[1].

In the absence of measuring scales, a porter estimated what he could carry for the length of the journey by lifting it up to feel its weight. If the load was too heavy for him to lift off the ground, he knew that it would be too heavy for him to carry. A porter required the united strength of one or two others to help him in raising a full calabash load up to his head.

Labour

As in the case of all pre-colonial economies in Nigeria, labour for porterage was recruited largely from the family and the slaves. Before the nineteenth century, wage labour by the indigenous traders was uncommon. It was the reliance of porterage on abundant labour that made the system work. Women and children were extensively used as porters. Lander, for instance, noted in 1830 that near Eggan, "children nor more than five or six years of age trudged . . . with loads that would give a full-grown person in Europe the brain fever"[2]. Whitford also noted that "a little girl, almost an infant, commences the practice of putting an empty bottle upon her head, and thus she learns how to balance"[3]. It is this child labour which probably made some observers label the system a social evil. But it is unlikely that farmers in Africa (or nineteenth century industrialists in Europe) ever saw it that way"[4]. "A numerous family of children, instead of being a burden, was a source of opulence and prosperity to the parents"[5].

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1. Bowen, Adventures, p.307, gave 60-70 lbs. as a carrier's pack; Hall, Barack and Bush, p.42, noted that one of his porters carried a load of 115 lbs for two days; Robinson, Hausaland, p.50, made each of his porters to carry 90 lbs, but on one occasion, one carrier opted for a double pack, 180 lbs, for a double pay.
2. Lander, Journal, Vol.I, p.106.
3. Whitford, Impression, p.92.
4. For example, Charles Dickens, depicted child labour in his Oliver Twist, at the early stages of the industrial revolution in England.
5. Adam Smith, Wealth of Nations, Book I, p.29.

One writer regarded women as "the original beasts of burden"[1]. Our nineteenth century travellers noted many instances where women were used as porters. Whitford, for example, was distressed to see "poor women on the paths, staggering beneath heavy loads of produce on their heads"[2]. James Johnson felt that women were employed as porters in Yorubaland largely because they were considered less troublesome[3]. Lugard, who disliked employing women porters, had to employ one when he had no alternative. He noted that she carried a load of eighty pounds "which had been evaded by the regular porters, and marched off with it at the head of the caravan"[4]. Barth also credited women with a remarkable capacity for carrying heavy loads[5].

The main reason for women predominating in headloading, locally, was probably that "when men armed for defence against animals and enemies went on unfettered and free for combat, women followed, loaded with their belongings and offspring"[6]. Hodder noted that it was the same insecurity of routes that was responsible for the predominance of women in Yoruba markets[7]. Many other explanations are possible, For example, in some parts of the country, especially in Yorubaland, men probably devoted so much time to land cultivation and other jobs that they had no time for both headloading and going to market. With time, both jobs were regarded

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1. Eaton, Transport, p.4.
2. Whitford, Trading Life, p.274.
3. C.M.S. Archive, Journal, James Johnson, CA2/056, March, 21, 1877.
4. Perham, Diaries of Lord Lugard, p.208.
5. Barth, Travels, Vol.I, p.484.
6. Eaton, Transport, p.4.
7. Hodder, Thesis, pp.42-3.

as occupations suitable only for women and children. In this respect, it can be seen as a division of labour by sex and age, although this was not quite distinct[1].

In the southern parts of the country, the work of women and children as porters could be regarded as a conjugal obligation that was expected by and given to a man. A man's production had to be carried to the consumers; and at the peak period of harvesting when immediate removal of crops from the farm to the villages or market places was a matter of urgency in order to avoid their destruction, the producer relied on his family and slaves. To the extent that porterage was regarded as an essential household obligation, it was hardly seen as a social evil, but as an accepted practice that was taken for granted in the absence of alternatives.

For long-distance journeys, however, traders had to recruit porters other than members of their family. In this case slaves of both sexes and of all ages were involved. On the Badagry-Oyo route which Clapperton trod in 1826, he met more than "six hundred men, women and children, carrying loads"[2] In Borguland he also saw "a number of female slaves . . . compelled to travel with a heavy load on their heads" by the Hausa caravans on their way to Gonja[3]. Lander, too, saw a great number of slaves, "proceeding to the coast from the interior"[4].

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1. For example, in many parts of Yorubaland, women are responsible for carrying water and foodstuffs for home use. Women and children up till now, often hire out themselves locally as porters.

2. Clapperton, Second Expedition, p.33.

3. Clapperton, Second Expedition, pp.68,76.

4. Lander, Journal, Vol.I, p.113.

Along Ijaye-Ogbomoso route Clarke saw "four hundred people, single file and with loads on their heads".

It was usual for long-distance traders within the country to buy not only their articles of trade but also the slaves who could transport the goods to the market places. Even the traders who used canoes had to buy slaves along the route so that they might carry the traders' loads[1]. Sometimes the traders sold off their slaves as soon as their loads were disposed of along the route[2]. But with their attitude to slaves, as already described, it is unlikely that faithful and obedient slaves would be so treated. Nineteenth century producers and traders who made local and long-distance exchanges possible must have relied largely on slaves as carriers[3]. As Hodder says about Yorubaland "This co-existence of slaving and legitimate trade was logical enough in a situation where headloading was virtually the only means of transporting goods on land"[4].

Apart from household porters, hired porters may have also existed. Probably the system whereby people, especially women, hired themselves as carriers existed in the nineteenth century. In 1826 when Clapperton was passing through Borguland to Hausaland, he noted that the Nupe women hired themselves as porters to as far as Kiama in Borguland[5]. The existence of

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1. Baikie, Narratives, p.219.

2. Upward, Kabba, p.245.

3. For example, Dr. Afigbo of the University of Nigeria Nsukka and Mr. Egboh, a colleague at the Birmingham University, told me that the Aro long-distance traders in the east relied solely on slave porters.

4. Hodder, Thesis, p.47.

5. Clapperton, Second Expedition, p.68.

hired porters is also an indication that the people saw nothing derogatory in head carriage.

However, there does not seem to be any evidence to suggest that professional carriers, free people who obtained their livelihood from carrying goods, existed in any numbers before the penetration of some Europeans into the interior of the country. Early nineteenth century European travellers such as Clapperton and Lander who penetrated the hinterland along the route from Badagry to Sokoto and who needed carriers for their personal belongings and their presents for chiefs, had much difficulty in obtaining porters on the route. They saw no people looking for employment as porters. When Clapperton reached Ijanna and asked for some hammock-men to carry the invalids in the party, he was promptly told that the Oyo people "could not and would not carry a hammock - that a man was not a horse"[1]. Neither did they find it easy to obtain carriers for their loads. They had to depend on the rulers of the villages that they passed through. This customary system of carrying visitors' loads in the old Oyo empire was vividly described by Lander in 1830:

> "If a stranger, from a remote part of the empire, wishes to visit Katunga (Old Oyo), in order to pay his respects to his sovereign, the chief or governor of every town through which he may happen to pass is obliged to furnish him with any number of carriers; and in this manner his goods are conveyed from village to village, until he arrives at the capital"2.

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1. Clapperton, Second Expedition, p.15. Laird, Narrative, Vol.I, p.197. At Badagry Lander also noted, "we were . . . unfortunate in our inquiries for hammock-men, not a single individual in the town being willing to engage himself in what all ranks conceive to be an occupation fit only for horses". Lander, Record, Vol.I, p.57. Hammock carriage does not seem to be a common occurrence prior to the use of it by Europeans. Probably a few chiefs were carried in hammocks. E.g. Lander, Journal, I, p.25, noted in 1830 that Adele, the exiled Oba of Lagos was "borne in a hammock by two men".

2. Lander, Journal, Vol.I, p.185.

This system was probably common in many other well organised states under respected, powerful political leaders. In 1872, Crowther found the same system in practice in Nupe kingdom. The head of each village made arrangements for the carriage of their luggage from one village to the next free of charge[1]. But when travellers reached a place where no such system was in operation, they were often in difficulties[2]. They would probably have found it less difficult if a class of professional carriers had existed before the nineteenth century.

The class of professional carriers must have arisen as a result of constant European demand for it. As the number of Europeans - traders, missionaries, and administrative officers - increased, a greater demand for porters arose; and thus there sprang up a class of men who lived partially or entirely on their labour as porters. Europeans generally avoided the employment of slaves for porterage in the nineteenth century because the use of labour without payment would have been inconsistent with their policy of abolition of the slave trade.

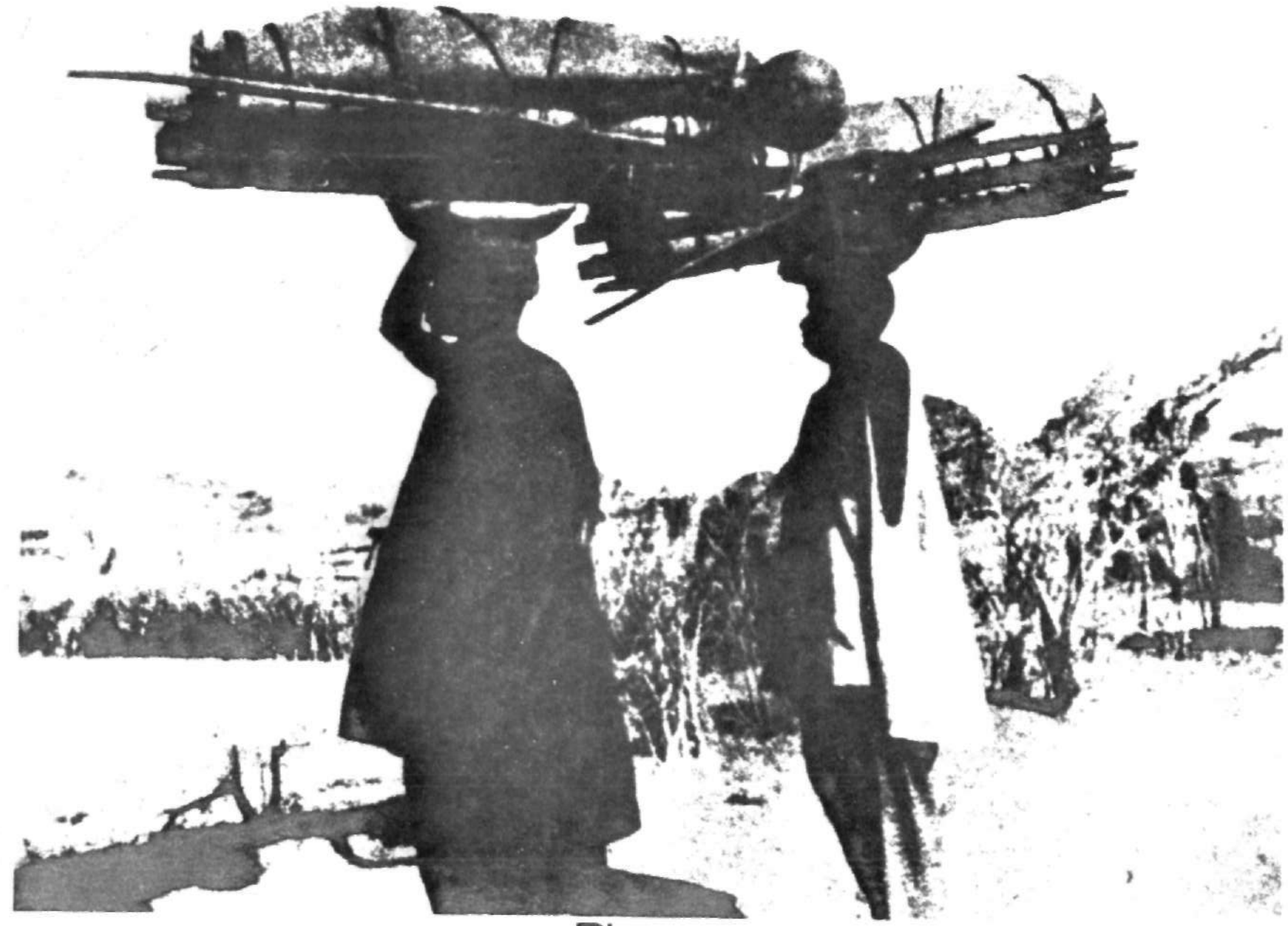
Professional carriers emerged first in towns on the banks of rivers which penetrated the interior. Lokoja, at the confluence of the Niger and the Benue, and the principal starting-point of expeditions to the interior, was the main headquarters of the porters[3]. Other centres included Loko and Ibi on the Benue and Zungeru on the Kaduna. These porters might have been freed or runaway slaves.

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1. Crowther, Overland Journey, p.8.

2. For example, Clapperton's porters deserted him in 1826 at a village, May-Yarrow in Borguland, Clapperton, Second Expedition,p.118.

3. Falconer, On Horseback, pp.37-8.



Pl. 1

They were probably attracted by money-wages and European products. Although the professional carriers must have been a small class, it would appear that their existence in parts of the country demonstrated a fundamental change in the labour force. Rather than being tied to particular masters, the carriers could give their services to anyone they chose. They could probably demand high wages and better conditions of service. If they were denied their requests it was likely that they would agitate or withdraw their services[1].

The porters who were employed by the nineteenth century travellers often constituted a great problem to their employers who wanted them to keep to the very disciplines which they had escaped from[2]. Furthermore, the large numbers often employed meant that they were almost uncontrollable. Robinson, who dealt with fifty-one carriers in Hausaland, complained that "as in other parts of the continent, so here, the one unceasing trouble is the management of the native carriers. It is indeed almost impossible for anyone who has not had personal dealings with African porters to realise the worries and vexations which their employment involved"[3]. A force of as many as three hundred carriers was dealt with by some travellers[4].

It was common for professional porters to run away at the approach of their towns; and for one group of mates to conspire against another or even to hold the travellers to ransom by refusing to proceed further unless their pay was increased[5]. Even in the northern section

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1. E.g. for Robinson's experience with porters, see Robinson, Hausaland, p.49.
2. Falconer, On Horseback, pp.37-8.
3. Robinson, Hausaland, p.49.
4. Jackson, Boundary Expedition, p.33.
5. Robinson, Hausaland, pp.38-50.

of the country where pack-animals were available, the Colonial Government widely made use of professional porters. Their activities en route reached a point when Lugard remarked that "I think means should be found to prohibit the use of carriers, whose thieving and looting propensities do incalculable harm, and cause bitter discontent and resentment among the villagers on the routes they traverse"[1]. In Tugwell's missionary tour in the north, he employed some 250 carriers at a time[2].

European travellers followed the routes they chose irrespective of whether or not there would be enough settlements on the route where food and drink could be easily procured. The porters had to stop for resting and eating according to the travellers' schedule of time, not according to the porters' pleasure. Their tiredness might be taken for laziness; their genuine grievances as unnecessary complaints. In short, they found that the freedom they sought was highly restricted[3].

At least two immediate consequences are noticeable. First was the type of "worries and vexations" which their employment involved[4]. Secondly, many travellers had difficulty in recruiting even professional carriers. For example, in Nupeland where women often hired themselves as porters, Ferryman experienced great difficulty as late as 1889 in procuring a sufficient number of carriers to carry his party's loads from Shonga to Ilorin[5]. Bishop Tugwell of the Church Missionary Society also

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1. Northern Nigeria Colonial Report, 1900-11, p.813.
2. C.M.S. Archive, G. 3 A3/0, No.17, Feb.26, 1900.
3. Jackson, Boundary Expedition, p.33; Upward, Kabba, 245; Falconer, On Horseback, pp.48-49.
4. Robinson, Hausaland, p.49.
5. Mockler-Ferryman, Up the Niger, p.174.

had "Intense difficulties in getting carriers" to convey his loads from Zaria to Katsina[1].

Even if the porters were well treated, many travellers would still have found difficulties in obtaining porters for long distances, because of their fear of accompanying strangers to strange lands. In many parts of the interior where Europeans were appearing for the first time, porters often felt reluctant to go with them. For instance, Clarke noted in the 1850s that in Yorubaland none of the passers-by he wanted to hire to convey his luggage would accept employment. The story that white men on the coast shipped off slaves to unknown destinations must have long spread to the interior. This probably instilled fear into the minds of porters. Such stories were more easily spread than stopped or corrected.

Indigenous traders however, do not seem to have had such problems in recruiting or in dealing with porters. Robinson, for instance, remarked that if his party had "been travelling as Arabs or as rich natives of the country would travel, these difficulties would not have occurred, or would at any rate have been reduced to a minimum"[2]. Whereas the European travellers made use of professional or hired carriers who worked purely for remuneration regardless of who their employers were, the traders chose their porters from among their slaves, family or companions. If the slave refused orders, he was liable to be sold or punished in some way[3].

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1. C.M.S. Archive, Dr.Miller to Mr. Baylis, G 3, A9/0, No.7, Jan.26,1900.
2. Robinson, Hausaland, p.49.
3. Oral evidence collected at Kishi suggests that troublesome slaves could be sold after his load had been disposed of.

But a more important factor was that the porters were probably allowed a great deal of freedom in their day-to-day schedule of work. The traders themselves, whether they had porters or not, also carried loads. Even when they had many porters, they might carry as much as each of their porters[1]. They suffered, or had once suffered the pains as carriers. Therefore, they knew the porters' grievances and were prepared to listen to them. They would likely overlook such habits as drinking, gambling and fighting which a European traveller might take up seriously.

The traders usually understood the local dialects of their porters and knew how to get the very best out of them. They also knew their routes well and would not likely run into problems of scaracity of food for porters, as European travellers did. For example, Lander passed through a route where his porters were "without food for thirteen hours before they were supplied with corn and milk by the king of Kiama"[2]. On another occasion they had to obtain provisions sufficient for three or four days' consumption[3]. These conditions encouraged stealing and violence, which were not common with indigenous traders. By making use of the same routes and same porters on their frequent trading activities, the traders knew the routes and the porters to avoid, the best time to take rests and the most suitable time to start and end the day's journey.

Apart from occasional maltreatment of slaves, the relationship between the porter and the trader was so close that the system worked with astonishing continuity. While the European travellers were often

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1. It must have been very difficult for European travellers to make distinctions between slave porters and their owners who might have also carried some load.

2. Lander, Journal, I, p.222.

3. Lander, Journal, I, p.256.

in want of sufficient porters, the traders often had enough. One traveller remarked that he "never found a professional carrier, though they are common and universal on the trunk road through Yoruba"[1]. Even with all the faults that the nineteenth century travellers found with their porters, some travellers remarked that porters had the virtues of patience and endurance[2].

According to another traveller, the porters "will do heavy marches on half or even quarter rations without a murmur if they know you are doing your best to get food for them"[3]. They were capable of carrying heavy loads and of covering great distances in a short time if they were allowed freedom to move at their own speed. This relationship between porter and employer made a world of difference in the porterage system. If a trader saw the system as adequate or tolerable, a European traveller, who was probably acquainted with alternative systems, might see it as an evil or even a danger.

The assertion that human porterage was an "economic waste"[4] also deserves examination. This statement can be seen in terms of the amount of labour required, the time consumed and the cost involved in relation to the value of products carried. Critics assume that if the labour engaged in human porterage had been diverted to active production of agricultural and non-agricultural products, the resources of the country would have been greatly developed[5]. This view, therefore,

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1. May, J.D., "Journey in the Yoruba and Nupe in 1858", JRGS, Vol.30, 1860, p.223. However, the porters that May found on the route were probably not professional carriers.

2. E.g. see Alexander, Boyd, From the Niger to the Nile, Vol.I, London, 1907, pp.11-12.

3. Jackson, Boundary Expedition, p.33.

4. Harrison-Church, West Africa, p.153.

5. Robinson, Hausaland, in G.J., pp.206-210.

regarded human porterage as a waste of labour.

It could also be assumed that because of the speed of only fifteen to twenty miles a day at which a carrier could go, much time was spent in transporting a small amount of goods. The result was the high cost of transportation by human porterage. Hardly has anyone discussed human porterage without mentioning its high cost.

After the British Naval blockade had reduced the large-scale shipment of slaves from West Africa in the nineteenth century, a great number of slaves was released for the economy. There was, therefore, an abundant labour in relation to the traditional economy. As Wrigley notes,"It is clear that the traditional economic system by no means absorbed the full potential energies of the population, especially of the young males"[1]. The labour remained largely unabsorbed until the end of the nineteenth and early twentieth centuries. At this period external market for export products such as cocoa[2] began and for others such as cotton[3] and palm oil[4] increased. Then more labour was employed to produce the products on a larger scale.

Therefore, before the nineteenth century in order to keep the slaves under effective control and to feed them, they had to be employed in the domestic economy that existed at the time. Also, in order to

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1. C.C. Wrigley, "The Colonial Phase in British West Africa - Economic and Social Developments", in Ajayi, J.F. Ade and Espie, Ian, (Eds),"A Thousand Years of West African History", Ibadan, 1965, p.429.

2. McPhee, Economic Revolution, pp.43-44

3. McPhee, Economic Revolution, pp.44-47.

4. McPhee, Economic Revolution, pp.30-38; For these export products and others in West Africa, see Chap.II 'Trade'.

procure the increasing varieties of manufactured products that were reaching people in the interior, the slaves and the freeborn were prepared to employ themselves in all economic activities.that would bring immediate remuneration.

Labour was especially abundant for local employment. For example, when the Church missionaries at Abeokuta wanted to build their houses in 1846, they decided to hire labour for the job. They began the construction with thirty women whom they paid a wage of 120 cowries[1], (or threepence) each, per day. When more labourers than they expected turned up they reduced the pay to two pence a day. On the following day, the number of people that turned up had increased to about four hundred. Even when the wage was reduced to a penny a day, six hundred and seventy people presented themselves for employment. The number further increased to such a size that the missionaries had to apply to the chiefs to disperse the people by force[2]. However, this was a local case and was not necessarily typical of the whole country.

The large numbers of porters that were still sometimes found on trade routes also suggest that labour was not scarce. Although Clapperton had to obtain his own porters through the help of the chiefs in 1826, he met more than six hundred porters at a time[3]. In the early 1850's Barth was "met by a long train of broad-shouldered, square-built Nupe females, each with a load of from six to eight enormous calabashes on her head"[4]. Clarke also noted that on the Ijaiye-Ogbomoso route, he

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1. Tucker, Abbeokuta, p.112. She reckoned 40 cowries to the penny at Abeokuta in 1846.

2. Ibid.

3. Clapperton, Second Expedition, p.33,

4. Barth, Travels, Vol.III, p.551

saw about a hundred porters[1]; and Bowen observed that two or three thousand porters passed from Ogbomoso to Ilorin every five days[2]. According to Bindloss, "One African merchant testified before both Mr. Chamberlain and the Marquess of Ripon that he had seen a host of 9,000 men march to the river-side with burdens of merchandise[3].

In 1900 the Société Anglo Belge employed over 200 labourers on their coffee estate at Badagry and remarked that they had "no trouble in obtaining all the men required"[4]. Although a great number of people was available for employment, many must have still been self-employed.

With so much available labour, it is difficult to see how the porterage system could be described as being wasteful of labour. Conversely, it should be seen as economically rational because it reduced economic waste of labour - the labour that was not scarce in relation to the demand of the economy.

Speed

Human porterage has also been seen as a time-wasting system. The main factor that could contribute to this assumption was the slow speed at which porters moved. Porters walked normally at three to three and a half miles per hour[5]. It could be more in the dry season or less in the wet season. The wieght of a porter's load could also decide his speed. Apart from delays at toll gates and ferrying points, heavy downpours and tornadoes could cause a porter's speed to be slow.

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1. Clarke, Travels, p.32.
2. Bowen, Adventures, pp.307-308.
3. Bindloss, Harold, In Niger Country..... 1898, Frank Cass, 1968, p.68.
4. Lagos Annual Report, H.W.H., Cumming, D.C., C.O. 149/5, 1900, p.45.
5. My personal experience shows that even without carrying a load one can hardly walk more than three to four miles an hour. Raphael, Unknown Nigeria, p.226, gave a porter's speed at 3½ mph in the dry season and 3 mph, in wet season.

But in the dry seasons, when most of the physical constraints were reduced, his speed could reach about three miles per hour, but rarely more than that because the dry season had its own problems. Then a man might quickly become tired on account of the high temperatures. It would be worse for porters who were labouring under heavy loads.

If a porter's load was heavy, his speed could be very slow. A caravan of women traders who tried to attach themselves to Barth's party on Katsina-Kano route were often left behind because they could not "walk steadily for any length of time with their loads. They stopped every few minutes"[1]. Some nineteenth century travellers did not realise the effect weight had on speed, and they often overburdened their porters. For example, Robinson, who made incessant complaints against his porters, always had his loads in ninety-pound packs. Consequently, they had to stop and rest more frequently than he could tolerate. On one occasion one of his porters "put down his load ten times within a hundred yards"[2]. Another traveller, who used to make up his loads to a weight of more than seventy pounds, had to reduce each porter's pack to forty or fifty pounds, probably in response to porters' agitation or probably because he wanted their speed to be increased[3]. Perhaps, for the same reasons, the early twentieth century travellers and officers always limited the weight of their porters' loads to sixty pounds[4]. The usual weight of traders'

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1. Barth, Travels, Vol.I, p.484.
2. Robinson, Hausaland, p.45.
3. C.M.S. Archive, Journal of Smith, J., CA2/083, 27th June, 1865.
4. E.g. Richardson, A.E. G3 A9/0, Jan.26, 1900, no.7; Falconer, On Horseback, p.38, Northern Nigeria Colonial Report, 1900-11.

packs is not known but it can be presumed that the Colonial Government probably based its fixed porters' weight of sixty pounds on the experience of the indigenous traders.

The weight of a porter's load affected not only his own speed but that of his whole party. A porter whose load was too heavy for him needed frequent rests which could interrupt the caravan's movement. In order to rest he might require the assistance of another person on each occasion to set down or lift up his load. This happened in the case of some of Robinson's porters who required more frequent rests than the others. Of his fifty-one porters, about eight decided to go at a slower rate of one or two miles per hour. Since they could not be abandoned, their rate of travel dictated the rate at which the whole party had to go[1].

Waste of time could also be read into the length of time that took in transporting a small amount of load. For example, if a porter carried a seventy-pound load at a time on an average speed of fifteen miles a day, it would take him ninety-six days to carry a ton of yams from Ibadan to Oru, a distance of forty-five miles on Ibadan-Ijebu Ode route[2]. Even if the porter was able to do twenty-two and a half miles a day, he would still require sixty-four days to carry the load. This type of calculation had a tendency to exaggerate the time spent on human porterage of products. Normally, no one would employ a porter to spend ninety-six or sixty-four days in carrying a ton of yams from Ibadan to Oru; rather than doing that, thirty-two porters, each carrying a seventy-pound pack, would be employed to carry the entire load. With

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1. Robinson, Hausaland, p.43.

2. C.O. 879/33, Alvan Millson's Report, Molony to Knutsford, April 30, 1890, p.95.

more labour, much time could be saved.

If travellers employed a few porters because of the worries and vexations that many of them caused, then they had to spend more time on a journey. For example, if Robinson had reduced the pack of each of his porters from ninety pounds to sixty pounds, he would have required seventy-six or seventy-seven porters instead of the fifty-one that he employed. Because of the "slowcoaches" who could also delay the other porters their speed per day might be of the order of fifteen miles per day. Assuming that the rate of travel was proportional to the weight of the load, if each of the seventy-seven porters had carried a sixty-pound pack, their speed might have increased to twenty-two and a half miles per day[1]. In order to go from Zaria to Kano, a distance of about a hundred miles[2], the porters would require about four and a half days. But if this fifty-one porters walked at a slow speed of fifteen miles per day (each carrying a load of ninety pounds), they would have spent about seven days to cover the same distance. If Robinson had employed some 26 extra porters, he could have saved about two and a half days. Yet he would not have increased the transport cost[3].

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1. Carrying a 90 lb pack, a porter covered 15 mls per day; carrying a 60 lb pack, he would cover $\frac{90 \times 15}{60} = 22\frac{1}{2}$ mls.

2. Robinson, Hausaland, p.92.

3. Assuming that a total wage of 1/- was paid per porter per day.
   51 porters @ 1/- per day, travelling 7 days, would earn (51 x 7)/- 357/-
   77 porters @ 1/- per day, travelling $4\frac{1}{2}$ days, would earn $(\frac{77}{1} \times \frac{9}{2})$/- $346\frac{1}{2}$/-
   Also, note the loads carried.

   51 porters, each carrying 90 lb, carried 4590 lbs.
   77 porters, each carrying 60 lb, carried 4620 lbs.

   Therefore, with abundance of labour, employing more porters, each carrying less weight, suggests that more loads could be carried at less time and at a lower cost.

It would appear that the speed of travelling of indigenous traders was not quite slow. They would not carry heavy loads that might seriously impede their speed. They were usually conversant with routes and would delay nobody if they stayed behind to rest. They also had ready devices by which they minimised delays and increased speed. For example, instead of requiring assistance of other porters when a porter wanted to set down or lift up his load whenever he needed a rest, each one carried along the journey, a long, forked stick which he used to lower down the load from his head and to support it against a tree. Whenever he was ready to start again, he used the stick to raise up the load and set his head underneath it. He could do this as often as he wanted without interfering with the normal speed of the caravan. An added advantage was that the load was kept out of mud or water and also from insects[1].

In order to avoid frequent halts for rest, the porters protected their heads from pain by placing specially-made pads on the head before setting the load on it. According to an observer, the pad was "composed of folded cotton, sewn up like a pincushion, and was tied on by various odds and ends of string, grass and strips of leather, its proper adjustment every morning being a matter of much careful deliberation"[2]. By using a pad, a porter could travel many miles without stopping for rest.

He could also reduce fatigue by tying a cord to the load, allowing it to hang down to his hand. Instead of maintaining a posture of keeping his arms raised to support the load, he only needed to hold

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1. Vincent, Frank, Actual Africa, or the Coming Continent - A Tour of Exploration, London, 1895, p.388. Also oral evidence.

2. Tremlett, Horace, With the Tin Gods, London, 1915, p.73.

the hanging cord. Sometimes he could raise up the load at arms length, allowing it to rest on his hands for a few minutes. When he did this he could ease his neck and give it a stretch[1]. Many such simple contrivances were known to the porter to ease fatigue on the route and to quicken his speed.

In actual practice, the porters' speed was not as slow as it is often suggested. In a pleasant atmosphere the load that a porter carried was amazingly heavy and the speed at which he carried it surprisingly high[2]. To traders, walking was not limited to the day-time in peace time. The several hundred of porters that Lander saw on the Badagry-Old Oyo route "had been travelling the whole of the preceding night"[3]. On the Ibadan-Ijebu-Ode route, Hinderer joined a party of Ijebu traders in the night because the "Ijebus travel very much by the nights"[4]. These trader-porters travelled fast and for many hours with short rests. Unlike European travellers, they did not reckon their own remuneration or that of their porters on day-to-day basis. Invariably, when the porters were not the traders themselves, they were traders' slaves or family members. It was common for traders' porters to travel thirty miles a day walking more than two hours without a rest[5].

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1. C.M.S. Archive, Richardson, A.E., to Baylis, G3 A9/O, no.7, Jan, 26, 1900.

2. C.M.S. Archive, G3, A9/O, Richardson, A.E., to Baylis, Jan,26 1900. Richardson noted that porters often walked "at a rapid pace". They could "carry a load of 60 lbs on their heads for 20 or 30 miles a day without a murmur - often walking 1½ hours or even 2 hours without a stop". Feb.9, 1900.

3. Lander, Journal, Vol.I, p.185.

4. Hinderer, CA2/049, Dec.1854.

5. Richardson to Baylis, G3 A9/O, Feb.9, 1900.

According to Richardson, the amount of work the porters did was marvellous[1]. Viewed in this way, it seems that the system was not as wasteful of time as some travellers would lead us to think.

Cost

In calculating the cost of head-porterage many complications are involved. The calculation is made more difficult because no particular information is typical of even a small section of a community at a particular time. Most of the available information was given by the European travellers whose rates of pay were probably not equivalent to traders' pay or reckoning. The main factors to be taken into account are (1) seasonal changes, (2) the degree of security, (3) the length of the journey, (4) ferry costs and gate tolls, (5) the need to carry food and currency, and (6) the weight/value of goods in relation to the distance of the journey.

First, travelling was slower and more costly in the wet season because of the general characteristics of the routes. There was always the fear of dangers that might follow a heavy downpour and this could scare away many porters[2]. During that season the few porters who were industrious enough to make themselves available might demand higher remuneration. Scarcity of porters often limited production of fragile products such as pots, because it was common for porters to slip when the ground was soft and pots to be broken[3]. In the wet season, snakes, scorpions, and ants were common on the routes, streams had to be forded, flooded sections of the route had to be waded through, and bridges or

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1. Richardson to Baylis, G3 A9/0, Feb.9, 1900.
2. For example, Bowen's carriers deserted him on his way from Ijaiye to Ogbomoso, Bowen, Adventures, p.186.
3. Ojo, Culture, pp.94-5.

ferries had to be used to cross swift and deep rivers. All this could lead to scarcity of porters. More porters could be available in the dry season and pay could then be lower.

Secondly, insecurity of the route owing to infestation by slave-raiders, kidnappers or robbers and to civil wars, might also scare off porters and raise cost of porterage. An Ibadan Church missionary had to pay more than triple the usual cost of headloading his luggage from Lagos to Ibadan. As he noted, "under ordinary circumstances, I suppose the carriage of a load from Lagos to this place (Ibadan) would not be more than 3 heads of cowries whereas I was compelled to pay 10 heads. Because of the danger and difficulty of the way no carrier would risk it and take the journey for less"[1]. A traveller who travelled during a time of unrest and who had to pay as much as three times the normal rate of pay might think that that was the normal cost and might conclude that the system was excessively costly. During a time of insecurity it required courage on the part of the porter to get products transported. It was reasonable that a few porters who were prepared to take the risk asked for higher remuneration. This was bound to affect the total cost of porterage.

Thirdly, it is also essential to an understanding of the costs of human porterage to distinguish between costs for short and long distances. It was usual for porters to earn less per day for a journey that was done within their locality than for long-distance journeys that might take them away from their vicinity for days or even weeks. The rate at which the porter was paid would affect the total cost of porterage per ton-mile.

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1. C.M.S. Archive, Journal of J.Smith, CA2/083, 27th June, 1865.

This principle of low pay for doing a job in one's own village or locality was clearly demonstrated by other forms of labour. For example, the C.M.S. missionaries at Abeokuta, already referred to[1], had almost seven hundred people seeking work for a job which about thirty labourers were required. This was so mainly because it was a job that did not require leaving homes. It was convenient for them because they could withdraw from the job during the day or stop presenting themselves whenever they chose. This meant that their normal occupation was not seriously interrupted as it might have been if they were to travel far away from home for the work. Consequently, they were satisfied with whatever they were paid, however little it was.

Conversely, long-distance porterage could be engaged in only by men, apart from slaves. Whereas housewives, especially in the south, could engage in short-distance porterage, men would hardly allow their wives to leave for long journeys, involving many days. Therefore, the men or any hired porter on a long-distance trip could only be attracted by high remuneration - at least, high enough to counter the opportunity cost of the job or leisure that was forgone at home.

Some nineteenth century sources indicated that costs of porterage for long distances was more expensive than for short distances or for the cost of labour within the labourers' locality. In 1860, for instance, the Iwe Irohin, an Abeokuta newspaper, gave the monthly wage of local labourers in Yorubaland as 12000 cowries or 10s.9½d., or 4½d per day, which was equivalent to about 400 cowries[2]. But calculations show that as much as 1200 cowries was paid a porter per day on long-distances in some parts of Yorubaland in the late 1850's and early 1860's.

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1. Tucker, Abbeokuta, p.112.
2. Iwe Irohin, (Appendix), Sept.25, 1860.

In 1865 an Ibadan Church missionary, Smith, who paid ten 'heads'of cowries per porter, in the wet season, for the porterage of his luggage from Lagos to Ibadan supposed the normal carriage cost to be of the order of three 'heads' or 6,000 cowries[1]. If the journey was via Ijebuland, it would require about five days altogether, and that would be 1200 cowries per porter per day. In 1858, in his overland journey after the wreck of the Dayspring, one traveller paid 1300 cowries to two porters for the porterage of his load for a day[2]. In another instance, but in the same year, the cost of long-distance porterage - Lagos to Rabba - also turned out to be 1200 cowries per porter per day[3].

After the wreck of the Dayspring seven porters were sent to Rabba on the Niger from Lagos; and they were paid a total wage of £16 for the return journey. Crowther who was also involved in the shipwreck and who took a circuitous route, Lagos-Abeokuta-Ibadan-Oyo or Iwo-Ogbomoso-Ilorin-Shonga, estimated the journey to be about 300 miles; and he reckoned that it was done in fifteen days, that is, at a reasonable rate of twenty miles per day.

The wage of £16 for seven porters, for thirty days was about eighteen pence per porter per day. A 'bag' of cowries or 20,000 cowries was put at twenty-five shillings; and eighteen pence was equivalent to 1200 cowries[4]. The average weight of load carried to Rabba by each of the seven porters was 65-70 lb. The total weight carried was about 490 lb at 70 lb per porter. If the porters carried loads from Rabba to Lagos,

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1. Smith, J. CA2/083, 27th June, 1865.
2. May, Daniel, J., "Journey in the Yoruba and Nupe Countries in 1858" In JRGS, Vol.30, 1860, p.229.
3. F.O. 2/27, p.82. I am grateful to Marion Johnson of the Centre of West African Studies, Uni. of Birmingham, for directing my attention to this information.
4. 7 men earned £16 for 30 days (return journey). Rate per porter per day was $\frac{16 \times 240}{7 \times 30}$d = $18\frac{2}{7}$d or 18d approx.

   If 25/- = 20,000 cowries

   1/6d = $\frac{3}{2}$ $\frac{1}{25}$ $\frac{20,000}{1}$ = 1200 cowries.

they were to receive extra remuneration[1]. That is, nothing was supposed to be carried on the return journey to Lagos. It then meant that £16 was paid to transport 490 lb for 600 miles.

The part-cost of transportation would then be at a high rate of 29.2d per ton-mile[2]. Half of this (14.6)d would be the rate if the same volume of load was carried on the return journey with no additional pay. That was the porters' wages only; to it must be added other expenses such as tolls to ferrymen and gatekeepers; the longer the journey the more tolls had to be paid. Also for long journeys the porters' pack might have to be reduced to about sixty or even fifty pounds as an inducement to porters. If less weight was carried, more porters would have to be employed and engaged. As it would be unreasonable to expect porters to travel twenty miles a day for fifteen consecutive days, allowance must be made for extra days during which they had to be fed even if they would be fully paid.

Conversely, for a short distance, many porters would be available and the greater the number that was available in relation to demand for them, all things being equal, the less would be paid to each. Labourers who had a daily wage of 4½d would probably be prepared to take 9d per day for short distance porterage.

For example, a porter would carry a seventy-pound load of yams, at nine pence a day, from Ibadan to Oru on the Ijebu Ode route, a distance of forty-five miles[3]. If he did twenty-two-and-a-half miles a day, he would spend four days for the return journey. It was most likely that for such a short distance he would carry goods on the return journey.

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1. F.O. 2/27, p.82.
2. To carry 490 lb, £16 was paid for a 600 ml.trip
   $\frac{2240 \times 16 \times 240}{490 \times 600}$ d = 29.2d per ton-ml.
   89 70 lb. carrie
3. 70 lb. carried for 90 miles for 3/-
   Cost per ton-ml. was $\frac{2240 \times 36}{70 \times 90}$ d. = 12.8d per ton-ml.

But even if he carried nothing and he was fully paid per day, he would be paid three shillings for transporting a seventy-pound load of yams for ninety miles. That would be at the rate of 12.8d per ton-mile. As it was more likely than not for him to be re-hired and paid on the return journey, the rate might be 6.4d per ton-mile. Other expenses that would be added to this were likely to be correspondingly low. It can therefore be safely said that while cost of human porterage was very high indeed for long-distance journeys, it was at least, less costly for short distances.

The difference in cost per ton-mile between long and short distances was also noted by Lugard. His record shows that the difference was not peculiar to human porterage. As Table 5 indicates, differences also occurred in the cost per mile when pack-animals were used for long and short distances.

TABLE 5

Differences in Transport Costs between Long and Short Distances*

Form of Transport	Long Distance (say 320 ml)			Short Distance (say 40 ml)			Diff.
	Cost per mile	Time Taken	Remarks	Cost per mile	Time Taken	Remarks	in %
Human Carriers	24d	2 mos	Includes rest	20d	7 days	Includes	$16^{2}/_{3}$
Animal (Pack)	10d	2 mos	" "	9d	7 "	return	10
Animal (Draught)	8d	2 mos	" "	7d	7 "	journey	$12^{1}/_{2}$

* Derived from "Lugard and the Amalgamation of Nigeria", C.O. 879/119, Edited by Kirk-Green, 1968.

As can be seen in the Table, the difference was higher in the case of the human porterage ($16^{2}/_{3}$%) than in that of the pack animal (10%).

Fourthly, whatever the distance of the journey, to the porters' pay had to be added tools for ferrying over rivers or passing through town gates[1].

1. See Table 4.

This could be a considerable addition. For the forty-five-mile Ibadan-Oru route[1], a trader had to pass through four toll stations. These tolls were very high when related to the low value of the loads. For example, in 1890, a load of yams that cost 4d to 6d in Ibadan, was charged a total of 2.4d[2]. Also 2.4d. was charged on a load of maize that cost 2.5d to 5d. A total charge of one shilling was paid on a load of melons that cost only 9d in Ibadan[3].

During the wet season, porters had to be ferried over unfordable rivers, the total cost of ferrying had to be added also. What was paid would depend on the number of rivers that had swollen up enough to be unfordable. The ferrymen often discriminated in their charges. Even such a well-organised ferry as that at Rabba charged not according to the weight of load but according to the tribe of the traders. Thus, according to Crowther, a Yoruba with his load was charged 200 cowries, a Hausa, 120 cowries, and a Nupe, 100 cowries[4]. In other words, to calculate accurately what a trader paid as ferriage cost, his home town might have to be known. It is essential in estimating the cost of porterage to take these tolls into consideration.

Fifthly, another addition that must be made was the cost of carriage of cowries and goods that might be used for payment to the ferrymen, the toll-collectors, and subsistence allowance to porters. Travellers' porters were often paid in cowries, salt, and cloth[5]. But, apart from officals, they did not have to carry all such goods about.

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1. Alvan Millson's report, C.O. 879/33, p.95.
2. Alvan Millson's Report, C.O. 879/33, p.82.
3. Ibid.
4. Crowther and Taylor, Journal of, p.201.
5. For example, see Robinson, Hausaland, pp.66 & 92, Ferryman, Up the Niger, p.174, Bishop Tugwell, Notes no.LX, Vol.I, March, 1895.

Usually, all that was carried was the amount used in paying the porters for their subsistence on the route. It was usual for travellers to pay their porters in cloth, which was a light material, and which they could exchange for cowries, if that was the local currency, and then for food[1].

Such extra carriage was often complained about by travellers, including Government officials. One official, who had to carry presents on his journey northwards, noted, "We required for our journey between eighty and ninety carriers. We were taking £150 worth of valuable presents from the British Government to the chiefs of the country; and further, all money for defraying the cost of food and other necessaries had to be carried in the shape of bags of cowries and salt and bales of Manchester goods"[2]. On the same journey Ferryman paid £1.15s.1d. in kind for his party's ferrying over two rivers. This ferry toll was paid in the form of about sixty yards of cloth and eight thousand cowries. About half a mile further was another river to be crossed and tolls had to be paid as before, and again on as many others as they had to cross[3].

It is not known to what extent cowries were carried about. It was usual to pay as much as 200[4] to the ferryman of each river crossed, about 300[5] to each porter for his daily meal and as much as 500[6] to the toll-collectors. Indeed, a serious defect in the use of the cowry as a currency was its low purchasing power in relation to its weight. It has

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1. Bishop Tugwell and Charles Robinson paid their porters' food allowances in cloths, C.M.S. Archive, Tugwell's Report, G3 A9/0, March 14, 1900; Robinson, Hausaland, p.65.
2. Mockler-Ferryman, Up the Niger, p.174.
3. Mockler-Ferryman, Up the Niger, pp.184-5.
4. James Johnson, CA2/056, June 7, 1877.
5. Robinson, Hausaland, p.65.
6. Clapperton, Second Expedition, p.146.

been estimated that 20,000 Maldive cowries, which were smaller than the Zanzibar ones, would weigh fifty pounds, "a reasonable man's load for long distances"[1]; with the larger cowries "a strong man would soon get tired of carrying it"[2].

The purchasing power varied widely from time to time and place to place, depending on cost of transport. By the late nineteenth century the cost of transporting cowries had become so high and their value had become so low that it was scarcely worth while to transport them on long distances. For example, Robinson estimated the value of about 20,000 cowries to be equivalent to about ten shillings in the northern parts of the country in the 1890's[3]. This meant that to transport 20,000 cowries or a porter's load of about fifty pounds from Lokoja to Kano, (a distance of about 400 miles[4], or 20 days' journey at the rate of 20 miles a day) would have cost, at the rate of 9d or 1500 cowries per porter per day, at least the enormous total of 30,000 cowries[5].

The high transportation cost of cowries is clear. The low value of cowries, 20,000 to ten shillings, is also apparent. Thirty thousand cowries would have been spent as porters' wage alone in transporting twenty thousand cowries. That is, the porter earned all that he carried and still had to be paid an extra of ten thousand cowries.

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1. Johnson, Cowries, p.42.

2. M.F. Smith, "Baba of Karo", London, 1954, p.80.

3. Robinson, Hausaland, p.66.

4. Robinson, Hausaland, p.201.

5. 10/- or 120d = 20,000 cowries
   9d = 1,500 cowries - a porter's pay per day.
   For 20 days, 30,000 cowries would be paid.

It actually happened that Robinson agreed to pay 20,000 cowries, apart from 300 cowries for food, to each porter if they carried his load from Kaffi to Zaria, which he estimated at 180 miles[1]. If he had had to carry the cowries along to Zaria and if every porter had carried only fifty pounds, each one should have carried no more than his load. But he often made each of his porters carry a ninety-pound pack - which would be equivalent to 36,000 cowries. If he was to transport fifty porters' payment of 20,000 each, he would still have required twenty-five porters, each carrying 36,000 cowries of ninety pounds to transport the 1,000,000 cowries that would be paid fifty porters. In other words, he would have had to reduce his load to twenty-five packs, because to employ twenty-five extra porters was to incur further transportation expenses.

When Robinson's horse became so ill that it could not continue its journey, he would have had it sold. But he could not because "its value in cowries would require fifteen extra porters to carry"[2]. He calculated further that the carriers would have to be paid much more than what they could carry[3]. Hailey also gave an interesting instance of a porter on a 500-mile journey who finished eating all the he carried[4]. In the light of earlier calculations, it would be surprising if what he carried was even sufficient for him to eat for the whole journey. The additional cost of any extra load of cowries or articles of exchange for the porters' remuneration was so considerable that neglect of it might lead to an enormous miscalculation of the total cost of human porterage.

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1. Robinson, Hausaland,
2. Robinson, Hausaland, p.46.
3. Ibid.
4. Lord Hailey, An African Survey, OUP, London, 1957, p.1536.

Sixthly, if the value of a product was low in relation to its weight, it could not be profitably carried on long distances. It was unlikely that a product such as yam which was heavy but cheap[1] would be headloaded to distant places. For example, if a ton of yams was headloaded from Oyo to Lagos (a distance of about 120 miles) at a cost of 29.4d[2] (or 30d) per ton-mile, the transportation cost would amount to £15. Besides, as a perishable commodity, the cost of yams lost on the journey would be spread over the quantity that reached Lagos. Unless there was a high demand for Oyo yams in Lagos, the transport cost could so much raise the selling price that its consumption in Lagos would be restricted to only a few.

There is no doubt that in practice both the traveller and the trader made efforts to reduce transport costs to the minimum. Even the European travellers carried more light cloths than bulky cowries. Most of the traders and their porters would exchange their goods either directly or sell them for cowries and spend most of the cowries immediately to purchase whatever they needed.

By the end of the nineteenth century, head porterage had become inadequate to the growing economy of the country. Its cost had soared mainly because there were alternative jobs such as the construction of railways which not only absorbed more labour but also offered regular and higher remuneration. As briefly noted above, there was a greater involvement of the country's agricultural products in the legitimate trade as a result of greater demand for them and increases in their world price[3].

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1. C.O. 879/33, Alvan Millson, 1890. In 1890 a load of yams cost 4d to 6d in Ibadan.

2. See the calculation made above for short and long distances.

3. Newbury, C.W., The Western Slave Coast and its Rulers, London, 1961, pp.42-60; McPhee, Economic Revolution, Chap.II,'Trade', Passion.

When the world and local price of palm produce was declining towards the end of the century there was a rise in the price of rubber from about two shillings and eight pence per pound to over four shillings. Between 1894 and 1895 the quantity of rubber exported from Lagos rose from 5,000 to 5,000,000 pounds[1]. Also at this time cocoa was introduced into Yorubaland in Ibadan and Ondo districts[2].

There was, therefore, an increase in total volume of exports involving increase in both production and transportation. This led observers to think that if the labour employed in transporting produce was diverted to production alone, while a labour-saving device was employed in transportation, production would increase[3]. It was in the interest of merchants and government officials that more was produced and transported cheaply both to lower merchants' outlay, and so that more imports and more revenue might be available in the country for building essential facilities such as the harbour and railway. It was also considered that a cheaper form of transporting manufactured products to the interior would enable producers to come into contact more quickly with more European goods, and encourage them to increase output.

For the construction of the railway which started in March 1896 in Lagos, machines had to be transported to wherever they were needed[4]. Also, heavy machinery required at the Bauchi Tin Mine for mining and that imported for cotton pressing in the early twentieth century could not be

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1. S.S. Berry, "Cocoa in Western Nigeria, 1890-1940 - A Study of an Innovation in a developing Economy", Ph.D. Thesis, Uni.of Michigan, 1967, pp.20-62.
2. Ibid.
3. Flora, L. Shaw (Lady Lugard) A Tropical Dependancy, 1905, p.498; Also Kirk-Green, A.H.M. (Ed) Lugard and the Amalgamation of Nigeria - A Documentary Record...., Frank Cass, 1968, p.196; Lugard, Dual Mandate, p.463.
4. McPhee Economic Revolution, p.108.

easily or cheaply headloaded. Some had to be broken into seventy-pound packs and parts such as girders, which were indivisible, had to be carried by a number of porters[1]. Tin ore, too, had to be headloaded from Bauchi to Loko on the Benue - a journey of about fourteen days[2]. This was part of a machine economy which headporterage was incapable of satisfying. Since porters were unaccustomed to carrying heavy machines and since there were alternative jobs, the few who could carry them naturally demanded higher remuneration. By this time head porterage was a heavy burden on those infant industries which already faced many risks and uncertainties.

By the early twentieth century, the cost of transportation by human porterage was being compared with that of the railway, which was to provide the first alternative to headloading in the vast areas of the country where neither the canoe nor the pack-animal could be used. It was becoming obvious that the porterage system was getting more and more incapable of coping with the transportation of new products to the coast. It was also necessary to justify the need for a railway when it was being built and for its existence after it had been built, not only in Nigeria but in other parts of the British colonies. The best way to do this was to bring out the relatively high cost of porterage in comparison with the railway.

Lady Lugard stated in 1905 that head porterage had been calculated at "two shillings per ton-mile as opposed to the fraction of a penny for which certain classes of goods would be carried by rail"[3]. In 1922, in the debate in the House of Commons in England, the Under-Secretary of State for the Colonies, Hon. E. Wood, made a simple arithmetical calculation as to the comparative value of human labour

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1. Lady Lugard, Dependency, p.498.
2. Falconer, On Horseback, p.304.
3. Lady Lugard, Dependency, p.498.

and railway tracks in transport. "An ordinary human being, he was advised, could carry on his head 60 lb over 10 miles in one day. A railway truck on a railway could carry 30,000 lb 100 miles in one day"[1]. This kind of remark was intended to underline the comparative advantage of the railway over head porterage.

Perhaps the greatest agitator for construction of the railway, not only in Nigeria but also in many other parts of Africa, was Lord Lugard. His services in East and West African British colonies gave him a considerable authority which made his comments popularly respected[2]. His calculations are well-known and widely quoted, but they were undoubtedly based on comparison of porterage with railway costs. He strongly believed that "the development of the African continent is impossible without railways"[3]. He calculated that "one railway train will do the work of 13,000 carriers at one-twentiety the cost"[4].

In his detailed calculations, Lugard left no one in doubt that he had a thorough understanding of the porterage system. He always made allowances for day-to-day expenses on the trade routes. For example, in one calculation he noted that "a man carrying 65 lb for a distance of 12 miles per diem for six days in the week would at 9d a day cost 2/6d per ton-mile. To this must be added subsistence money on the return journey, and a margin for sickness and supervision"[5].

Such calculations could not but impress on the public the great advantages of the railway over the porterage system. The first

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1. E. Wood, Journal of the Parliaments of the Empire, 3, 1922, p.743.
2. Fage, History, p.182.
3. Lugard, Dual Mandate, p.462.
4. Lugard, Dual Mandate, p.463.
5. Lugard, Dual Mandate, p.461.

advantage of the railway was said to be the "gradual abolition of the system of transport of carriers"[1] or that "it would suppress the use of porterage"[2], set labour free for other economic activities, and increase the speed at which products would be transported at a reduced cost.

It is misleading to generalise about the high cost of the porterage system without limiting the explanation to a particular period. While the argument of high cost of porterage may have been valid in the late nineteenth and early twentieth centuries, it was not necessarily so in the earlier period especially for short distances. In the first place, until the early twentieth century when "the iron horse" began to penetrate the interior, there was no alternative land transport in most parts of the country. Therefore cost comparisons could only be made by European travellers or those who had seen less costly modes of transport. Secondly, it does not seem that Lugard and others made strict calculations for the railway - a highly capital-intensive form of transport - as they did for head porterage. If the over-head costs and the running costs of the railway were properly calculated; and if the costs were related to the pre-colonial economy, their comparative estimate of low cost of transportation by the railway might have to be modified.

The nineteenth century travellers discovered that it was women who dominated both the local trade routes and the market places. This was not a coincidence; it was mainly because most loads were carried locally, probably within ten miles or a day return journey of about twenty miles. The value of the products that were carried to local consumers might be low but there was normally no need to carry such products on long

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1. Northern Nigeria Colonial Report, 1900-11, (1906-7), 551, p.485.
2. Harrison-Church, Thesis, p.203.

distances. For example, a load of yam, that might weigh at least fifty pounds, cost only about 2.4d for an equivalent of about 384 cowries, at 160 cowries to the penny, in Ibadan in 1890. A load of plantain cost only about 1.25d or about 200 cowries[1].

But the value of some imported commodities was comparatively high. For example, a bag of salt cost 5/- or about 9,600 cowries[2]. It meant that about twenty-five loads of yams were equivalent to a bag of salt. Yet it might cost the same amount to transport a load of yam as a load of salt although their values varied considerably. It also meant that because of the high value of salt it could be profitably transported a long distance. But yam could not, otherwise the cost of headloading it would be so high that the cost of the yams would only pay a fraction of the transportation cost.

Indeed, porterage costs do not seem to have had much effect on salt prices even for a distance of about eighty miles. For example, Millson discovered that both at Ibadan and at a town about seventy miles further, Ikirun, salt was sold for the same price, 5/-[3].

It would appear that the main geographical areas depended largely on local crops for their staple food[4]. People in the south depended largely on crops such as yams of different species, cassava, plantains and maize. These crops which could be used to make different foods are their staples. In the north, people relied largely on grains

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1. C.O. 879/33, Alvan Millson, in Moloney to Knutsford, No.27, June 10, 1890, p.82.

2. Ibid.

3. Millson, C.O. 879/33, p.81.

4. Roland Perteres, "Primary Cradles of Agriculture in the African Continent" Fage, J.D. and Oliver, R.A. (eds) Papers in African Prehistory, Cambridge, 1970, Chap.3.

for their food. Most of these food crops were carried only locally - from farms to markets, villages and towns.[1]

Although long-distance traders existed - the Hausa, Nupe, Aro, Yoruba - the bulk of the total trade of the country was in the hands of the small-scale local traders who headloaded their products to the consumers. Apart from slaves who carried loads to long distances, products such as leather, natron, salt, and cotton and palm oil, that entered international markets before the nineteenth century were only partly headloaded.

Pack-animals and the canoes played greater roles in their transportation. For example, Cadamosto, the fifteenth-century Venetian sea-captain in Portuguese service, referred to the salt caravans from Taghaza which travelled south through Timbuktu to Mali where the salt had to be transferred from the camels' backs to porters' heads.[2] The gold that the Sudanese exchanged for the salt was also partly headloaded and partly carried there in boats.[3]

Human porterage suited the economy before the expansion in exports in the late nineteenth century. With the limited seasonal production of the agricultural products, and with low valued but heavy and bulky products, a mechanical form of transport would have been under-employed and would have been more costly than human porterage.

In the areas where neither pack-animals nor canoes could be used for transport, there was no alternative transport to human porterage before the introduction of mechanical transport. Therefore,

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1. It would appear from general remarks and observation gathered on fieldwork that villagers who form the bulk of the population in Nigeria still rely heavily on foodstuffs produced locally.

2. A. da Cadamosto, Voyages, ed. and trans. G.R. Crone, Hakluyt Society, London, 1937, pp.21-23.

3. Ibid.

the cost of human porterage could not be justifiably compared with any other at that time and in such a place.

In summary, it would appear that when there was abundant labour and when internal and external markets for products were small, human porterage was economically rational. Contrary to Harrison-Church's assertion (quoted at the beginning of this chapter), "head porterage was not necessarily an evil in itself. It indeed caused little hardship until regularly employed by Arabs or Europeans for commercial purposes"[1].

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1. Lord Hailey, African Survey, p.1536.

CHAPTER 5

Pack Animals

This chapter sets out to examine the crucial role that pack animals played in the pre-colonial economy of Nigeria. Emphasis is laid on the camel which revolutionised the trans-Saharan trade in Roman times and which remained in use; and on the donkey which dominated the routes in the northern half of Nigeria. The ways in which both indigenous traders and foreign travellers employed their pack animals are also distinguished. Among other points discussed are the problems which faced the users of pack animals, the speed and the costs.

In many parts of the world, apart from human porterage, the earliest non-mechanical form of land transport was the pack-animal. It is known, for example, that in England up till the sixteenth century, the carriage of man and merchandise was done by pack horses. In the Middle Ages: "Long trains of these faithful animals (horses). . . wended their way along the narrow roads of the time, and provided the chief means by which the exchange of commodities could be carried on"[1]. The same writer adds that "each of the large merchants of the principal mercantile centres had his horses for carrying his goods to the more remote, as well as the nearer, markets; and generally on the main roads, and almost universally on the by-roads, the conveyance of all kinds of products was done by the agency of these carriers"[2]. Although water transport was also important, heavy reliance was put on pack animals in places which could not be reached by water.

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1. Jackman, Development of Transportation, p.141.
2. Ibid.

Throughout England, long lines of pack horses with bales or panniers slung across their backs, made their way along roads or bridle paths. The animals not only carried the bulk of the trade goods, but also carried a good number of people. As Pratt noted, "in the Middle Ages everyone rode except the very poor, and they had to be content to trudge along on foot"[1]. In the eighteenth century, pack-animal transport still provided about ninety per cent of the total transport in Castile. But there, in addition to being used for transportation purposes, the pack animal was closely associated with farming[2]. In many parts of Asia, and among the peoples of North Africa and the Tuareg of the Sahara, animals were the major means of transporting travellers and traders and their loads.

Among the European countries, where head porterage was not practised, the only alternative to pack animals, before the introduction of mechanical forms of transport, was water transport. The study of the pack animal is therefore a study of a universal means of transport which belonged to the past and which is still in great use today. This is due to a number of reasons. First, the nineteenth-century travellers - explorers, missionaries and company officials who provided the bulk of documentary evidence on nineteenth-century transport gave less information on pack animals. This was due, in turn, to the fact that even in the north, they themselves relied more on porters for the transportation of their loads than on pack animals[3]. The detailed comments which Charles

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1. Pratt, Edwin, A. A History of Inland Transport and Communication in England, London , 1912, p.16.

2. Ringrose, David, R. "Transportation and Economic Stagnation in Eighteenth-Century Castile", The Journal of Economic History, No.1, Vol.28, March 1968, p.52.

3. For example, Tugwell reported that one Col.Morland made use of about 400 carriers in the north. He himself used about 250. Neither made use of pack animals. G.3 A9/0, No.14, Feb.19th, 1900.

Robinson made on porters and the type of meticulous calculation which Lord Lugard made on them cannot be found about pack animals. Secondly, the use of pack animals for transportation purposes in Nigeria was, and still is, limited to the areas not infested by tsetse fly. In the north of the country, the pack animal was an essential means of transportation, but it was restricted to that section of the country. Even among these communities, head porterage more than supplemented the pack animal. In spite of this, however, pack animals deserve study if only to direct more attention to them and generate further research.

Among the pack animals employed in pre-colonial Nigeria on which information is available, were, the camel and the donkey. A few references are also found regarding the use of the bullock, the ox, the mule, the hinny and the horse[1]. But the horse which was of such wide-spread use in Europe and some other parts of the world was of less significance as a pack animal in Nigeria, mainly because of its high demand for warfare.- it became a symbol of prestige. It is also notable that the elephant, which was of such importance as a pack animal in Asia, was not so employed in Nigeria. For instance in East Bengal, elephants were employed for carrying bulky materials. They were also used for riding, as a symbol of prestige[2]. Since each of them was capable of

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1. The ass and the donkey are often referred to as one and the same thing. According to the dictionary, a donkey is a usual word for an ass. An ox is described as a bovine, horned animal, a bull as an uncastrated male ox; and a bullock as a castrated ox. A mule is the offspring of a male donkey and a female horse while a hinny is the offspring of a female donkey and a male horse.

2. Kamaluddin, A.F.M. "The Development of Transport in East Pakistan", Ph.D. Thesis, Aberdeen, Oct. 1967, p.91

carrying as much as 1,000 lbs[1], they might have been useful in transporting heavy things instead of being recklessly killed for the sake of ivory. A possible explanation is that the people never learnt the taming and breeding of elephants in order to use them for transportation purposes.

The camel, too, was not much used within the country. Its main use was confined to the extreme northern portion, on the fringes of the Sahara. Its significance lay in promoting trans-Saharan international trade. This role is comparable to the ship which was used for the trans-Atlantic international trade with the coastal areas of West Africa. Indeed, the camel has been rightly named "Markoub el Sahara or ship of the desert" by the Arabs[2].

The camel on the one hand and the donkey and others on the other were largely employed on different routes. The camel crossed the Sahara to the southern termini of the trans-Saharan routes while the other pack animals were essentially employed in the areas south of the termini - Sokoto, Katsina, Kano and Bornu and around these areas. (See Map 2). For this reason the camel deserves to be treated separately.

The Camel

The camel is essentially the transport animal of the desert. (See Plate 2). Available sources tend to suggest that a species of camel was indigenous to North Africa, but exactly when later ones were introduced

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1. Kamaluddin, A.F.M., "The Development of Transport in East Pakistan" Ph.D. Thesis, Aberdeen, Oct. 1967, p.91.

2. Campbell, Dugald, On the Trail of the Veiled Tuareg, London, 1928, p.248.



Pl. 2

there and used across the desert has been a subject of academic interest[1]. Bovill, for example, suggested that there had existed in North Africa an indigenous species of camels which has long since become extinct. According to him, "The wide distribution throughout the region of remains of a quaternary camel for long seemed clearly to indicate that it had been there continuously since before the dawn of history. It is now known that the quaternary beast did not survive into historical times"[2]. Hogben and Kirk-Green also noted that "there is evidence of an indigenous long extinct camel in North Africa (Camelus Thomazi)"[3]. It is also argued that although the later species of camels reached the Maghrib in Roman times, it was probably to the Zenata Berbers that the credit of its introduction into North Africa belonged[4].

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1. For discussions on the introduction of the camel into North Africa the following are useful sources: (1) Hogban,S.J. & Kirk-Green, A.H.M. The Emirates of Northern Nigeria, OUP, London, 1966, pp.12-13. (2) Bovill, E.W., The Golden Trade of the Moors, 2nd Ed., 1968, pp.37-8; (3) Brogan, Olwen,"The Camel in Roman Tripolitania", Papers of the British School at Rome, Vol.xxii, (New Series), Vol.ix), London 1954, pp.126-7; (4) Wheeler, Mortimer,(Sir), Rome Beyond the Imperial Frontier, London, 1954, p.97; (5) Boahen, A. Adu, Britain, the Sahara and the Western Sudan; 1788-1861, Oxford, 1964, pp.103-104; (6) Lhote, Henri, The Search for the Tassili Frescoes, the story of the Prehistoric Rock-paintings of the Sahara, Translated from the French by Alan Houghton Brodrick, London, 1959. (7) Rodd, Francis, (Lord Rennell) People of the Veil, 1966, pp.206-208.

2. Bovill, Golden Trade, p.37.

3. Hogban & Kirk-Green, Northern Nigeria, p.13.

4. Ibid.

The earliest reference concerning the camel in North Africa was the mention of the famous twenty-two camels which belonged to King Juba and which were captured by the Romans during the skirmishing in the campaign which led to the Battle of Thapsus in 45 B.C.-47 B.C.[1]. In about A.D. 363, there is another reference to camels. At this time, it was as many as 4,000 which a Roman Governor requisitioned for transport purposes from Tripoli[2].

It is therefore, possible that "somewhere between 46 B.C. and A.D. 363 the Roman army started using camels"[3] in North Africa. Mortimer Wheeler also argues that there is no evidence to suggest that the camel was in normal use in North Africa before the third century A.D.[4]. Well before the Arab invasion of North Africa in the seventh century A.D., the Libyan Berbers were already using camels[5]. It is then possible that their spread to the Sudan was about the same time or later.

It is thus difficult to say precisely when camels first crossed the Sahara and reached the extreme northern portions of modern Nigeria. With the trade from North Africa across the Sahara followed Islamic influences in Northern Nigeria, but "the date of the appearance of Muslim [sic] in Hausaland is unknown"[6]. However, the camel must have been employed as far as Kanem - Bornu, before the eleventh century when according to the Kanuri sources, Humai, the twelfth Mai, accepted Islam. On the authority

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1. Brogan, The Camel, p.126; Hogben & Kirk-Greene, Northern Nigeria, p.13.
2. Rodd, The Veil, pp.207-8; Bovill, Golden Trade, p.37.
3. Bovill, Golden Trade, p.38.
4. Wheeler, Imperial Frontier, p.97.
5. Hogben & Kirk-Greene, Northern Nigeria, p.13.
6. Smith, Abdullahi, "The early states of the Central Sudan" in Ajayi and Crowder, West Africa, p.197.

of Arab geographers, Bovill noted that the Fezzan-Bornu route which crossed the oases of Kawar had been in use as early as the ninth century[1]. Camels must have been in regular use since then in Kanem-Bornu districts.

Although "Hausaland seems to have lacked direct contact with North Africa prior to the fifteenth century A.D."[2], and although it is said that no one owned a camel in Hausaland prior to the fifteenth century A.D. when Abdulahi Burja (1438-1452) had one[3], it is possible that the camels which reached Bornu in the ninth century also reached Hausaland at about the same time. In other words, it is possible that, through the camel, there had been commercial links between North Africa and Northern Nigeria for about five hundred years before there were trade contacts between any European country and the coastal states of Southern Nigeria.

If the early use of the camel is shrouded in uncertainty, its crucial role in revolutionising the trans-Saharan trade can hardly be doubted. With its widespread use, "the caravan routes lost half their terrors and new roads were opened for the flow of trade and culture"[4]. The use of the camel led to the increase of network of routes through which international trade developed to an unprecedented stage. As so much work has been done on the trade routes, only a little need be said about them here[5].

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1. Bovill, Golden Trade, p.245.
2. Smith, Central Sudan, p.197.
3. Palmer, Kano Chronicle, p.75.
4. Bovill, Golden Trade, p.44.
5. E.g. Boahen, The Sahara, Fage, History, pp.13-17; Bovill, Golden Trade, Chap.25.

After the Moroccan invasion of Songhay at the end of the sixteenth century, the traffic had become concentrated on four main routes[1]. Two of these four, the Ghadames-Air-Kano and the Tripoli-Fezzan-Bornu routes, reached Nigeria[2]. (See Map 3). That these routes were among those which survived till the nineteenth century indicates the strength and the flourishing nature of the trade that passed on them.

Certainty of water and pasturage were the greatest factors that had to be reckoned with in choosing a route. Many routes were abandoned owing to the failure of wells or pasturage. But these two central routes that touched the fringes of Northern Nigeria had the reputation not only of being among the oldest highways, at least in West Africa, but also of being blessed with the greatest certainty of both water and pasturage[3].

Even so, sometimes there were long waterless tracts which the heavily laden caravans had to cross. There were occasions when caravans perished with the pack animals and their entire property as a result of scarcity of water or of attack by highway robbers[4]. Yet traders persisted in using the routes. Nothing "could force the toiling merchant caravans permanently to forsake them. They had endured through the ages"[5].

The camel dominated the trans-Saharan routes. This was due chiefly to its special suitability for desert conditions, especially its ability to do without water for about ten to fifteen days[6]. Lack

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1. Boahen, The Sahara, p.104.
   Bovill, Golden Trade, p.237.
2. Bovill, Golden Trade, map facing p.238.
3. Bovill, Golden Trade, p.237.
4. Bovill, Golden Trade, p.239.
5. Bovill, Golden Trade, p.237.
6. Leo Africanus, Description iii, 941 mentioned fifteen days and
   Bovill, Golden Trade, p.16 gave ten days.

of water alone must have been responsible for the greatest number of daaths of man and beast that attempted crossing the Sahara. Bovill, for example, noted an instance in which a caravan of 2,000 men and 1,800 camels perished of thirst in 1805 on the Timbuktu route[1]. When sufficient water was available, the humped camel could take in over fifty gallons of water at a time[2]. It could also withstand abnormal heat and store up reserves of energy in its hump[3]. Besides, camels' feet are well adapted for desert travel as they never sink in the sand. During sand-storms they could close their nostrils and eyes to prevent sand from entering them[4].

But, perhaps, next in importance to its power of doing without water for a long time was its capacity for going without food for more than a week. The African camels were even better than those of Asia at doing without food. They could travel forty of fifty days together without having to carry food supplies[5]. Leyden, an early nineteenth-century traveller, said 'Infinite facility has been afforded by the introduction of the camel, emphatically called the "ship of the desert"; an animal whose patience of hunger and fatigue, whose capacity of conveying water, and whose foot smoothly gliding over the level sand, seems almost to point him out as an instrument formed by nature for effecting a communication across these immense wastes'[6].

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1. Bovill, Golden Trade, p.239.
2. Hogben & Kirk-Greene, Northern Nigeria, p.13.
3. Ibid.
4. Adefolalu, "Transport", p.25.
5. Leo Africanns, Description, iii, 939,
6. Leyden, Discoveries, II, 493.

The Tuareg were the breeders of camels which were employed in crossing the Sahara to the northern parts of Nigeria.[1,2] Like the Arabs, they esteemed the camels to be their principal possessions and riches. According to Leo Africanus, the Arabs speak of the wealth of their princes or governors by saying that "he has so many thousand camels and not so many thousand ducats".[3] So also were the Tuareg. According to Francis Rodd, "to own camels, and yet more camels, is the ultimate ambition of every Tuareg. A man may be rich in donkeys, goats, or sheep, or he may have houses, gardens and slaves, but camels are the coveted possessions."[4]

An important explanation for their very high regard for their camels is that breeding of camels is a very slow process. She-camels give birth to only one calf at a time; and their gestation period is about one year. She is frequently not mated until one year after the birth of a calf. In other words, one camel has only one calf every two years. Therefore, whilst a great loss of goats during a drought can be restored quickly once rainfall starts, this is not so with loss of camels. For this reason, and because of high demand for camels for transportation purposes, a grown up camel has about the same value as 25 to 30 goats among the Tuareg.[5]

Despite this slow breeding, the Tuareg possessed convoys of camels of a strong and sturdy breed. They not only sold and hired camels to travellers and traders, they themselves spent a great part of their time in using camels to carry merchandise for trading purposes.[6]

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1. According to Campbell, Veiled Tuareg, p.20, "Their true name is neither Tuareg nor Targani (plural), which are nicknames given to them by their enemies, the Arabs, but Imouchar, or Imoshagh".
2. For a recent study of the Tuareg with reference to their domestic animals see Johannes Nicolaisen, Ecology and Culture of the Pastoral Tuareg, with particular reference to the Tuareg of Ahaggar and Ayr, The National Museum of Copenhagen, 1963.
3. Leo Africanus, Description, III, 939.
4. Rodd, The Veil, p.194.
5. Nicolaisen, Pastoral Tuareg, p.56.
6. Campbell, Veiled Tuareg, p.19.

A Tuareg was a true nomad, wandering about, and selecting for temporary homes wherever he found water and grazing[1]. It was inconceivable to dissociate the Tuareg from his camel. He could live on its milk for months and could rely on its dung for making fire. Neither oxen nor donkeys, which he also bred, could enable him to remain independent of his physical surroundings to the same extent as the camel. As Campbell noted, "The Tuaregs are kind and considerate to their wives; patient and forbearing with their children of both sexes; but they love their camels"[2].

It was mainly for personal and economic reasons that the Tuareg loved their camels. They well realised that traders and travellers across the desert relied on them solely for supply of camels. For their livelihood they also depended on revenue from animal transport. Therefore, to them the camel was more than just a domestic animal. A Tuareg's "solvency or bank value"[3] depended on the size and state of his herds of camels. As breeders and hirers of animal transport they were very important. Clapperton noted in 1824, that "the merchants of Ghadamis and Tuat never keep camels of their own, but hire them from this singular people (the Tuareg) who carry their goods across the desert to Kashna [sic] . . ."[4].

Another factor which helped travellers and traders to cross the desert was the availability of the Tuareg as guides and drivers of camels. Caravans without Tuareg guides were liable to highway robbery and plundering. The Tripoli Arabs who dominated the trade routes and

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1. Campbell, Veiled Tuareg, p.230.
2. Campbell, Veiled Tuareg, p.248.
3. Ibid.
4. Denham & Clapperton, Narrative, II, 348-9.

who often dispensed with their services as guides had incessant complaints against the Tuareg. Other users of the routes could hardly cross the desert without them because of their intimate knowledge of the camel and the routes. According to Campbell, "Tuaregs understand a camel from A to Z"[1].

With this qualification, they served not only as guides but also as drivers and minders of the camels they hired out. To a trader who was unaccustomed to the routes, the desert was either a vast sheet of featureless land or "a giant spider web, woven with an infinite number of criss-cross trail threads", across which "the slow-moving caravans of camels and men resemble crawling spiders"[2]. The Tuareg, however, had trained eyes to read the desert routes. "Like the Magi, the Tuareg followed the trail by means of the star, ... the heavens were his chart, his eyes and intuition his telescope...."[3]. While on the journey it was essential to know how to cater for the camels. If a camel was lost in the desert as a result of inadequate care, the whole journey could be disorganised unless a substitute was readily available.

Instead of beating them like donkeys, their masters sang "certain songs unto them; wherewith being exceedingly delighted, they performed their journey with such swiftness that their masters were scarce able to follow them"[4]. The Tuareg knew this; and they also knew camels to be curiously delicate, losing condition easily. They knew how to combine progress with pasturing, and watering with resting.

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1. Campbell, Veiled Tuareg, p.248.
2. Campbell, Veiled Tuareg, p.20.
3. Campbell, Veiled Tuareg, p.26, Also, Rodd, The Veil, pp.225-6.
4. Leo Africanus, Description, III, 941.

Camels had to be rested properly and loaded only once a day as they might be subjected to a considerable strain if they had to kneel down frequently for loading and unloading. With this special knowledge, the Tuareg, sometimes, "a tough sailor of the Drake or Hawkins type"[1], was able to guide traders right across the desert to Nigeria and even in the northern section of the country.

As professional animal transporters of the Sahara, the Tuareg of Air and Ahaggar were involved in the trade across the Sahara. The nobles amongst them engaged in the organisation, ensuring a steady supply of donkeys, camels and other pack animals and employing their servants and slaves in the north-south trade. Along the major routes leading to Bornu, and Katsina or Kano, they traded their goats, donkeys, sheep and camels.

Also from Kano to Bornu and Lake Chad areas, they made themselves indispensable as permanent transporters[2]. Even right up to the Colonial period, they were always in evidence in the extreme north of Nigeria with their long strings of camels. Every year, during the dry season, they left for Northern Nigeria where they earned a prosperous livelihood on transport work between the cities of Hausaland. But before the rainy reason they returned to the Steppe and desert because neither they nor their camels relished flooded routes or excessive damp[3]. So much was their transport valued that, as late as 1928, an observer noted that "their immediate withdrawal would have a deleterious effect on trade in Northern Nigeria"[4].

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1. Campbell, Veiled Tuareg, p.22.
2. Campbell, Veiled Tuareg, p.20.
3. Rodd, The Veil, p.38.
4. Ibid.

Indeed, apart from trades directly connected with camels, the Tuareg have practically no industries. They were famous as trading agents employing their camels. Even when they were employed to trade on 'credit' they had a reputation for honesty. This impressed Campbell who remarked, "everywhere I went I heard nothing but eulogies of their honesty, and though I have seen them paid for a two or three months' journey in advance without question of name or address, I have yet to hear of a single case of theft"[1]. Their special interest was in the Bilma salt trade. According to Lord Rennell, "the life of the camel-owning Tuareg may be said to centre around the autumn salt caravan"[2].

Thus, the Sahara trade, the Tuareg and the camel were almost inseparable. So far from causing insecurity of routes or instability of trade routes, many devoted themselves to the peaceful pursuit of commerce. Those of them who depended mainly on the caravan trade for their livelihood - as traders, guides, and suppliers of animal transport - would maintain the security of the routes. To stigmatize the Tuareg as bandits or to stress their robber reputation is to underrate their role as breeders, sellers and minders of pack animals which were chiefly employed for crossing the Sahara. Rather than being seen mainly as "the terror of the desert" and "the bugbear of travellers"[3], their role as professional transporters of the Sahara and guides of the travellers must be thoroughly examined.

Apart from the Tuareg, the Arabs, Hausa, Beriberi and light-coloured men from the Fezzan and Tripoli carried on the trade across

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1. Campbell, Veiled Tuareg, p.44.
2. Rodd, The Veil, pp.218,219.
3. Campbell, Veiled Tuareg, pp.20, 23-4.

the Sahara. Another essential commodity which pack animals carried to Kano and Bornu was Bilma salt. Although it was available in some parts of Nigeria a great number of people depended on the imported salt. Therefore, much more was required to supplement the local supply. Bilma was reputed to have the finest salt deposits in Africa. It was of good quality, free from sand or impurities and often preferred to European salt[1]. Besides, it was easily produced in big loaves, and could be properly wrapped in mats for camels to transport.

The salt caravans which dominated the route between Kawar and Hausaland in the nineteenth century often employed the best camels for the journey. Thousands of the caravans, known as Azalai, set out from Air, every dry season, to fetch salt at Bilma and they carried it to Hausa and Kanuri market places. According to Bovill, "probably nowhere in the world could be found a commercial spectacle comparable with the Azalai which even as late as 1908, when it was in its decline, numbered no less than 20,000 camels"[2]. There was an occasion when the caravan reached the total of over 30,000 camels[3].

On return journeys, the camels carried natron, corn, hides and leather goods - saddles, water skins and sandals, ostrich feathers, ivory, kola nuts; and the slaves brought from the south also followed the caravan[4].

A type of Hausa cloth known as Turkudi[5] was also carried northwards. They were "in large demand, especially by the desert tribes in the north, who wear nothing else"[6]. According to Barth, the manufacture

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1. Rodd, The Veil, pp.218,219.
2. Bovill, Golden Trade, p.242.
3. Rodd, The Veil, p.218.
4. Boahen, The Sahara, p.108.
5. Turkudi is a black, glazed woman's cloth.
6. Dr.F.Cargill, "Kano Province Report", No.36. for the year ending December 31st 1907, par.116. I am grateful to Marion Johnson for directing my attention to this information.

of Hausaland spread to the north as far as Murzak, Ghat, and even Tripoli"[1]. The camel was the chief vehicle that transported the exports to these various consumers. At his lowest estimate, Barth rated the export of Hausa fine cotton cloth to Timbuktu at "three hundred camel-loads annually"[2].

By having full camel-loads on both southward and northward journeys the transportation cost was lowered. If enough loads were not available for camels to carry on both journeys, the transport cost would have been so high as to render the trade unattractive and probably impossible.

The speed at which a pack camel travelled is crucial to the total transport cost. It is notable that, unlike the speed of porters in the forest zone, the speed of camels was not much constrained by physical obstacles. For example, a camel was not likely to be detained by downpours or tornadoes (although sandstorms might be encountered). Neither would its speed be limited by ferrymen, or by fording a stream, or by wading through flooded routes, nor were toll-collecting points common in the desert as in the forest zones. Routes might have to be along lines of oases or water holes but they were less circuitous than those in the forest. Apart from detours to avoid large sand-dunes or mountains, and apart from sandstorms, no extra travelling was usually necessary. Camels were not rested, or fed or watered during the day, so that there was virtually nothing to impede the day's travel[3]. There were also night journeys which would not be started until after the camels had had long rest.

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1. Kirk-Greene, Barth's Travels, p.115.
2. Barth, Travels, Vol.I, p.511.
3. Campbell, Veiled Tuareg, p.175.

However, the journey might be impeded if the camels' loads were not properly packed and could easily drop down. (See Plate 2). A pack-saddle was used, consisting of "two sheaves of grass or straw, two semi-circular pieces of matting made of plaited dum palm fronds, a skin filled with grain or stuffed with dry camel dung and a wooden arch terminating in flat boards". Then, "the loads, which must be carefully balanced, are slung over the pack-saddle; two loops on each load are hitched to the other two with two short sticks"[1]. Girths or breastbands were used if the loads were bulky or needed special steadying.

Loading was difficult and could only be properly done by at least two men. The camel had to be made to kneel down before it could be saddled, because of its height. To unload it was a simpler operation. As soon as it had been made to kneel down the loops were disconnected by pulling out the short sticks and the loads simply fell down on either side.[2]

On rough routes the camel could slip and their loads fall off. Also when let loose many camels grazing on the same bush might bump into one another, knocking off their packs. On each occasion when loads fell down, the camels had to be made to kneel down and re-packed. This is why camel guides who knew the routes and could watch the loads were almost indispensable if good speed was to be maintained.

The normal speed of a camel depended on the species. Leo Africanus identified three species. First was the Hugium, the biggest in stature and most fit to carry burdens. The second one was the Becheti

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1. Rodd, The Veil, p.223.
2. Campbell, Veiled Tuareg, p.79.

which had a double hump, able to carry both burdens and men. Thirdly, the Ragnahill, which was slender and which excelled the other two in swiftness, being able to travel a hundred miles a day and to continue doing so over the desert for eight or ten days together carrying very little food. But they were quite unfit for carrying burdens[1]. Even within the Sahara, there were different species.

It appears that the species which crossed the Sahara to Kano and Bornu were not swift ones. The average speed of those with a baggage caravan was not more than two to two and a half miles per hour. Even the Mehari, the riding camels, could hardly do more than three and a half to four miles per hour on regular marching days[2]. But the absence of physical constraints on their journey was an advantage to their speed. They could, therefore, do a non-stop journey of ten to twelve hours a day. At the minimum speed of two miles per hour for ten hours a day, pack camels could cover twenty miles a day. They could, at the very maximum, cover thirty miles a day, doing two and a half miles per hour for twelve hours. (See Table 9).

Apart from the fact that a speed of thirty miles was one of the highest that could be covered in a day by the existing modes of transport in this period, one of the relative advantages of the camel over other pack animals and human porterage was its suitability for long-distance journeys. This was due not only to its ability to cover many miles for days and even weeks without breaking down but also to its ability to carry heavy loads for long distances. Rodd's camels, for instance, covered 500 miles in thirty-five days, including only nine days of halt, giving an average speed of twenty miles per marching day

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1. Leo Africanus, Description, III, p.940.
2. Hogben & Kirk-Greene, Northern Nigeria, p.13; Rodd, The Veil, p.193.

for twenty-six days[1]. No other beast of burden - man or animal - could do so long a journey in a short time.

Another factor that recommended the camel for long-distance journeys was its cheap maintenance on the route. Although camels were more fastidious than donkeys as regards feeding, they fed themselves en route on grasses. Their best fodder was the true desert vegetation; "The animals eat it avidly on account of the salt it contains, and even long periods of drought do not conquer its obstinate greenness. Its nutritive power is greater and it is more wholesome than the luxuriant southland fodder"[2].

The camel did not have to carry its food while in the desert. But when getting out of the area of the true desert vegetation it was often loaded with dates and bunches of grass. Some of the bunches of grass were dropped along the route to provide feeding on the return journey. What was carried did not seriously affect its pay-load; but a porter who attempted a 500-mile desert journey would consume more than he carried.

The camel could carry even on long journeys, a load of 2 to 5 cwt[3]. It would take over five donkeys, each carrying about one hundred and twelve pounds[4], to carry a camel's full load of 5 cwt. As a man's load is hardly more than half a donkey's pack, over ten men would be required to carry a camel's load at a time.

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1. Rodd, The Veil, p.72.

2. Rodd, The Veil , p.62.

3. Marion Johnson, "Cowries", p.29, who also refers to other estimates of camels' carriage, gives 4-5 cwt.

4. Kirk-Greene, "Lugards, Documentary Record", p.197, gives a donkey's load at 100 lbs. Tremearne, Hausa Superstitions, p.38, gives it at 150 lbs. N.Nig.Report, (1909), p.703, gives 112 lbs.

Some long-distance traders bought the camels that they employed for transportation. A camel could give as much as thirty years' service[1] to the trader who would still sell it for about 60,000-100,000 cowries at the southern termini of the route[2].

A trade which existed and continued for hundreds of years and which involved a great number of traders and camels[3], besides other pack animals, despite the hazards of the journeys, must have been a lucrative one. For example, the total value of Western Sudan trade with Tripoli for the period from September 1861 to October 1862 - £100,480 - represented 1,625 camel loads[4].

Slave traders could sell the prime slaves at Tripoli at five times their purchase price[5]. It is also known that the outlay on Bilma salt was in the order of three pence to five pence a load. A load consisted of four to six loaves of salt; and a loaf was sold in Hausaland for anything up to seven shillings or more[6]. This means that a camel-load of salt which originally cost about five pence in Bilma was sold for about forty-shillings in Hausaland[7]. The wide gap between the original cost of

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1. Campbell, Veiled Tuareg, p.251.

2. Lander, Records, I, p.222, cited 62,000 cowries as the price of a camel at Kano. Over twenty years later, Barth, Travels, III, 579, cited 60,000 for one, also at Kano.
   Hiskett, gives 100,000 cowries for a camel in Kano.
   Mr. Hiskett, "Materials relating to the cowry currency of the Western Sudan I", Bulletin of the School of Oriental and African Studies, University of London, XXIX, Part I, 1966, pp.133, 134, relating to Kano, Schedule of inheritance for the last half of the nineteenth century. (5,000 cowries = 1 silver dollar).

3. Newbury, "North African Trade", p.237.

4. Newbury "North African Trade", pp.242-4. Nicolaisen, Pastoral Tuareg, p.215. He, too, mentions that in 1908, when the trade was already decreasing, Bilma caravans numbered about 20,000 camels.
5. Bovill, Golden Trade, p.246.
6. Rodd, The Veil, p.218.
7. Ibid.

salt and its selling price must have been due partly to transport costs and customs and mainly to profit. Such profits were justified by the risks to life and property and the hardship involved in the long-distance Saharan trade.

It is easy to over-estimate the profit on the trans-Saharan trade. For example, the difference (shown in percentages)between cost price and selling price of the articles in Tables 6 and 7 does not indicate profit alone, transport expenses are included. Transport expenses include cost of packing and customs paid en route.

The example given by Newbury well illustrates the position of transport costs in trade[1]. The cost price of some fabrics bought at Tripoli by a nineteenth-century trader, "El Hadj Ahmed Mecrouren", was 175 mahboub (or 437,500 cowries)[2]. Newbury reckoned the transport expenses from Ghat to Kano as 70,000 cowries. But total transport expenses from Tripoli to Kano is calculated to be 111,350 cowries[3]. At Kano the textiles were sold for 750,000 cowries. This left a profit of about 201,150 cowries - 46% of the original cost price of the textiles at Tripoli.

With his cowries, El Hadj Ahmed bought 280 lb of good quality ivory. At Tripoli he sold the ivory at a profit of 36%, having deducted transport costs[4]. Goods taken to Timbuktu also showed a profit of 37% and 40%[5]. These reasonable profits demonstrate the point that transport

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1. Newbury, "North African Trade", p.238.

2. According to Newbury, 1 mahboub = 4/- (p.237)
   25 frs = £1 (p.242); 5,000 cowries = 10 frs. (p.237)
   i.e. 10 frs or 5,000 cowries = 8/-
   4/- or 1 mahboub = 2,500 cowries
   175 mahboub = 437,500 cowries

3. Packing and transport from Tripoli to Ghat = 16½ mahboub (p.238).
   or 41,250 cowries
   Transport from Ghat to Kano = 54,000 cowries
   Customs 16,100 cowries
   Total Expenses 111,350 cowries

4. Newbury, "North African Trade", p.238.
5. Ibid.

costs were not too high to discourage trans-Saharan trade. In El Hadj Ahmed's Tripoli trade, transport costs represented 15% of the selling price, and 28% of the cost price. Indeed, the Tripoli-Kano trade expanded in the nineteenth century[1]. The camel probably played the most significant role in the trade.

The Horse

As the camel was not employed for transportation in North Africa until about the third century A.D.[2], other pack animals must have been in use in earlier times. The horse was one of the animals that had accomplished the Sahara crossing. Herodotus credited the Garamantes with the use of two-wheeled chariots drawn by two or four horses in the fifth century B.C.[3] But later work has proved that the Saharan chariots were more ancient than that. Henri Lhote, a French archaeologist, traced sites of paintings and engravings of chariots from Tripoli to Gao on the Niger[4]. According to him "the geographical disposition of the painted chariots shows that the horse-riding populations, descended from 'people of the Sea' and the Libyans, must have reached the Niger by almost as early as 1000 B.C."[5].

Whereas the horse penetrated beyond Gao southwards and even, later, reached places as far south as Benin in Southern Nigeria[6], there is no evidence yet to prove that the chariot followed it further southwards. As horses could hardly do more than three days' journey without

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1. Newbury, "North African Trade", pp.244-5.
2. Wheeler, Imperial Frontiers, p.97; Hogben & Kirk-Greene, Northern Nigeria, p.12, Brogen, The Camel, p.126.
3. Lhote, Tassili Frescoes, pp.124-5.
4. Lhote, Tassili Frescoes, pp.22.
5. Lhote, Tassili Frescoes, p.127.
6. Fage, History, p.45.

water[1], they must have been used only when water-holes were not too far away from one another.

According to Bovill, "though much remains obscure, one fact stands out beyond the reach of controversy; for centuries before the introduction of the camel into the Sahara men were accustomed to move about the desert with oxen, in horse-driven chariots, or on horse-back"[2]. But horses later became so rare that even among the Tuareg it was regarded as a symbol of prestige[3].

A probable reason for the rarity of horses is that; unlike camels or donkeys, they were difficult to maintain. They needed water, at least, every three days, and for a large part of the year they were fed on barley, millet or on milk[4]. For this reason, according to Nicolaisen, "The horse has never had the same economic value as the camel later has had"[5]. In modern Nigeria, they were of significance more for close fighting than for transportation purposes. Because of their military importance they played an essential role as an item of trade in the north-south traffic of the pre-colonial era.

Lack of water and pasture were not insuperable impediments to crossing the Sahara by some other pack animals. For example, the bullock is a powerful pack animal, almost comparable to a camel and could on occasion do up to five days without water[6]. More surprisingly,

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1. Rodd, The Veil, p.202.
2. Bovill, Golden Trade, p.15.
3. Nicolaisen, Pastoral Tuareg, pp.111-113.
4. Ibid.
5. Nicolaisen, Pastoral Tuareg, p.113.
6. Bovill, Golden Trade, p.16.

although of less significance to this work, unloaded cattle had been known to have covered eight successive waterless days[1]. The pack-ox was less capable of desert journeys as it had to be watered every third day[2]; but the donkey could do as much as five days' travelling between wells[3]. Regarding pasture, the donkey, being a less fastidious feeder, would eat almost anything[4].

However, it was not only the capability of the camel to do without water for up to fifteen days that made its introduction into trans-Saharan trade significant. Its ability to cover long distances regularly without grazing for days; and, most important of all, its high carrying capacity, made it supreme in the trans-Saharan trade.

Within the area of study, the bullock, the ox, the mule, the hinny, and most especially, the donkey were employed for local and long-distance trade in pre-colonial Nigeria. Each of these is discussed; but emphasis is laid on donkeys because they were most widely used.

The Bullock

In the north-east, especially around Bornu, bullocks were employed in carrying products to local market places. Denham noted in 1824 that "The bullock was the bearer of all the grain and other articles to and from the market"[5]. On a market day, on his return journey from Sokoto to Kano, Clapperton, too, saw large numbers of the finest bullocks he had ever seen. There were three or four persons to

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1. Bovill, Golden Trade, p.16.
2. Rodd, The Veil, p.203.
3. Ibid.
4. Ibid.
5. Denham & Clapperton, Expedition, I, 148.

every bullock. According to him, "one man usually went in front, leading the animal with a rope round its horns, which were dyed with henna, and two or three others followed behind with a rope fastened to the legs"[1].

These bullocks which were found in Katsina, Kano and Bornu districts were well suited for transport work[2]. But bullocks were not widely used in other parts of Northern Nigeria mainly because they were not as easily bred as donkeys. In 1909, a bullock cost £2 while a donkey cost £1.5s. This difference should not have mattered much but for the fact that bullocks required more feeding and care than donkeys. They were also more susceptible to diseases and had less stamina than; donkeys[3].

Pack Ox

Although available information does not emphasize the widespread use of pack oxen, there is no doubt that they were also used for transportation. They were bred in great numbers in both Sokoto and Bornu. Bornu in particular had a reputation for breeding the best oxen[4]. Their oxen were mainly used for butcher's meat and for producing milk. They were also employed for riding and as pack animals[5]. Like horses, they were essential items of trade in the north-south traffic. Oxen were, and still

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1. Denham & Clapperton, Expedition, II, p.343.
2. "Northern Nigeria Colonial Report", (1909), 1900-11, p.703.
3. "N Report" (1907-8), p.602.
4. "N Report" (1904), p.312; (1905-6), p.441.
5. Benton, P.Askell, The Sultanate of Bornu, Translated from the German of Dr. A. Schultze (First Lieut.(Retired) Imperial Germany Army), London, 1913, p.165.

are important in the south as butcher's meat[1].

For transportation purposes, oxen were less important than donkeys. A traveller who had employed both noted, "again and again I have had occasion to use both, and though I prefer oxen because of their greater strength and patience, the jackass has other obvious advantages"[2]. One advantage of the ox over the donkey was its higher carrying - capacity. Whereas a donkey could carry up to 100 to 150 lbs[3], an ox could carry up to 200 lbs[4]. Yet, far more donkeys than oxen were employed for transportation.

The Mule

It would appear that neither the mule nor the hinny played a significant role in pre-colonial transport in Nigeria. They were very rare in the country in the nineteenth century. An important reason for this rarity was the problem of breeding. As animals were not usually enclosed, but were often allowed to run loose, there was little chance for male donkeys and female horses to meet in order to produce mules, or of female donkeys and male horses to meet so as to produce hinnys.

Therefore, only a very few of them existed and were employed for transportation purposes in the nineteenth century. Barth remarked that "once there was . . . a mule with other beasts of burden; and on inquiry, on this occasion, I learned that this animal, which I had supposed to be frequent in Negroland, is very rare...."[5].

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1. Benton, P.Askell, The Sultanateof Bornu, Translated from the German of Dr.A.Schultze (First Lieut,(Retired) Imperial Germany Army)?London,1913, p.165. Benton noted: "the most widely distributed species is the humped ox, similar to the 'Zebu' of India, which is bred all over the Sudan".
2. Campbell Veiled Tuareg, p.70.
3. Kirk-Green, "Lugard's Documentary Record",p.197:100 lbs; Tremearne, Hausa Superstitions, p.38-150 lbs.
4. Kirk-Green, "Lugard's Documentary Record",gave an ox's load as 120-140 lbs; Lugard to Chamberlain, "Northern Nigeria Colonial Report"(1904), 1900-11, p.312, gave it as 200 lbs.
5. Barth, Travels, Vol.I, p.531.

The Northern Nigerial Colonial Administration realised the value of mules for transportation purposes, especially for drawing light carts. It attempted to import some from Argentina[1] and later to breed them in good numbers,[2] but the efforts failed. Owing to the problem of breeding, scarcity of mules in relation to the demand for them is easily discernible in their relatively high price. Whereas, in 1909 a bullock cost £2 and a donkey cost only £1.5s., a mule cost £5, exactly as much as the cost of either a horse or a camel[3]. It meant that a mule was purchased for four donkeys. Barth even discovered that around Kuka and Kano in 1851, the price of a mule was high enough to purchase two camels[4]. He saw only one mule in Kukawa and one in Timbuktu which, according to him, belonged to "one of the richest Morocco merchants"[5].

It was only the wealthier of the Hausa traders who had mules and hinnys which they employed mainly for long-distance kola trade. But their number in proportion to donkeys was so insignificant that only few traders could recollect ever using them[6]. A trader with about ten

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1. "N. Report", (1902), p.115.

2. "N. Report", (1905-6), p.444.

3. "N. Report", (1909), p.703, The average costs were as follows: Mule £5, Ponies £5, Camels £5, bullocks £2, donkeys £1.5s.

4. Barth, Travels, Vol.I, p.531.

5. Ibid.

6. Oral evidence in Hausaland, Jaki-donkey - was the only animal easily remembered.

donkeys did not possess more than two mules and one hinny at a time[1]. For example, Tambarin Agalawa Yakubu of Madabo ward in Kano city, who had the reputation of being the largest Kola trader in the nineteenth century, had about eighty donkeys, only ten mules and a couple of hinnys. Mainly because both the mule and the hinny were highly valued for their carrying capacity, there was a high demand for them and this was reflected in their high cost.

The Donkey

The donkey appears to be the most important pack animal that was ever used and that is still being employed in Nigeria. It was a pack animal of both the Sahara and the Savanna[2]. Its ability to do about five days' journey without water[3] and to cover about twenty miles a day[4] fitted it favourably for the desert journey. But for its lower carrying-capacity, the donkey would have been almost as good as a camel on the desert.

The donkey had been used regularly in places such as Egypt before camels. It had been noted that "the Pharoahs of the XXth Dynasty used Donkeys to transport stone and gold from the mines of the Eastern Desert"[5]. Some tribes in the Sahara who never acquired camels relied on donkeys for transportation[6]. As Nicolaisen noted, "There can be no doubt that before

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1. I am grateful to Paul Lovejoy for this information which he passed on to me by correspondence.
2. Nicolaisen, Pastoral Tuareg, pp.109-110.
3. Rodd, The Veil, p.203.
4. Bovill, Golden Trade, pp.16,17. On page 16, Bovill noted that a bullock would do twenty miles a day and on page 17, that a donkey would travel as many miles a day as a bullock. Also, Clarke, Travels, p.218, put a donkey's speed at 15-20 miles per day.
5. Bovill, Golden Trade, p.17.
6. Ibid.

the introduction of the camel the donkey was . . . more important for riding and transportation than is the case nowadays"[1].

The donkey was probably employed in crossing the Sahara to Nigeria prior to the introduction of the camel. Whereas the camel was not usually employed beyond the termini of the trans-Saharan routes, the donkey not only crossed the Sahara but went beyond the termini further south to Borguland[2], Nupeland[3], and even as far south as Ilorin[4].

Our nineteenth-century travellers and the Colonial Administration in the north are unequivocal about the importance of the donkey. In 1851, Barth witnessed a caravan of two to three hundred asses carrying natron from Kano to Nupe[5]. Robinson also noted in 1895 that he and his party got mixed up with a caravan consisting of some hundreds of donkeys[6]. In 1900, when Richardson was on a Christian missionary tour of the north he saw a caravan which consisted of 677 donkeys travelling towards Kano[7]. There must have been many of these large caravans of donkeys. But there were also numerous small groups, numbering ten to fifteen donkeys; and many farmers using one or two donkeys to carry their produce to market-places[8].

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1. Nicolaisen, Pastoral Tuareg, p.110.

2. Perham, Lugard, p.212.

3. Nadel, Byzantium, pp.204,320.

4. Clarke, Travels, p.256.

5. Barth, Travels, Vol.I, p.503.

6. Robinson, Hausaland, p.243.

7. C.M.S. Archive, Journal of A.E. Richardson, G.3 A9/O, March 25, 1900; The Church Missionary "Gleaner", (Rev.E.A. Richardson), 1900, p.139.

8. Falconer, Horseback, pp.50-51.
   Also Polly Hill, Rural Capitalism, pp.141-5.

At first, the Northern Nigeria Colonial Administration had no confidence in using donkeys for transportation. Lugard's report in 1904 was that "Donkeys are too small and slow, and die too easily to be a serviceable means of transport"[1]. The Administration, therefore, attempted to use other pack animals. Oxen failed because, apart from being costly, they were not easily procurable. Those bought from Sokoto and Bornu did not survive long journeys[2]. A mule cost four times the price of a donkey and efforts to breed them turned out to be a fiasco[3]. Pack bullocks were employed but they, too, proved to be a failure and were "successfully replaced by donkeys, which have more stamina and less liable to tsetse"[4]. Then it returned to the donkey.

By using the donkey consistently, the Administration discovered that its merits greatly outweighed its defects. By 1909, the lack of confidence of 1904 had completely changed to full confidence in the donkey. It reported that "pack donkeys have justified their introduction. Their mortality is heavy, but this is fully compensated for by their low price, small amount of food required, and the little attendance necessary. They are able to carry small and compact loads only, but are not distressed by their full load of 112 lbs, when suitably packed"[5].

As donkeys were more used, more was learned about them; with better handling, the donkeys gave better service. In the 1910-11 Report, it was noted that "Donkeys have proved the most suitable of the pack animals"[6]. The high rate of mortality which had hitherto been a matter of constant complaint was reported as being lower. They also cost less

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1. "N.Report" (1904), p.313. This Lugard's remark could be due to the prejudice he had had for donkeys owing to the incessant troubles they gave him on his journey to Nikki in Borgu in 1894. See Margery Perham and Mary Bull (eds)., "The Diaries of Lord Lugard". Vol.Four; Nigeria, 1894-5 and 1898. London, 1963, Passim.
2. "N.Report" (1905-6), p.516.
3. "N.Report" (1904), p.703.
4. "N.Report" (1907-8), p.602.
5. "N.Report" (1909), p.703.
6. "N.Report" (1910-11),p.732.

and required less feeding and care than either bullocks or camels[1]. The Administration then came to realise that the local people, whom they had seen employing pack donkeys on a vast scale, must have discovered them to be the cheapest and most manageable pack animals.

The donkey seems to have been the most available means of land transport in Nigeria before the introduction of mechanical transport. It was easily bred; breeding was done in almost all the rural areas of the north, but especially in Kano and Bornu districts. Those bred in Bornu compared favourably in size and strength with those bred in Mossi (famous for its donkeys)[2]. They were much larger and stronger than those bred in Hausaland[3]. The Agalawa - a people of mixed Asbenawa and Hausa origin, who lived in the Katsina area were well known for breeding and keeping large herds of donkeys[4].

The breeding of donkeys was not in the hands of a few potentates; almost every farmer bred them. The system was easy and inexpensive. Almost every member of a faimily was given a small female donkey to mind to which a name was given, signifying a specific "personality". After a few years it became mature enough to mix with the male donkeys in the village and began to produce offspring. The offspring went, alternately, to the original owner and to the minder. Within a few years the donkey produced many offspring, and in time, these also began to reproduce. The second generation of offspring, however, belonged to the minder, who in

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1. "N. Report", (1910-11) p.732.

2. Skinner, Elliott, P. The Mossi of the Upper Volta - The Political Development of the Sudanese People, Stanford University Press, California, 1964, pp.4, 113.

3. Benton, Bornu, p.116; Barth, Travels, I, 530, Denham & Clapperton, 148.

4. Temple, Northern Provinces, p.4.

his turn, gave out young female donkeys to others for minding and for producing offspring. The majority of the male donkeys were sold or hired, leaving only enough behind in the village to carry out the duty of procreation. Such was the system: it was so simple and satisfactory that it still continues in the villages which surround large trade centres such as Kano, Katsina and Sokoto[1].

This system of procreation demonstrates a crucial point; donkeys were easy to breed, plentiful and cheap. A survey carried out in the early decades of the twentieth century indicated that thc donkey population averaged one to every sixteen persons in a village, Kawaki ta Kudu, about twenty-five to thirty miles south-east of Kano City[2]. Producers could, thus, easily employ donkeys for their economic activities. By riding a donkey to the farm or any place of work (which might be miles away from the place of residence) the producer could increase his productivity.

Donkeys often played a vital role during the peak period of harvesting. As crop farms were often scattered; the donkeys were used in assembling the crops to a centre from where it transported them to villages or local market-places. With his donkey bred, hired or bought, a producer could transport his produce to local or long-distance consumers; he was thus assured of a ready market for his produce.

If prices at the local market-places were low, he could employ his donkeys to transport the products to a long-distance market where he could find a higher price than that ruling in the local market-places; He could thus produce to the full capacity. With donkeys available to

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1. Oral evidence collected in Hausaland in 1971.

2. Perham, Margery, (ed) The Native Economies of Nigeria by Professor Daryll Ford and Dr. Richenda Scott, Part I, pp.145-7.

producers, perishable agricultural products were immediately carried to consumers, thus avoiding economic waste on a large scale.

What a donkey was capable of doing, and actually did, is exemplified in the case of Batagarawa tobacco producers in northern Katsina in the nineteenth century. According to Polly Hill, many donkey-loads of tobacco were carried for about 250 miles northward by the producers, who had deliberately stored them for a higher price. *The donkeys carried natron on their return to Katsina and then southwards* to Ilorin or even Ibadan. On their northward journey, back to Katsina, the donkeys carried kola nuts which had been imported to Lagos from Ashanti[1].

The importance of the donkey in northern Nigeria so much impressed Campbell in early twentieth century that he noted that "one could not think of northern Nigeria without Neddy. For travelling and trek purposes in the southern Sahara, and Nigeria, the jackass is the most important part of a poor man's outfit"[2]. The part that donkeys played in the economy of the northern portion of Nigeria was enormous and almost comparable to that of the eastern Sudan and especially to that of eighteenth-century Castile where pack animals were heavily relied on for transportation purposes[3]. In the eastern Sudan, where pack animal transport was also of great importance in the nineteenth century, it has been reported that - "of domestic animals, the most important is the donkey, on which the population depends for practically all heavier transport"[4]. The high

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1. Polly Hill, Rural Capitalism, pp.141-5.
   Also Polly Hill, Rural Hausa - a Village and a Setting, Cambridge, 1972, pp.244-5.

2. Campbell, Veiled Tuareg, p.71.

3. Ringrose, "Transportation", p.52.

4. Barth, Darfur, p.150.

demand for donkeys was such in the eastern Sudan that a donkey might be exchanged for as many as ten slaves[1].

Donkey breeders could also earn much from the proceedes of the donkeys sold or hired. It was usual for neighbours without donkeys to borrow or hire some from the breeders. But large-scale traders hired and purchased donkeys either directly from breeders or through brokers[2].

An early twentieth-century writer put the average cost of donkeys at thirty shillings which, according to him "was double the price a few years ago"[3]. The Northern Nigeria Administration bought a donkey for 25 shillings in the 1900s[4]. The price went up in the early twentieth century probably as a result of a higher demand by the Colonial Administration, and the Jos Tin Mines; and owing to greater use by the producers of export products.

When the railway reached the north in the early 20th century there were no motor roads to feed it properly. Apart from porters, the donkey would be the main carriers of the export products to the rail-heads. There would, therefore, be greater demand for the donkey. The local producer-buyers whose purchasing power was increased by the sales of the export products would be prepared to buy or hire donkeys at higher prices.

Yet, as late as 1946, a donkey could be hired at a low rate of 2d a day[5]. Because of the low cost of hiring donkeys traders who could not afford to buy could hire and use some to transport their goods to

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1. Muhammed al-Tumisi Voyage an Oudey, Paris, 1851, pp.338 & 343.
2. Evidence based on oral evidence in Hausaland.
3. Raphel, Nigeria, p.108.
4. N.Nig.Report, (1909), p.703.
5. Perham, Native Economies, p.147. A 1964 estimate is 2s per ton mile Polly Hill, Rural Hausa, p.227.

long-distance markets. By doing that they could sell their products at prices 20-30 per cent higher than those ruling in local markets[1].

Donkeys were cheap to maintain because they could fend for themselves on the march, feeding on the stalks of the guinea corn[2]. According to Campbell, "they'll eat paper, or anything except hard wood or iron . . . They never get homesick, and are quite contented in the most desolate places...."[3]. Since most of their food was obtainable along the route traders did not have to carry load in form of food unless they went on a desolate route where there was no grazing. The cost of food and the additional cost of carrying it, as already noted, could substantially increase transportation costs.

Donkeys had many other good qualities. They had a reputation for patience and exceptional endurance. According to a Hausa proverb, "Hakurin Kaya sia jaki - only a donkey shows patience under a load"[4]. Campbell also noted that "He is the true picture of patience in a pill-hole"[5]. He added that his Arab friends spoke of the "patient camel" only because they did not know the donkey intimately[6]. They could ascend and descend hills which would be avoided by the camel and which would give a back-ache to a porter. Campbell referred to a mountain which a donkey ascended in two days but which took a camel seven days to go round.[7] They were capable

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1. Perham, Native Economies, p.147.
2. Raphel, Nigeria, p143.
3. Campbell, Veiled Tuareg, pp.71-2.
4. A.H.M. Kirk-Greene, Hausa Ba Dabo Ba ne - A Collection of 500 Proverbs, OUP, Ibadan, 1966, no.178.
5. Campbell, Veiled Tuareg, p.73.
6. Ibid.
7. Campbell, Veiled Tuareg, p.72-3.

of carrying all sorts of things, from grain to firewood. They could also be ridden. Donkeys could go through tsetse fly belts in safety without more than wagging their tails. But they could not withstand tsetse flies for long. This was one of the main impediments to their widespread use in the country[1].

The other major problem was their dislike of deep water. They hated crossing streams. Often they had to be carried across or roped and hauled[2]. Lugard's main difficulty with donkeys was in connection with crossing rivers. According to him, "they broke down every few yards; they sat in every small rivulet; they tried to drown in every stream and had to be hauled out by the ears and tail by main force"[3]. Many travellers avoided employing donkeys on their journeys mainly because they realised that they were useless in rains. This fear of water was not peculiar to the donkeys in Northern Nigeria. According to Lugard, who used them widely in other parts of Africa, "the African donkey, either in East or West, cannot travel in the rains. Wet has the effect upon him as it had on brown paper - it wholly unfits him to fulfil the objects for which he was made"[4].

The situation in Castile was very similar. During December and January, when rain turned the roads into mud, there was a serious reduction in animal transport. With the presence of the tsetse flies and heavy rains in the forest zones, the donkey remained essentially the pack animal of the north savanna and the desert.

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1. Campbell, Veiled Tuareg, p.71
2. Campbell, Veiled Tuareg, p.72.
3. Perham, Lugard, p.212.
4. Ibid.

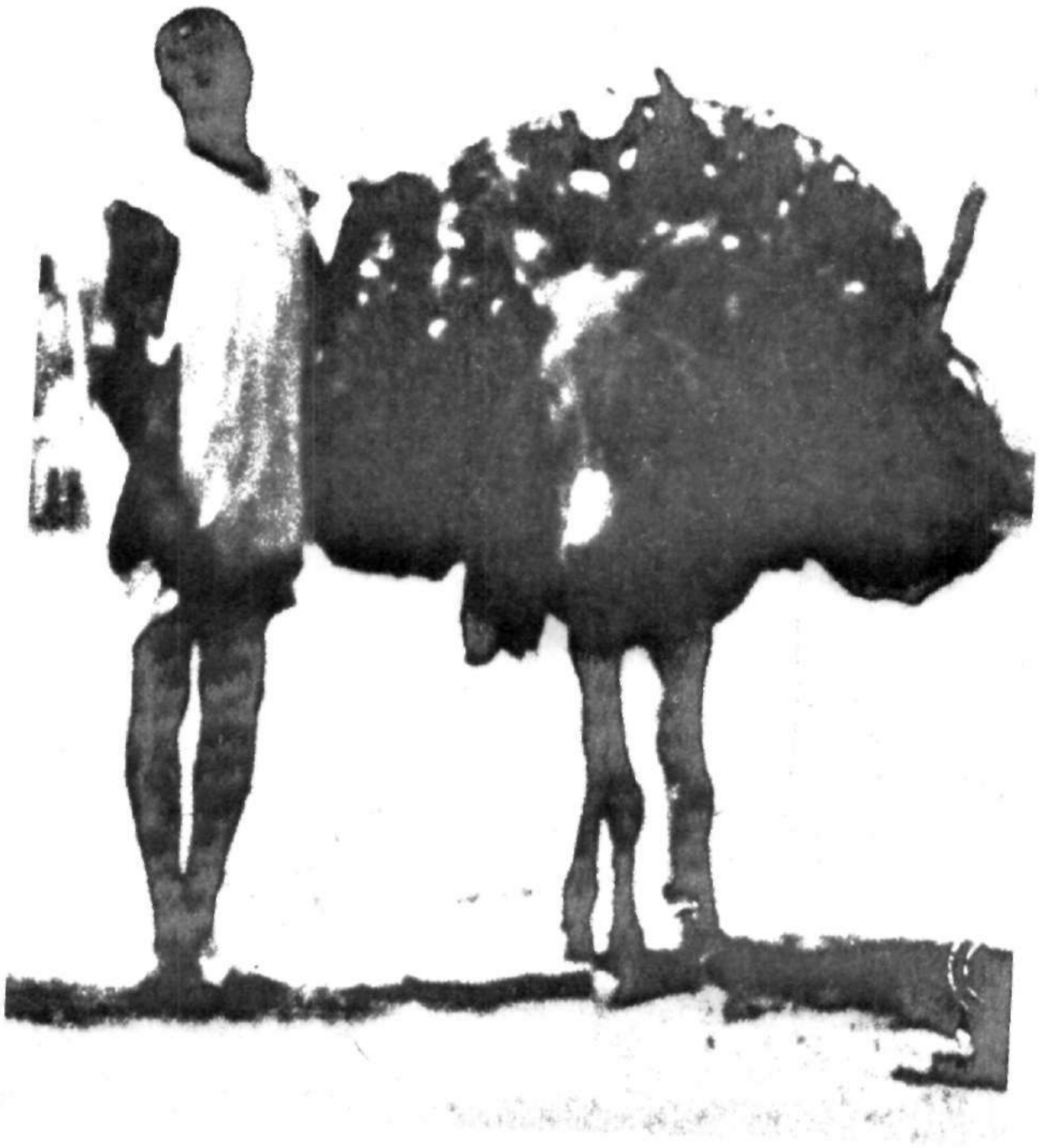
Another problem was that of handling. In order to ensure best service of even a mechanical form of transport, it must be handled properly. This is much more necessary in the case of a beast of burden. Although the donkey was often credited with patience, it was rarely found patient by a non-patient user.

One has to be patient in packing its load properly. The packing depended on the type of articles for transportation. Grain, natron, kola nuts, cotton and such products were packed in special leather or mat panniers designed to give a double bag, placed across the donkey and kept in position by the wieght of the load on its sides. In this case, no tying was necessary. Firewood and such other items were also made into double packs[1]. (See Plate 3). Because the load was not fixed to the donkey, whenever it stumbled, the load fell off.

If the load had been loosely packed it scattered and needed repacking. This could happen frequently on rugged, narrow routes to the annoyance of the employers of donkeys. In Kano areas, Robinson, who had had incessant complaints against his porters, tried to use donkeys. His complaints show that he found donkeys even worse than the porters he had earlier condemned. He noted that "the operation of loading the donkey was a trying and distressing one"[2]. The problem continued and eventually he remarked that "the trouble experienced in loading was, however, so great, and so many loads fell en route, that I fear we shall have to return to carriers once more"[3].

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1. I personally participated in packing donkeys at New Bussa, Borgu.
2. Robinson, Hausaland, p.218.
3. Robinson, Hausaland, p.224.



Pl. 3

Other users talked to donkeys as if they were human beings, alternately entreating them or cursing them as Leo Africanus found camels being treated[1]. It is also true that many indigenous employers of pack animals treat them mercilessly and failed to take proper care of them. As Raphel noted, "Camels have large patches of flesh raw and open and on these places the wooden saddle holding heavy packages will rest.... As the animals have the packs removed from their backs the cries and groans go to ones heart.... The poor, patient little donkeys also suffer shockingly"[2]. The appalling treatment given to pack animals also horrified Samuel Crowther who, in 1858, remarked that "the backs and sides of these beasts are sadly gauled and deeply cut, so much so that the sight of them excites pity in every person having any feelings at all except from the owners, who, from habit and familiarity with these cruel usages think very little of them"[3]. With such merciless treatment, no pack animal could work hard for many years.

Whenever donkeys were over-worked or under-fed, or if they got annoyed or tired, they could decide to drop their loads to the ground. Then they would hop away at a remarkable pace; and it might take hours to bring them back and repack them. Even in the early morning they could play many tricks to avoid the early morning walk. They could lie down together in a bunch and entangle their loads. They could roll over whatever was near them or rub themselves against rocks or trees to get rid of their loads. They loved sand-baths and could do this for as long as they wanted[4].

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1. Wallace, "Notes", p.214.
2. Raphel, Nigeria, pp.109-111.
3. Crowther and Taylor, Journals, p.208.
4. Campbell, Veiled Tuareg, pp.71-73.

Campbell who had "watched them at all hours of the day while on the trail, tired and longing for camp, and at night... under the southern Sahara stars"[1] noted that "Whenever you get angry and feel inclined to shoot him for some tricks he plays you, don't forget that you can't get on without him... treat him like a lady, for Jacky will have the last word"[2]. His golden advice was that anyone who would travel comfortably must learn the habits of the donkey. "He is brave, fearless and indifferent, and a born philosopher"[3]. Therefore, according to Raphel, in order to employ the donkey profitably, its employer must "be endowed with a large and double-distilled philosophic temperament not to exhibit loss of a calm exterior"[4].

Transporters

In pre-colonial Nigeria, there were professional animal transporters as there were on a greater scale in the eighteenth-century Castile[5]. Although direct evidence is rare, this can be inferred from the way that the Hausa hired out pack animals to the Colonial Administration, on a vast scale in the 1900's. If there had been no animal transporters, the idea of hiring their animals as well as themselves would have been strange to the owners. But this was evidently not so. In the 1907-8 Report - the administration noted that "in the Northern Provinces, there is an increased tendency on the part of owners of pack animals to place them at the disposal of the Government for hire"[6]. In that year over 3,000 hired pack animals were employed by the Administration[7].

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1. Campbell - Veiled Tuareg, p.71-73.
2. Ibid.
3. Ibid.
4. Raphel, Nigeria, pp.192-3.
5. Ringrose, "Transportation", pp.51-79.
6. N."Report" (1907-8), pp.602-3.
7. Ibid.

It was usual for the animal transporters, such as the Tuareg, the Hausa, and the Kanuri to serve as drivers and guides to the hirer. The number of animals to each guide depended on the type of animal, the capacity of the guide and the length of the journey. For example, it was usual for a guide to look after three donkeys on a long journey[1]. The guide held a crucial position in dealing with pack animals - their food and drink, and their tricks and grievances - could only be dealt with by a guide who knew them intimately.

It was not possible to work throughout the year, as a transport specialist because only a few animals would be required for transportation purposes in the wet season. Transporters also engaged in cultivation of crops or in production of leather or textile goods. Nor did their animals relax entirely in the wet season. They, too, were employed in domestic work such as carriage of food crops and craft products to local markets, of manure from towns and villages to cultivated farms, and of sand, clay. grass and other items within the towns for house construction[2]. The Tuareg used their pack animals for the transportation of tents and household goods during nomadic migrations, and also employed them daily in all camps to carry water in skin-bags from wells and water holes to the tents[3]. The work of the specialist transporters, especially for long distances, was confined mainly to the dry season months of from October to early May.

This seasonal use of pack animals was one factor that tended to make them less economical than porters, especially to those who employed them solely for transportation purposes. The Colonial Administration, for example, considered it more economical to purchase some

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1. Raphel, Nigeria, p.143.
2. Based on oral evidence collected in Hausaland. Also, Polly Hill, Rural Hausa, p.226.
3. Nicolaisen, Pastoral Tuareg, pp.109-110.

pack animals solely for transportation than to hire them every time that they were required. But since the animals could not be employed for transport in the wet season; and since there was nothing else on which they could be employed, pack animals were found to be more costly than porters[1]. It was reported in the 1908-9 Report that "animal transport has proved more costly than carriers owing to the necessity of maintaining the greater part of establishment throughout the year, whereas it can be utilised during the dry season only"[2].

Another factor was the heavy mortality of pack animals, owing to occasional epizootic outbreak among the animals. The tsetse often took high tolls in the areas south of Kano[3]. In the 1910-11 Report, it was stated that "animal transport has again proved more costly than porters, due to the heavy rate of mortality among all classes of animals[4]." For instance, in 1910-11, of the 541 pack animals in the establishment, 201 died, giving a death rate of 37% in a year[5]. The tsetse, the vector of trypanosomiasis, which was responsible for the high mortality of animals in the southern parts of the country, also rendered pack animals less economical for transportation. When the Administration discovered that it could not use transport animals for more than five months and only in a limited area, it concluded that animal transport was more costly than carriers[6].

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1. N. Report, p.738.
2. N. Report, p.676.
3. N. Report, p.667.
4. N. Report, p.732.
5. N. Report, p. 04.
6. N. Report, p.601.

Human porterage, which had always been regarded as very expensive, was now seen as being less expensive and even preferred to pack animals. Travellers who used both, and who had, in strong terms, condemned porters for their trouble-making, later found out that pack animals were even more troublesome.

This was not necessarily the same for the indigenous users; Each owner had only a few pack animals which could be cared for properly. Therefore, if there was any epizootic outbreak, not many animals belonging to any individual would be affected.

Secondly, the indigenous owners maintained their animals as cheaply as possible, feeding them with local fodder which they did not need to buy. According to Clapperton, "Cotton seed bruised is very much used for feeding sheep, bullocks, asses and camels. These animals soon became extremely fond of it; it is an excellent food for fattening them"[1]. The cotton seeds were easily obtainable from the cotton grown by every farmer. Also, the animals, especially the horses and camels, loved natron water and natron rocks. This, too, could be got cheaply in Kuka by the Kanuri of pack animals[2]. With years of experience of breeding and using pack animals, there would be local vetinary experts who knew the care for almost all animal ills; and they could do all this without incurring much expense.

Thirdly, the indigenous owners did not employ their animals only for five months in the year. Although it was in these months of the dry season that they, as transporters, had great revenue from their animals, they also employed them in the other months for trading, on the farms and for many menial jobs.

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1. Denham and Clapperton, Expedition, Vol.II, p.192.
2. Campbell, Veiled Tuareg, p.243.

It is, therefore, possible that to the indigenous users, pack animals were cheaper than porters. Even for other users, hired pack animals, which were not kept for any length of time, were likely to be less expensive than daily paid porters. It has been noted in this chapter that a donkey could be hired in 1946 for 2d a day[1]. By this time the widespread use of mechanical transport could have cheapened donkey transport. But in many rural parts of the country mechanical transport might not have affected traditional transport.

In the 1860s when a porter or any other worker earned about 6d a day[2], a donkey would not likely be hired for more than 2d a day. If a donkey carried 112 lbs[3] for about 20 miles[4] a day, the transportation cost would be 2d per ton-mile. But if the donkey carried 150 lb[5], the cost would be reduced to 1.6d per ton-mile. This is considerably lower than the average cost by human porterage which was about 6.4d per ton-mile even for short distances.

In addition to this lower cost, there was no need to go into meticulous arrangements for animals' sleeping places, food, drink or any comforts that had to be prepared for porters on long journeys. Although pack animals, too, caused problems on the route, if they were well treated they could be more servile and amenable to instructions, and, so, more useful than porters.

Both porters and animals would travel almost at the same average speed, but pack animals would travel for weeks without breaking

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1. Perham, Native Economies, p.147.
2. Tucker, Abeokuta, p.112.
3. "Northern Nigeria Report", 1909, p.703.
4. Bovill, Golden Trade, p.17.
5. Tremearne, Hausa Superstitions, p.38.

down; and each donkey would carry, at least, double of what a porter would carry[1]. But for the rains and the flies that limited their use, they would go anywhere. Unlike porters, they neither had tribes to fear nor family to make them homesick. Neither did they expect favours nor agitate for higher pay. By employing pack animals instead of porters wherever or whenever labour was scarce the labour force of the community could be profitably employed on other economic activities. Therefore, it would seem that, in general, pack animals were more economical than human porterage where they could be used. It remains for us to see if they were as cheap or cheaper than canoe transport.

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1. Polly Hill, Rural Hausa, pp.226-7. Polly Hill calculates that a donkey could manage loads of 200 lbs and upwards. A donkey could then carry more than three men's loads, if each man carried about 65 lbs.

Table 6* Some European goods imported into Kano from Tripoli in 1862.

	Articles	Unit	Purchase price at Tripoli (Francs)	Sales Price at Kano (Francs) (Cowries)		Difference as % of 3
	(1)	(2)	(3)	(4)		(5)
1.	White cotton goods	Piece 34	17	30	15,000	76
2.	Turbans	Each	2.20	2.40	1,200	9
3.	Cotton fabric	21m.	14.85	20	10,000	43.7
4.	Red sulphur	500g.	3.50	7	3,500	100
5.	Glassware	500g.	8.50	14	7,000	64
6.	Glass beads	500g.	6.3	24	12,000	281
7.	Needles	1,000	1	2.60	1,300	160
8.	Ribbon	1m.	1.25	2.40	1,200	92
9.	Cotton and silk fabric	19m.	85	130	65,000	52
10.	Paper	Ream	9-10	30	15,000	200
11.	Heavy muslin	17.5m.	3.50	7	3,500	100
12.	Cloves	50 kg.	68	200	1,000	194
13.	Gun benzoin	50 kg.	191.75	600	300,000	216
14.	Heavy head-dress	6	10.6	30	15,000	183
15.	Copper scraps	50 kg.	127.5	400	200,000	214

Table 7* Some African products imported into Tripoli from Kano in 1862.

Articles	Unit	Purchase price at Kano (Cowries) (Francs)		Sales price at Tripoli (Francs)	Difference as % of 3
(1)	(2)	(3)		(4)	(5)
Good ivory	150 kg.	225,000	450	320-450	-
Gold dust	Mitkal	5,000	10	19.5	95
Ox hides	Each	12,000		10-12	-
Goat skins	10	2,300		20.21	-

* Derived from C. W. Newbury, "North African and Western Sudan Trade in the Nineteenth Century: A Re-evaluation", JAH, VII, 2, 1966, pp.242-3.
Original source: A.N.F.[12] 7211, Mircher MSS., 28 January 1863.
N.B. 25 frs = £1 (p.242); 5,000 cowries = 10 fr. in Kano, 1862 (p.237)
5,000 cowries or 10 fr. = 8/-.

SECTION III

WATER TRANSPORT

CHAPTER 6

Water Routes

Just as the porter and the pack animal depended on land routes, the canoe was useless without water. It is, therefore, necessary before examining the economic importance of the canoe to focus attention on the routes it used. Like any other form of transport the vehicle and its route are both crucial to the movement of men and merchandise. The routes are examined separately to ensure a thorough understanding of the problems that confronted the user of the canoe in the pre-colonial era in Nigeria.

The chapter explains the physical and human interruptions on the water routes and concludes that despite the interruptions, a large number of canoes used the routes. The physical obstructions include seasonal fluctuation of volume of water, the prevalence of snags, rapids, and water monsters - hippopotami. Among the obstacles created by human beings are fishing (especially in the dry season), piracy, toll collection, and political and economic dissensions which sometimes deteriorated to wars.

The suitability of water as a means of transport must have occurred to men right from early times. It cannot have been by mere accident that the earliest civilizations grew among the communities who settled very close to water. Two well-known cases are the civilizations of the Nile[1] and the Tigris-Euphrates valleys.[2]

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1. Adam Smith, An Inquiry into the Nature and causes of the Wealth of Nations, with an Introductory Essay and Notes by J. Shield Nicholson, London, 1901, p.9.
2. Boulton, Transport, p. 47.

Referring to the importance of the Nile to Egypt, Adam Smith's notable remark was:

> "(the) great river breaks itself into many different canals, which, with the assistance of a little art, seem to have afforded a communication by water-carriage, not only between all the great towns, but between all the considerable villages, and even to many farm-houses in the country, nearly in the same manner as the Rhine and the Maese do in Holland at present. The extent and easiness of this inland navigation was probably one of the principal causes of the early improvement of Egypt".[1]

The huge blocks of stone used in the construction of lofty buildings such as the Old Assyrian palaces were conveyed from the quarries and floated down the rivers to such places as Nineveh.[2] The rivers were of great importance as sources for irrigation. The rivers also drew many people together into city-states.[3] The ancient kingdom of Persia and the rich countries which lay to her east also sought a regular outlet to the Mediterranean, long before historic times.[4]

It is also known that ancient Rome, which controlled a vast empire in many parts of the world grew at a place where water made transport convenient for her at the mouth of the Tiber. Indeed, such a city with a large population and with expansionist aspirations could hardly properly feed its people without importing its essentials of life for the many and its luxuries for the few. Such imports were brought by sea and moved from the harbour at the mouth of the Tiber up the river to the city.[5]

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1. Smith, Wealth of Nations, p. 9.
2. Boulton, Transport, p. 47.
3. Goodwin, Ashen, J. H., Communication has been established, London, 1937, p. 61.
4. Ibid.
5. Leighton, Transport, p. 127.

Until well into the eighteenth century, the trade of England was largely on overseas, and much less on overland routes.[1] Even in the eleventh century the Thames was so improved that it was possible to ship goods as far as Oxford.[2] Comparable civilizations also grew and developed on the ports and along the banks of rivers such as the Amazon, the Mississippi and the St. Lawrence in the Americas and Canada; the Severn and the Thames in Britain, the Congo, the Niger, the Zambezi, the Senegal in Africa, the Indus and Ganges in Asia, and the Rhine and Danube in Europe, to mention just a few.[3] In India, for example, the Indus Valley developed a form of civilization thousands of years ago. Trade was moving up and down this valley from the Punjab to the sea - the exchange of produce from one prosperous community to another.[4]

There were also lagoons, creeks and lakes such as those in East Africa, and Lake Chad, at the extreme north-east of Nigeria, which also attracted human settlement and civilization. Thus, according to Goodwin, "cities and states are normally set on rivers, and it is only when war and conquest make their uncouth divisions that the river is twisted into an artificial political barrier".[5] The crucial role of the Nile to Egypt in its political and economic development must be indicative and instructive of the enormous role that water transport played in the rise and development of mankind.

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1. Jackson, Principles of Transportation, p. 10.
2. Leighton, Transport, p. 128.
3. The Times Atlas of the World (Comprehensive Edition), London, 1967, Plate 3.
4. Goodwin, Astley, J. H., Communication has been established, London, 1937, p. 60.
5. Goodwin, Communication, p. 20.

Man might have been attracted to areas of surface water to ensure that water was available to him and his livestock for all purposes. But for easy movement from his territory to other places to fulfil social obligations by visiting his neighbours or to expand his dominion by waging expansionist wars, water must have been convenient. But, neither social obligations nor military motives would be as strong as his basic desire to carry out economic activities for his livelihood.

Among such economic activities were fishing, irrigation and transportation of food and luxuries. Since a brief summary of fishing activities has been touched on in an earlier chapter,[1] and since irrigation was not practised in many parts of pre-colonial Nigeria, this chapter and the next one examine the various water routes in modern Nigeria and the canoes which were the means of transportation on the routes.

One advantage for a student of water transport is that the water courses, as nature's work, have remained, generally speaking as they existed many years ago. Human occupation and usage of the waters by various riverain peoples must have caused changes in landmarks or slight diversions on the courses of some rivers, yet many of them, particularly the larger ones, maintain their original courses.

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1. See Chapter 2.

Land routes made by man or animal could easily be obliterated owing to neglect or disuse as a consequence of any social unrest such as warfare, slave-raiding and kidnapping, or as a result of a decline in trade and other economic activities in a region, or even owing to detours made for various reasons. Even if a water route was neglected in this way the main water courses would still continue to exist. They can still be visited at different seasons, and observations that were made many years earlier can still be checked today.

On the other hand, being permanent routes, water courses run naturally, disregarding human need. Unlike land routes which were designed to reach particular places of wealth or consumption, water routes had to be followed as they existed.

A physical map of Nigeria reveals an amazingly large number of rivers and rivulets. No one who takes a cursory look at Map 1 can either fail to be impressed by the network of river courses or fail to conclude that they must have been adequate for the inland transport of the country. As can be seen on the map,[1] there are only very few places in the country where no river flows.

Among these rivers, the Niger[2], which had long attracted scholarly research and geographical explorations, and from which the country derives its name, singles itself out, as the greatest of them all - as a giant among dwarfs. The Benue, its largest tributary, is also notable. In addition, there exist the

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1. See Map 1, from NEDECO, River Studies (in the Folio).

2. Hallett, Robin (Ed), Lander, Richard and Lander, John - The Niger Journal, London, 1965, p. 2. According to him Juba a scholarly Berber King referred to the river as'Niger, a name derived not, it would seem, from the Latin word for "black" but from a Tuareg expression n'ger-n-gereo, river of rivers'.

sheltered waters of the coastal lagoons which have always provided an east-west route of fundamental importance.[1]

As this is not a geographical analysis, it does not seem pertinent to go into detailed description of the water courses, even if this were possible. But it seems reasonable to give a brief survey of the general characteristics of the water routes and the ways in which their use for transportation was affected by geographical phenomena.

Regarding these disturbing phenomena, rivers in Nigeria share the same fate with their counterparts in other parts of West Africa. According to a West African geographer:

> "In spite of their length and number, the rivers of West Africa have not been very significant as lines of human movement. The existence of falls and rapids along their course, the presence of delta-swamps and sand-bars at their mouths, and the high seasonality of their flow have made it difficult for vessels of sizeable tonnage to sail any distance on the rivers".[2]

Some of the same drawbacks, natural and man-made suffered by rivers in West Africa had also impeded river navigation in other parts of the world. For example, in Medieval Europe, water transport was subject to obstructions and limitations from both natural causes, such as climate and vegetation, and human interferences such as piracy, warfare and tolls. Ships often ran against rocks; and the traffic was often interrupted by toll-collectors.[3] Fishermen, in pursuit

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1. Buchanan and Pugh, Land and People, p. 221.
2. Mabogunje, "Land and Peoples", pp. 9-11.
3. Leighton, Transport, pp. 138-9.

of their own economic activities also obstructed navigation. They "constructed weirs and kiddles to channel and trap the fish, even though the rivers were supposed to be open for the passage of ships and boats for the common profit of the peoples".[1] Piracy often made the open seas and rivers unsafe for shipping; and from the eleventh century the rising Italian cities always warred on each other's ships.[2] A unique hinderance of Byzantine shipping was encountered in the time of Justinian when a wandering whale, forty-five feet long and fifteen feet thick was always around to obstruct water transport.[3]

In England, despite the early mastery of sea navigation, inland water transport was unimpressive. Not much attention was paid to river transport before the seventeenth century. According to Dyos and Aldcroft:

> "there were few rivers in England which were naturally navigable over much of their course before the seventeenth century. Almost everywhere they tended to be cluttered up by mills and fishgarths or intersected by weirs - sometimes up to ten feet high - which impeded the passage of barges or boats. Some of them were also barred by toll-gatherers or infested by river-pirates, both of whom took their income from the river trade".[4]

It was the universal discontent with the condition of the land transport which inspired attempts to use water transport.

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1. Leighton, Transport, pp. 138-9.

2. Ibid.

3. Ibid.

4. Dyos and Aldcroft, British Transport, p. 36, Also Jackman, Development of Transportation, pp. 158-161.

Apart from human obstructions, physical impediments also hindered water transport. According to Lipson "rivers (in England) suffered either from an excess of from a deficiency of water, their course was irregular, and they were not evenly distributed throughout the country".[1] Sometimes adverse winds might hold up shipping in the Tyne or Thames for weeks.[2] Despite such delays and owing to the many obstacles which the watermen had to break through, they charged extortionately for their services.[3]

Most of the diseases that plagued the water routes in Nigeria were almost world-wide. Apart from problems which were specific to each water route or to the water routes in a particular region, there were, and still are, geographical and human obstructions to water transport.

Physical Interruptions

A major geographical limitation to water transport was the sharp division of two seasons in the year. The wet and the dry seasons were well marked in many parts of Nigeria as

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1. Lipson, E. The Growth of English Society - A short Economic History, London, 1949, p. 231.
2. Ashton, T. S., An Economic History of England. The 18th Century, London, 1961, p. 72.
3. Jackman, Development of Transportation, p. 160.

in many parts of West Africa.[1] It suffices to note here that the hydrological characteristics are determined by climatic and physiographic factors.[2]

Although rainfall is an essential determinant of the volume of waters in rivers, important also are the factors such as temperature and humidity which influence the amount of water that is evaporated and also the physiographic factor which affects the amount of water that runs off or sinks in. Even if there is enough rainfall to swell rivers and creeks, if the

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1. E.g. See (1) Ledger, D.C. "The Dry Season Flow Characteristics of West African rivers", Thomas M.F. and Whittington, G.W., (Eds), Environment and Land Use in Africa, London, 1909. (2) Ledger D.C., "Some Hydrological Characteristics of West African Rivers", The Institute of British Geographers, Transactions and Papers, Publication, No. 3, Dec. 1964, pp. 73-90. (3) NEDECO: Netherlands Engineering Consultants, The Hague, "River Studies and Recommendations on Improvement of Niger and Benue", Amsterdam, 1959. I am grateful to Dr. Peter Mitchell, Centre of West African Studies, for directing my attention to these works and many others.

2. Ledger, "Dry Season Flow", p. 83. The influence of climatic factors depends largely on the amount and distribution of rainfall, and the effect of wind, temperature and humidity on evaporation. The influence of physiographic factors depends essentially on the nature of the geology, the relief, the soil and the vegetation cover.

water runs off, or sinks in, or is evaporated too quickly, the regular volume of water for transportation may be seriously reduced. The rate of run-off and evaporation losses are difficult to give in West Africa "because of the difficulty of measuring these in a tropical environment",[1] but these factors must have had an influence on the deficiency of waters for navigation in Nigeria.

This water deficiency is more serious in the northern zone than in the south. According to Ledger, this is due to "the seasonal migration of the intertropical convergence zone (ITCZ) separating warm dry air originating over the Sahara from warm moist air moving northwards from the Gulf of Guinea".[2] Places near the coast experience a long wet season from April to October; but those in the north, on the other hand, lie under the influence of the hot drying winds from the Sahara for most of the year and experience only a short wet period.

The mean annual rainfall decreases steadily with distance inland, falling from an average of about eighty inches in the coastal areas of the south to under ten inches in the semi-desert areas of the north.[3] The main dry season period extends from December until March in the south, and from September until June in the far north.[4]

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1. Ledger, "Hydrological Characteristics", pp. 77-8.

2. Ledger, "Dry Season Flow", p. 83.

3. Ledger, "Dry Season Flow", p. 84.

4. Ledger, "Dry Season Flow", pp. 86-7. These distinctions between the months of the wet season and those of the dry season, and between the southern and the northern sections of the country explain, to some extent, the fluctuations in the water volumes and variations in the use of the water routes.

These climatic factors explain the shortness of lives of so many small rivers especially those in the northern section of the country where the dry season occurs for about three quarters of the year. Therefore, while it is possible to use many rivers in the south for canoe transport almost throughout the year, many small rivers in the north contain no water at all in the dry season.

Furthermore, the vegetation distribution which is determined primarily by the rainfall pattern and which tends to follow the latitudinal zones could affect volume of waters in rivers. In the extreme south where there is a very short dry season, tropical rain forest is the dominant vegetation type. But this thick vegetation is gradually reduced and becomes thinner to the north.

This variation in vegetation also affects the volume of water. In places where thick vegetation protects waters from the sun, evaporation tends to be less than in areas which are exposed to the sun. The dry season, therefore, tends to have more effect on water levels in some areas than in others.

Fluctuations in the volume of water hindered movement of vessels. Even the rivers Niger and Benue which are the largest of the rivers, were found to be vulnerable to such fluctuations. The Administration of Northern Nigeria noted in one of its reports that rivers varied in volume from month to month as a means of communication.[1] From mid-July to mid-October, a section of the Niger could be used by vessels drawing from nine to eleven feet, but this same section would

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1. "N. Nigeria Annual Report", 1901-8, p. 592.

only be plied by vessels of a draught of from one foot six inches to three feet in the months of the dry season.

The Niger Company which had its stations along the banks of the Niger took pains to note the level of water in the river regularly. John Whitford, an observer of the Niger noted in the 1860s, that the index of the rise and fall of the river, which was indicated by a long marked pole stuck firmly into the mud in the river, determined the time that they terminated trade for the season. According to him, "it was absolutely necessary to watch (the pole) carefully for a vessel touching a bank upon a steadily-falling river remains there until the next year's accumulation of rain flood enables it to float again."[1]

Captain Glover who once had his vessel wrecked near Eggan on account of the unexpected fall of the river, had to walk across country to Lagos.[2] A more serious incident happened to Captain Scott and his party when their ship struck a bank at the beginning of the dry season, in October 1871. The ship remained there until August 1872 when the river rose high enough to float off the ship. They, too, had to walk, taking about fifty days, to Lagos.[3]

The marked distinction between the wet and dry seasons was also observed by Richard Lander, the discoverer of the mouth of the Niger.

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1. Whitford, Trading Life, pp. 258-9.
2. Ibid.
3. Ibid. pp. 259-60.

> "Although during the dry season", he noted, "no communication or intercourse is maintained by water between Bossa (Bussa) and the countries or states lower down the river, by reason of the dangerous rocks ... yet in the wet season ..., when all the rivers which are dry during the remainder of the year, pour their outplus into the 'Great Father of Water', as the Niger is emphatically styled, then canoes ... pass to and fro ... Every rock and every low island is then completely covered and may be passed over in canoes without difficulty or even apprehension of danger".[1]

Smaller rivers also experienced fluctuations in water levels. The River Kaduna which had eighteen to thirty feet of water in the main channel in the wet season often became easily fordable in many places in the dry season.[2] The Komadugu in the extreme north was found by one traveller to be full of water, six to seven feet being the average depth from August to the middle of December. After that time, a rapid fall took place, and the river in some places became nothing more than a sandy bed.[3]

The Gongola, too, was subject to a very sudden rise and fall. If large boats used it in July, by September it had become fordable in many places.[4] In the south, the rivers Ogun and Calabar presented the same picture. During the wet season the Ogun, which runs through Abeokuta southwards to Ikorodu lagoon, could have fifteen to twenty-five feet of water in its deepest parts. In the dry season, travellers easily forded it in many parts.[5]

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1. Lander, Journal, pp. 33-4.
2. Crowther and Taylor, Journals and Notices, p. 80.
3. Alexander, Boyd, "Expeditions Through Nigeria", The Geographical Journal, 2, 25, Feb. 1905, 177.
4. Ibid.
5. Bowen, Adventures, pp. 207, 222.

Also, in the height of the wet season the Calabar river was filled from bank to bank, pouring its turbid waters into the Gulf of Guinea. But in the dry season, it dwindled, in many places, to a third of its former breadth.[1]

> "Where, only a few months ago before, your canoe was carried along by the swift current almost without the paddlers' exertions, there are now long stretches, islets and miniature cliffs or arid sand, huge boulders of bare rock, giants of the forest exposing bare limbs to indicate their final resting-place, and such a shallowness of water that here and there women, and even children, are able to wade from their village to the farm on the opposite bank".[2]

Even in the wet season, shallow water could occur in some parts of a water route. Soil was constantly being washed into the rivers which served as drains. Where the gradient of the river bed was only slight, it required a flood of tremendous volume to clear out the navigable channel. The soil that was removed from the banks of the rivers was desposited elsewhere in the rivers, causing irregularities in the depth of water. Such natural phenomena often tended to obliterate any channel along which man and merchandise would be transported.

This high seasonal fluctuation of water levels was probably made more serious by the fact that most of the small rivers and their tributaries have their sources in areas where rainfall is low. The water that remains in the Niger throughout the year is due partly to its tributaries and partly to its course.

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1. Partridge, Charles, Cross River Natives, London, 1905, p. 93.
2. Ibid.

It rises in a zone of heavy rainfall, in the mountains of Futa Jallon, north of Sierra Leone, about 150 miles from the coast.[1] It, therefore, has a favourable source which constantly supplies it with water. It is also possible for it to store water in the lakes around Timbuktu which supply so much water in January and which lead to a second flood which is very marked at Jebba, keeping the river at high level for the greater part of the year.[2]

The construction of the Kainji hydro-electric dam, in 1969, some sixty-nine miles north of Jebba, in which a lake with an area of 483 square miles has been created has finally removed the seasonality of the water flow.[3] Indeed, the dam has, since 1969, made the river navigable throughout the year from Escravos lighthouse on the coast to Niamey in the Niger Republic, a distance of over 1,000 miles.[4] In other words, the seasonal flow of water in the rivers was, undoubtedly, a crucial impediment to the use of the water routes for transportation purposes by large vessels.

In places already referred to, there were further obstructions to the use of water courses as lines of communication. The prevalence of snags of different types was a great impediment to water transport. The snags were often in the form of creeping weeds, stumps, rocks, fallen trees or tree

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1. NEDECO, River Studies, p. 15.
2. Lugard , F. D., "Northern Nigeria", The Geographical Journal, 1, 23 Jan. 1904, 13.
3. "Nigeria Handbook', 1970, Federal Ministry of Information, Academy Press, Lagos, pp. 9-10.
4. Ibid.

trunks, and over-hanging bushes.[1] They were capable of obstructing navigation in both wet and dry seasons. In the dry season they could easily be seen and canoes and their contents had to be carried over them. In the wet season, when they were covered by water, they constituted a great danger to transportation.[2]

On the Cross River, for example, almost all these snags were met with. On its banks were "walls of rock covered in places with masses of ferns and creeping plants, and crowned with over-hanging trees".[3] Talbot, who travelled on River Kebbi in 1904, told how their boats were caught by unseen snags or held by branches of trees which showed over the waters.[4] Along the rivers through the mangrove swamps, there were mangrove trees which have short, twisted stems, with many coiling roots, and numerous suckers suspended like fishing rods over the water. As the suckers touched the water they detained floating matter which built up to obstruct water transport.[5]

On the Benue, fallen trees sometimes blocked the passage and the canoes had to go round them against the current.[6] The occurrence of such obstructions on the Niger was observed by a

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1. Partridge, Cross River, p. 95.
2. Perham and Bull, Longard, p. 37.
3. Partridge, Cross River, p. 95.
4. Talbot, P. "From the Gulf of Guinea to the Central Sudan", JAS, No. XLIV, Vol. XI, July 1912, p. 381.
5. M'Keown, Robert L. Twenty-Five Years in Qua Iboe, London, 1912, pp. 16-17.
6. Alexander, Boyd, From the Niger to the Nile, Vol. I, London, 1907, p. 151.

traveller who noted:

> "All up the river the forest grows right up to the edge of the banks, and as these are continually being cut away, the trees on them fall into the water, and are carried down till they take the ground in some shallow spot and alter the set of the current causing silt in one place and scour in another, thus adding to the difficulties of navigation".[1]

Lugard also remarked that in the dry season varying sand deposits choked the course of the river. Giant trees borne down in the floods and partly buried in the sandbanks formed dangerous snags which broke some of the Niger Company's steamers.[2]

On the lagoons which run east to west of the coastal areas of the country the seasonality of flow of water was not as serious a problem as the presence of snags. They, indeed, constituted a great barrier to water transportation. John Whitford noted that falling trees often stuck fast in the muddy bottom of the Lagos lagoon and formed dangerous snags.[3] According to him, "occasionally the snag creates a bank by accumulating alluvial deposit, and in time, perhaps, forms an island, and thus the current is changed".[4]

Another observer remarked that "The lagoon, which is known to the natives of Lagos under the name of Ossa, varies much in width, ... In most parts the waterways are navigable for

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1. Elliot, Niger-Chad, p. 506.
2. Lugard, Expedition, p. 208.
3. Whitford, Trading Life, p. 148.
4. Ibid.

small steamers, but in others they are choked with grass, fallen trees, and sunken snags".[1] The Lekki lagoon, east of the Lagos lagoon, was even more seriously obstructed. There were formidable grass obstructions which made part of the lagoon quite impassable by large launches. Further east, near Igbobini, a traveller found that many trees had fallen over or into the water and grasses growing from each bank had met in the middle.[2]

Most of these snags also occurred in small rivers, some of which were rendered completely unnavigable by their presence. Travelling on the river Oluwa, in the east of Yorubaland, in 1877, Charles Phillips, a missionary, noted that progress on the river was very slow because they often had to leap on the floating grasses or on fallen trees in the middle of the river and push the canoes along.[3]

The Awon, a small tributary of the Niger which Samuel Crowther and his party hoped to use to carry them from a place near Rabba to Ilorin was completely blocked up with snags which rendered it useless to them. In the first decade of this century, the Colonial Administrations showed great awareness of the possibility of employing rivers for transportation purposes. The major difficulty that stood in their way was the prevalence of snags.

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1. Darwin, (Capt.), War Office - Precis of Information concerning the Colony of Lagos together with notes on the neighbouring native Territories, London, 1888, p. 5.

2. C.O. 879/58, Mac Gregor to Chamberlain, 1901.

3. C.M.S. Archive, Journal of Charles Phillips, CA 2/078, March 1877.

In 1900, one officer who tried to use the Yewa river in the western part of the country, found it almost impassable, the river being full of cabbage weed, floating grass and snags.[1]

In the north, the Administration set to work in clearing many rivers of obstructions. A small river known as Bako, for example, was cleared for sixty miles and the clearing was justified by the great use to which the local travellers put it.[2] In the south, the Ijebu not only volunteered their services to get obstructions out of their rivers, they also contributed towards the expense. In 1904, in order to clear a small river, the Owa, they contributed the remarkable sum of £1,045 towards the expenses involved. In addition, they gave their services free.[3] That enabled them to carry their produce in canoes from a place known as Atiba to Ejinrin market and even to Lagos, and bring back manufactured trade goods by canoe on the return journey.[4]

Also, between Benin river and Lagos, many large blocks of sudd were removed and the creek system became completely clear for navigation. The river Oshun, too, was cleared of snags for a distance of 27 miles, R. Yewa for 14 miles, Ndoni creek and R: Aseh for 64 miles, R. Imo for 25 miles and many others were also cleared of snags.[5]

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1. "Lagos Annual Report", C.O. 149/5, 1900, p. 40.
2. "N. Nig. Report", 1907-8, p. 598.
3. "Lagos Annual Report", 1904, p. 73.
4. Ibid.
5. "Southern Nigeria Colonial Report", No. 695, 1911, p. 31.

The spontaneous response which the various peoples gave to the appeal of the Administration to clear the rivers is remarkable. It suggests that such a practice was probably not new to them, using slave labour and communal efforts to clear rivers as some did to clear routes in the pre-colonial era. It is possible that, at least in well organised political units, such clearances had been well established even in the pre-European era. But with the introduction of large-scale slave trade, kidnapping, civil wars and general disruption of the well-settled agricultural societies, and with the subjugation of revered rulers, the organisation of such clearances broke down. When Colonial Administrators introduced the idea to them without any force or compulsion, they eagerly responded without any agitation against the idea.

To large-sized vessels, rapids constituted greater obstacles.[1] Rapids on the Cross River are about a quarter of a mile in length.[2] In this part, the river narrows considerably, and the water, much increased in depth, flows smoothly but with greater rapidity through this gorge. In the height of the wet season, navigation is extremely precarious in this section of the river. Another river, the Ogun, was found in both 1856[3] and 1861[4] to be navigable only to Aro in Abeokuta. "Above that part, a ridge of rocks crosses the bed and forms an impassable rapid".[5]

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1. Onions, C. T. (ed), The Shorter Oxford English Dictionary on Historical Principles, Vol. II, Oxford, 1959 (for defin. of "rapids").
2. Partridge, Cross River, p. 95.
3. Bowen, Adventures, p. 222. Also, Hinderer, C.A2/049, Aug. 7, 1858.
4. Burton, R., "Abeokuta, West Africa", PRGS, Vol. VI, 1861-2, p. 65.
5. Lugard, Documents, p. 200.

Also in 1860, a traveller noted that the Oshun which rises near Oshogbo and enters the lagoon in Ijebuland was so rocky that canoes could not use it throughout the year, throughout its course.[1] It appears that the Oshun was extensively used locally. In the dry season it often had enough water for canoes, but rocks limited the extent of its navigation.[2] Portages had to be applied to the canoes at such places where navigation was virtually impossible.[3]

The presence of rapids on the Niger especially near Bussa in Borgu is known. This was the place where Mungo Park lost his life.[4] From Badjibo, twenty-six miles above Jebba, navigation could be seriously disturbed by rapids for about 450 miles.[5] Also, further north-west, within the Yawuri territory, rapids rendered journeys dangerous during periods of low water. Many people tended to resort to walking rather than facing the hazards of shooting the rapids.[6]

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1. May,"Yoruba and Nupe", pp. 212-233.

2. CMS Archive, Hinderer, CA2/049, Aug. 15, 1858.

3. Field Work. I visited both the Oshun and the Ogun in the dry and wet seasons.

4. Mockler - Ferryman, Up the Niger, p. VIII. Projecting rocks by the sides and in the middle of the rivers were visible.

5. Lugard, Documents, p. 200.

6. Adamu, Thesis, p. 23.

Monsters created added problems to impede water transport. It seems that they did exist and were, in fact, feared, revered, and worshipped in many parts of the country. According to Ellis, "man worships that from which he has most to fear, or from which he hopes to receive the greatest benefit".[1] The worship of rivers and the rituals performed by canoemen were meant to prevent them from dangers in the water.[2]

Hippopotami, for example, existed in the Niger. In the middle of the fourteenth century, Ibn Battuta saw on the upper Niger, "sixteen beasts with enormous bodies, and marvelled at them, taking them to be elephants ... Afterwards (he) saw they had gone into the river ... They are bulkier than horses, have manes and tails, and their heads are like horses' heads, but their feet like elephants' feet".[3] When Lander saw such monsters on the Niger in 1830, he had no doubt in his mind that they were hippopotami. He says "an incredible number of hippopotami arose very near us",[4] suggesting that there must have been a larger number than those seen by Ibn Battuta.

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1. Ellis, A. B., The Yoruba Speaking Peoples of the Slave Coast of West Africa, The Netherlands, 1966, p. 71.

2. Ellis, The Yoruba, pp. 71-7. The Yoruba for example, worshipped Rivers Niger, the Oya, Oshun, Oba etc. The Yawuri also worshipped crocodiles. Jinjima island is called Gungun Kada (Island of Crocodiles) because it is believed that the island was once a crocodile that later turned into an island - Adamu, "Thesis", p. 22.

3. Ibn Battuta, Travels, p. 331.

4. Lander, Journal, p. 10.

There is also no doubt that they were often a menace to water transport. While on the Niger, between Timbuktu and Gao, Ibn Battuta noticed them, "swimming in the water, and lifting their heads and blowing".[1] He also noted that "The men in the boat were afraid of them and kept close to the bank in case the hippotpotami should sink them".[2]

Although the people often made attempts to kill them,[3] the "incredible number" that Lander's party saw in the areas south of Bussa does not suggest that they had reduced in number almost five centuries later. They were still seen "splashing, snorting, and plunging all round the canoe", placing the crew in an imminent danger.[4] Lander was told that the formidable animals frequently upset canoes in the river when everyone in them and their property could perish.[5]

But information regarding such accidents is by no means common. Canoemen always avoided night journeys on the river, mainly because of such dangers.[6] It was possible that at certain times in the past, hippopotami infested the lagoons near Lagos.[7]

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1. Ibn Battuta, Travels, p. 331.
2. Ibid.
3. Ibid.
4. Lander, Journal, p. 10.
5. Ibid.
6. Crowther and Taylor, Journal and Notices, p. 161.
7. Curtin (ed), Africa Remembered p. 231.

The mere fear of their existence in a river or lagoon at one time or another was sufficient to scare off canoemen and limit the extent of their navigation.

Human Interruptions

As if the natural barriers confronting canoemen were not enough, human beings in their various ways also constituted obstacles to transportation on water. River courses existed on their own without favour or prejudice against anything - organic or inorganic, animal or man, fishermen or canoemen, pirates or traders.

Each water course remained to be exploited by whoever wanted, and in whichever way he wanted. Unlike a land route which could be constructed purely for a private use, water routes often belonged to the public, even if only to a small community through which it passes. Water routes could be interfered with by those who were interested in using them for their own ends.

Fisherman lived along water courses or lakes, using their nets or placing their wire or basket garths wherever they were likely to have a good catch.[1] In choosing such places, there was the possibility of collision of interests with the canoe transporters. During the wet season when water channels were wide, there was not much danger of serious conflict. But when rivers fell and water courses dwindled to narrow channels, competition on the water route could be disastrous to transportation; and it was at the time of low water that fishermen were most active.

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1. See 'Fishing', in Chapter 2.

The migrant fishermen in particular often reserved their energies till the falling of rivers when fishes were trapped by the thousands in the pools.[1] In some places, desperate efforts were made to clear some small rivers of their waters so as to expose any available fish or to provide water for domestic use.[2] Such action was bound to be adverse to transportation.

However, the fishermen, the ferrymen and the canoe-transporter cannot be strictly distinguished from one another. In fact, they all have common interests - the water and the canoe. Each could use his canoe for any of the allied jobs. When the jobs were done by different specialists, they generally acted in complementary rather than in opposing ways. Therefore, it was only to a small extent that fishing disturbed transport.

Perhaps a more serious hazard to water transport was the prevalence of pirates on the water routes. Robbery of this kind might be due to social unrest among the people. For example, such robberies were common on the Ogun during the period of war between Abeokuta and Ibadan. In 1863, The African Times reported that "Another large robbery of goods on the Abeokuta River has taken place".[3] Such robberies were carried out on a larger scale than those by single pirates.

According to The African Times, the value of the goods stolen was considerable, totalling about £2,000.[4] That was a very large sum of money in the 1860s. During these wars, armed parties

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1. Alexander, Niger to the Nile, p. 167.
2. Ibid.
3. The African Times, Jan. 23, 1863, p. 75.
4. Ibid.

paraded the Ogun, rendering life and property unsafe. In such circumstances, trade on the river almost came to a standstill because canoe transport was limited to only a few people who did not mind the risk involved.

Piracy was also common in many parts of the river Niger, especially in the delta. For example, some of the Ijo who lived near or in the Warri area spent their time in piracy. This can be gleaned from the narration of Osifekunde, a nineteenth-century Ijebu trader. Peter Lloyd, who edited this narration, noted that "The Ijo were primarily a fishing people ... While the eastern Ijo were organised in substantial trading states, the western Ijo were not. For a few, piracy was a remunerative occupation. They seized canoes, selling the occupants as slaves ...".[1] In 1702, David Nyandael referred to them as the "Pyrates of Usa".[2] According to Nyandael, "they ... live only on Robbery; they sail to all parts of this River (Benin), and seize all that lights in their way, whether Men, Beast or Goods ....".[3]

The Ijo continued to disturb navigation of water routes till the nineteenth century. In 1854, Baikie noted:

> "Up the various creeks and branches, the waters are infested by a wild, piratical set, who live almost entirely in their canoes, and who subsist by plundering traders while on their way to markets, often adding murder to their other crimes. They extend their ravages from the Brass river on the one side, as far as Lagos creek on the other, and in the Rio Formoso (Benin) they are known to the English as Jo-men, a corruption of Ejo".[4]

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1. Curtin (ed), Africa Remembered, p. 236.
2. Bosman, Description, p. 427, 555. The Ijo were known as Uzon at Benin.
3. Bosman, Description, p. 428.
4. Baikie, Narratives, p. 149.

Three years later, Hutchinson referred to the Ijo as a piratical tribe who lived by pillaging all the canoes they could lay hold of, containing either British goods or palm oil belonging to indigenous people.[1]

That so much is known about the Ijo piratical involvements does not mean that they only employed their canoes in piracy. Neither does it mean that they were the only pirates in various other routes. Piracy existed in degrees, depending upon the usage of the rivers. It hardly existed in small water routes which were used mainly locally. But whereever piracy occurred it did have adverse effects on canoe transport.

Both economic and political dissensions within a community or between one political unit and another sometimes disturbed water transport. In 1855, an episode led to the total closure of the Ogun.[2] The Egba traders discovered that in their palm oil trade with the Sierra Leone immigrant traders, who were the middlemen between them and the European merchants, they were being cheated. The standard ten-gallon measured that were being used were beaten out from inside to hold about thirteen gallons - three extra gallons. The traders also kept down the price of palm oil so much that the local ruling price at Abeokuta was higher than that at Lagos, after it had been carried for three days down the river. On hearing the Egba's complaint the Alake ordered a closure of the Ogun river for some months.[3]

A more serious disturbance was created on the Niger in the nineteenth century. It was due to the rivalry between the indigenous canoe traders and European merchants who penetrated

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1. Hutchinson, Impressions, p. 79.
2. CMS Archive, CA2/068, Maser, 9th Aug. 1855.
3. Ibid.

the Niger in their steamers. The penetration led to confusion and embarrassment among the indigenous traders who had previously had a monopoly of the trade. Their reactions against the breaking of the monopoly led to obstruction of the water route. Large-scale traders such as Aje, an Abo chief,[1] and King Boy of Bonny[2] opposed the European merchants by instigating opposition against them.

The first of such conflicts was in 1832, at the first European penetration of the Niger from the coast. John Lander despatched an urgent letter to Macgregor Laird, the Liverpool merchant and pioneer of the Niger trade, saying that "The Ebos threaten to attack us .... They say we shall not pass the place, although there are not ten houses in the town".[3] By 1861 the situation had deteriorated to the extent that Laird's factory at Abo was burnt down.[4]

The burning down of Laird's factory at Abo was a significant incident on the Niger trade.[5] As from 1857, three years before Laird's death, European steamers had begun to be effective on the Niger.[6] Laird's trading post at Abo, especially, was a great embarrassment to the canoe middlemen because they should have realized that once a post was successfully established at Abo their position as middlemen would be undermined and their means of livelihood destroyed.

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1. F.O. 97/433, Baikie to Lord John Russell, Secretary of State, 5th Jan. 1861.
2. Laird and Oldfield, Narration, I, pp. 70-7, 79-80.
3. Laird and Oldfield, Narration, I, p. 82.
4. F.O. 97/433, Baikie to Russell, 13th Jan. 1861.
5. The canoe-steamer conflict on the river Niger was fully discussed in an unpublished paper presented by the writer at the Staff-Post-Graduate Seminar, held on 16th January, 1973, "Canoe-Steamer Transport on the River Niger in the Pre-Colonial Era".
6. Mockler-Ferryman, Up the Niger, p. X.

Abo had been the greatest emporium of trade[1] and a large canoe-building centre.[2] It occupied a strategic position, being at the head of the Niger Delta. It had controlled extensive trade up and down the Niger, acting as "middleman" in exchanging imported goods from coastal towns such as Brass for slaves, livestock and foodstuffs from as far north as Nupe kingdom.[3] The middlemen, therefore, strongly opposed the penetration into the interior of the European merchants. Such opposition also existed on the Benue where the Igbira had enjoyed a monopoly of trade, using their canoes.[4] The competition on the Niger among the various European firms led them to take active interest in the Benue trade. As from the 1870s, the agents at Lokoja began to send their own canoes up the Benue in competition against the Igbegbe indigenous middlemen. "In an attempt to preserve their livelihood the Igbira began to attack these rival canoes ..."[5]

On the other hand, the European merchants never hesitated in carrying their small war-ships into the river in order to right or threaten those who obstructed them. In Lander's despatch to Laird, he noted that he and his party landed at the town which resisted them on the Niger, and burnt it down in order to serve as an example of what they were capable of doing to the others.[6] In 1879, they bombarded Onitsha and burnt it down.[7]

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1. Laird and Oldfield, Narrative, I, p. 98.
2. Lander, Journal, Vol. III, p. 133.
3. Boston, J. S. "Notes on Contact Between the Igala and the Ibo", JHNS, Vol. 2, 1, 1960, p. 53.
4. Dorward, D. C., "A Political and Social History of the Tiv People of Northern Nigeria, 1900-1939", Ph.D. Thesis, London, 1971, p. 63.
5. Ibid.
6. Laird and Oldfield, Narration, I, p. 82.
7. Mockler-Ferryman, Up the Niger, p. 19.

In 1889, consequent to a fight between the indigenous people and the agents of the Niger Company, Onitsha was closed to trade; and canoe transport to the town was considerably reduced. While the middlemen were preventing the European penetration of the interior through the Niger, they were, in fact, doing more than that. They were also hindering the use of the Niger as a water route for the small-scale canoe traders.

Political upheavals, too, considerably impeded easy movement of canoes. Among the various peoples who lived around water routes, there were always political troubles which disturbed transportation. There were, for example, constant conflicts between the people of Ogidi and those of Onitsha, between the Nupe and the Kakanda and between the Abo and the Igara on the Niger in the mid-nineteenth century.[1]

These conflicts often resulted in open confrontations which sometimes involved the stoppage of canoe transport and even loss of lives. Crowther noted that Ibo canoes were not allowed to go beyond Idda market nor were Igara canoes allowed to go below Abo.[2] Few people who had close relations in both places could cross unmolested from one conflicting town to another. Ewonruzo, a trader, had unrestricted mobility because his father was an Igara and his mother was an Ibo.[3] Otherwise, traders were restricted to their own territories; and trespassing was often punished by seizure of canoes.[4]

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1. Crowther and Taylor, Journal, pp. 339-340.
2. Ibid., p. 385.
3. Ibid.
4. Ibid. p. 151.

Because of these conflicts, between Nupeland and the coast, conveyance of cotton had to be stopped and exchanged, at least, in five stations. No single canoeman could do the whole journey without being guilty of trespassing on another people's territory.[1] For example, the Kede canoes could not travel beyond Eggan because the area south of the river port was dominated by the Kakanda, a warlike riverain people of non-Nupe stock. They refused Kede canoes admittance into their territorial waters on the Niger.[2] Also, in the 1870s, Charles Phillips discovered that the chief ruler of a place known as Aboto on the lagoon would not allow Lagos canoemen to pass through his territory because the Ijebu often forbade his canoemen to pass to Lagos.[3]

In Nigeria as well as in many other parts of West Africa, battles took place on water routes, as pointed out by Robert Smith.[4] For example on the lagoon, behind the coast, "a genuine naval warfare was conducted, in which the crews of opposing canoes engaged in battles on the water and used their craft for blockades and ambushes of the enemy ...".[5] The Lagos blockade of the lagoon which cut Badagry off from all communication with Lagos in 1784;[6]

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1. Crowther and Taylor, Journal, pp. vii-viii.
2. Nadel, The Kede, p. 170.
3. CMS Archive, Charles Phillips CA2/078, March 20, 1877.
4. Smith R. S., "The Canoe in West African History", JAH, XI, 4, 1970, pp. 525-532.
5. Smith, Canoe, p. 530.
6. Dalzel, A, The History of Dahomey, an Inland Kingdom of Africa, London 1793, pp. 183-4.

the Lagos expedition on the western side of the lagoon,[1] and the considerable number of sizes of canoes employed in 'naval'[2] warfare, are very instructive about human obstructions on water routes.

How frequent these wars were and to what extent they disturbed navigation cannot be easily assessed. As such interruptions on land routes were often detrimental to movement of travellers and traders, their effect would also be adverse on water routes. Since alternative water routes leading to the same place rarely existed, the situation could, indeed, be worse unless there were alternative land routes.

The use of firearms from the seventeenth century may have intensified the warfare, as compared with earlier times when warfare relied solely on the use of spears, shields and arrows.[3] But war may also have become less frequent because, with the easy supply of local war weapons, it is possible that before they had firearms people were "almost always at war with each other",[4] thus creating more incessant obstructions to navigation than when they relied on the importation of firearms and muskets.

In the slave trade era, warfare encouraged slave raiding, kidnapping and the type of piracy already referred to. Whatever the dimensions of the warfare, only little trade could go on in the midst of open conflicts. The combination of war with other forms of human disturbance must have limited the effective use of the available water routes.

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1. Ryder, A. F. C., Benin and the Europeans, 1485-1897, London, 1969, pp. 225-6.

2. Smith, Canoe, pp. 525-8.

3. Smith, Canoe, p. 526.

4. Dapper, Description, p. 316, cited by Smith "Canoe", p. 526.

A less significant human interruption of water routes was the collection of tolls. The well-known "comey", which was a kind of customs duty, was a common feature on some water routes.[1] Before and even after the mouth of the Niger was discovered, Europeans anchored their ships at river ports. Then local traders carried articles of trade to them in their canoes. For allowing the merchants to trade at the ports, rulers levied duties on the European steamers. Charges varied from port to port.[2]

Along the Niger, also tolls were extracted from the canoemen plying the river. For example, in 1833, Oldfield observed that each of the canoes passing Eggan was obliged to pay a duty of twenty thousand cowries.[3] Thompson, who took part in 1841 Niger Expedition, noted that at Iddah, the Attah levied a small tax on all produce that was carried through his territory. He also noted that the ruler of the Kakanda charged fifty cowries on each bag of salt that was carried to Gori market and the same duty on each member of the crew of every canoe that carried trade goods.[4]

The Ijo were noted for extracting tribute from all canoes which passed through their territorial waters and which did not belong to them.[5] When the Lagos Administration realized

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1. Hutchinson, Impressions, p. 257.
2. Ibid. Also Smith, J, Trade and Travels in the Gulf of Guinea, London, 1851, p. 184; Adams, Remarks, pp. 240, 243, 245, 248.
3. Laird and Oldfield, Narrative, II, 32. 20,000 cowries = about 10 dollars of £2.10/-.
4. Allen and Thompson, Narrative, I, 322.
5. Baikie, Narratives, p. 41.

that tolls were being collected from traders using water routes without any agitation against it, it also charged a duty of three per cent on "all such Goods and Produce as shall be intended to be exported by the River Ogun ...."[1] in 1866.

The collection of tolls interfered with canoe movements on water routes mainly because as happened on land routes and as happens even now, the collector and the payer found it difficult to find a basis of agreement. Even when the duty was fixed and clearly stated the collector was prone to use his discretionary power, levying strictly or generously as he desired. He could demand little or nothing from his favourites or exact excessively from others. On the part of the canoemen, they too had an inherent tendency to cheat by dodging the collectors to pay very little or possibly to evade payment altogether. An influential trader or a stalwart canoeman could browbeat or cajole the collector and get his canoe to pass through without paying any duty.[2]

After all, the payers realized that whatever was collected was going to be distributed between the ruler and his chiefs and not on maintaining water routes. The collector also realized that the more he collected the more would be his private and official share, and the greater his influence and wealth. He was, therefore, prepared to exact as much as he could. Under such circumstances, toll-collection was, according to Baikie, "a fertile cause of disputes, and even of bloodshed".[3] When trouble between payers and collectors built up to that stage, canoes plying a route were disturbed and trade temporarily suffered.

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1. CMS Archive, CA2/07, 23rd March, 1866. (see Table 1).
2. See "toll collection" in Chapter 2.
3. Baikie, Narratives, p. 41.

Use of Routes

The geographical and human obstructions which have been described tend to give a gloomy impression that water routes were hardly used in the pre-colonial economy of Nigeria. This impression is certainly incorrect. Here, again, as in the case of land routes used by porters and pack animals, a distinction should be made in the use of water routes by the European trading ships on the one hand and the indigenous canoes on the other.

The main difference lies in the size of the vessels which used the water routes. Whereas the canoe could be moved on shallow water routes, the steamers required waters at least six to seven feet deep and broad channels.[1] Mainly because most rivers were incapable of moving steamers for a good part of the year, writers tend to generalize that "the rivers of West Africa have not been very significant as lines of human movement".[2] Any water route that was in constant use was of considerable significance even for the European steamers.

Among the rivers of West Africa, the Gambia "which flows without rapids, reefs or sandbanks" presented "an unrivalled waterway".[3] It is capable of moving steamers drawing 18 feet for 120 miles from the coast and for another 50 miles if drawing less than 12 feet.[4] The water routes in Nigeria were, indeed, more impressive. According to McPhee, Nigeria "has an unrivalled maze of coastal creeks, rivers and lagoons, which only need to be kept

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1. Buchanan and Pugh, Land and People, p. 221.
2. Mabogunje, "Land and Peoples", pp. 9-11.
3. McPhee, Economic Revolution, p. 121.
4. Ibid.

clear of 'sudd' to be used by fleets of native canoes and of European small craft".[1]

There were only very few water routes which were incapable of moving local rafts, but steamers were confined to large rivers and were largely used in the wet seasons when the routes were full of water.[2] Steamers were constructed in anticipation that they would ply water routes with regular full waters, whereas canoes were specially built to meet the demands of particular localities. Thus in places where waters were always low, canoes built there were always designed to move on incredibly low waters. The canoes used in surf were so solidly and strongly built that they were capable of breaking through waters that would almost upset European boats.[3] In 1832, Laird noted that he had seen long canoes "in a surf that would have swamped any European boat".[4]

Despite the multifarious impediments, canoes were employed on the water routes. In the Niger Delta area, for example, the creeks provided the only natural routeways between settlements.[5] Nineteenth-century sources are unequivocal about the intensive use of the water routes. In the late eighteenth or early nineteenth century, an explorer, John Adams, went to Warri in a canoe.

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1. McPhee, Economic Revolution, p. 122,
2. NEDECO, River Studies, p. 681.
3. Laird and Oldfield, Narrative, I, 63.
4. Ibid.
5. Buchanan and Pugh, Land and People, p. 221.

He noted:

> "The six rivers situated between Cape Formosa and Bonny have, in appearance, navigable changes ... They communicate with each other by creeks in the interior ... In fact, the canoes which I saw at Warre (Warri), belonging to New Calabar must have crossed these rivers in their passage".[1]

Another explorer, Darwin, also remarked, at the end of the century, that the lagoons which run parallel to the coast form a valuable means of communication between Lagos and the districts to the east and west of the port.[2] At Beshi, eighteen miles west of Lagos, where the least depth of water between Lagos and Badagry existed, steamers drawing seven feet could cross it even in the dry season.

There were also numerous small canoes which used the route as far west as Porto Novo and even beyond.[3] All the year round, the canoes plied the creeks, carrying cargo and passengers with their belongings. The sheltered waters of the coastal lagoons also provided an east-west water route of considerable importance. Up till now "canoes can travel from beyond the Dahomey frontier to the south-east of Nigeria without entering the open ocean and powered launches now follow the same routes".[4]

The route from Lagos to Benin which was thought to be unnavigable was crossed in 1891 by Captain Gallwey. With an

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1. John Adams, Remarks, p. 183.
2. Darwin, Colony of Lagos, p. 12.
3. Darwin, Colony of Lagos, p. 14.
4. Buchanan and Pugh, Land and People, p. 221.

indigenous canoe, paddled by twenty-four men, he covered the 170-mile route in five days, travelling only during the day, 5 a.m. to 9 p.m. In some part of the lagoon Gallwey found out that snags were a decided bar to any craft except the canoe.[1]

There must have been a good number of rivers which were uninterrupted by rapids. A good example was the Gongola, the biggest tributary of the Benue. On it, a canoe could reach Gende, a total distance of some 1,200 miles from the sea. According to the 1904 report of the Northern Nigeria Administration, "this is probably the greatest stretch of river navigation from a seaport, uninterrupted by rapids, in Africa".[2] Some other rivers in the north were also used.

Although steam launches had to stop using the Kaduna river in October, canoes used it almost all the year round.[3] The same can be said of the Logone which was often ascended throughout the year by barges and canoes.[4] In the southeast a radial pattern of tributaries and creeks and a maze of linking waterways provide routeways from the otherwise land-locked Iboland to the sea.[5] The Sombreiro River, the Kalabari Creek and especially the Imo River provided navigable waterways from the mainland to the coastal creeks.[6] The Cross River and the

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1. Gallwey, "Benin Country', p. 125.
2. "N. Nig. Report", 1904, p. 313.
3. CMS Archive, G3 A9/0, April, 1900.
4. Talbot, 'Gulf of Guinea," p. 392.
5. Ukwu, "Markets in Iboland", pp. 2-3.
6. Ibid.

Kwa Ibo rivers are known to have been of considerable significance as water routes.[1]

Evidence is abundant concerning the use of "the majestic Niger, the Mississippi of Africa",[2] and its tributaries, especially the Benue. At any time of the year one can travel very comfortably on the Benue in flat-bottomed steel canoes or in large dugout canoes.[3] In a recent issue of West Africa, a correspondent, writing on the Niger, noted:

> "Long before Park tried to trace the course of the biggest river in West Africa, and up to the present day, big canoes have been sailing down the 1,000 miles between Niamey and the coast; their crews are the 'Laptos' who know the secrets of the river and take many weeks to complete the difficult journey".[4]

Others, such as the Kede, the Kakanda and the Igala, who were riverain peoples, must have extensively traded on rivers for centuries before the colonial era.[5] Early travellers such as Ibn Battuta found it in active use. The nineteenth century European explorers and traders were also impressed by its intensive use for trading.

Rapids were not as impassable, as was often suggested. Lieutenant Glover, who passed through Bussa, noted that he did not find any insuperable obstacles to navigation. The rapids could be gone over at high water and could be dodged at low water.[6]

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1. Talbot, Southern Nigeria, p. 319.
2. Bowen, Adventures, p. 332.
3. Jackson, Expedition, pp. 28-42.
4. West Africa, "Unity Along the Niger", By special correspondent, 22nd Oct. 1971, p. 1226.
5. Nadel, The Kede, pp. 165-170.
6. Clarke, Travels, p. 215.

There was no time when the Niger did not contain enough water to move canoes.

The appearance and use of the Niger river immensely impressed those who knew it intimately. Lord Lugard's comment exemplifies such impressions. He remarked:

> "of the great rivers I have seen - the Irawady, the Ganges, the Zambesi, the Indus, and others - none has ever so excited my imagination by its size and the vast volume of water which it bears to the ocean as the Niger".[1]

To the peoples who lived in the areas of modern Mali, Dahomey, Niger Republic and Nigeria, the "lordly Niger"[2] must have long been of vital importance as it is to them today.[3]

Perhaps the first river that was navigated by Europeans in Nigeria was the Benin river. The Portuguese merchants took one of its branches[4] to Gwato where they established a trading post in 1486.[5] According to Pereira, "small ships of fifty tons can go as far as Huguatoo (Gwato)".[6] In 1702, Nyandael also noted

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1. Lugard, Expedition, p. 206.

2. Basden, Among Ibos, p. 25.

3. The countries through which the Niger passes recently set up committees to study the feasibility of making the Niger navigable to large ships. Two reports have emerged: 1. NEDECO Report, Sept. 1970. 2. Societe de 'Etude pour le Transport sur le Fleuve Niger, Niger Govt. Jan. 1971.

4. Bosman, Description, p. 426.

5. Pereira, Pacheco, Esmeraldo de Situ Orbis, Hakluyt Edition, by G.H.T. Kimble, 1937, p. 125; Fage, History, p. 61.

6. Pereira, Esmeraldo, p. 125.

that their ship penetrated up to Arebo, sixty miles above the mouth of Benin river.[1] If Arebo was situated half-way between Gwato and the sea,[2] this means that the Portuguese ships penetrated inland for about one hundred and twenty miles. Nyandael himself noted that their ship could travel even further inland, using hundreds of branches of rivers.[3] Before the sixteenth century, Bonny and New Calabar rivers in the eastern delta of the Niger were actively employed for canoe navigation.[4]

Undoubtedly, the existence of obstructions on the rivers in Yorubaland have misled some observers to conclude that no inland navigation existed in Yoruba.[5] Although, large rivers like the Ogun and the Oshun had projecting rocks which disturbed easy canoe movement in the dry season, these were not as disturbing to canoes as they would be to steamers. Where projecting rocks interfered with canoeing, portages were resorted to.

Almost throughout the year, the Ogun was navigable between Lagos and Aro, at Abeokuta, a distance of about ninety miles.[6] If Pereira's Agusale was the Ogun river, as has been suggested, it must have been used to transport slaves, ivory and other articles before the early sixteenth century when Pereira referred to it.[7]

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1. Bosman, Description, p. 426.
2. "Note on Arebo", Bosman, Description, p. 557.
3. Bosman, Description, p. 427.
4. Pereira, Esmeraldo, pp. 100, 132.
5. Bowen, Adventures, p. 222.
6. Molony "Notes on Yoruba", p. 597.
7. Pereira, Esmeraldo, p. 124.

A contemporary observer also noted that it was possible to travel in canoes even in January, in the heart of the dry season. The Oshun was also navigated by local canoemen. According to Millson, the Oshun "carries, even in the dry season, more water than the Thames at Kingston; (which) would enable launches and lighters to penetrate to the Ibadan farms in the heart of the most populous and promising commercial tribe in West Africa".[1]

Another navigable river that little is known about is the Oni which runs through Oke-Igbo, near Ile-Ife, to the lagoon near Makun. When Charles Phillips visited Oke-Igbo in 1879, the river was not in use for navigation, probably owing to the civil wars in the country. Chief Derin, the headman of Oke-Igbo appealed to Phillips to help him ensure the opening of the river "so that traders might come in their canoes straight from Lagos to Oke-Igbo".[2] Millson was also eager about the opening of the Oni to navigation. According to him, "the Oni ... would open up more than 50 miles of Eastern Yoruba, whose rich mountains and valleys will some day be a source of great agricultural wealth ...".[3]

Probably the Oni like many other rivers were employed for transportation purposes in the pre-colonial era. Even the Yewa river which the Lagos Administration regarded as impassable in the early twentieth century,[4] was found in the late nineteenth century

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1. Millson, Yoruba Country, p. 580.
2. CMS Archive, Charles Phillips, Journal, CA2/078, July 2, 1879.
3. Millson, "Yoruba Country", p. 580.
4. "Lagos Annual Report", 1900, p. 40.

as "navigable for small steamers ... It is deep, and would be navigable up to Okeodan or higher if cleared; at present only small fishing canoes go up above Shagbo".[1] In the dry season, canoes drawing three feet could ply it to its upper course.[2] Indeed, examples of such navigable rivers could be multiplied.

The fact that European steamers found it difficult to use the routes should not be allowed to mislead one to assume that the water routes were impassable. It is probably correct, however, to say that such physical and human obstructions that have been mentioned limited the use of the waterway to full capacity. For example, in the times of war, canoes plied the routes not for economic reasons. As is shown in the next chapter, nothing proves the intensive use of the water routes better than the enormous numbers of canoes of various sizes that were employed in transporting cargo and human beings from one place to another in the pre-colonial era in Nigeria.

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1. Darwin, "Colony of Lagos", p. 15.

2. Ibid., p. 12.

CHAPTER 7

Water Transport: Canoes

In Robert Smith's recent study of "The Canoe in West African History",[1] he noted that "For hundreds of years the canoe, both as a ferry and as a means of lateral communication has played a major role in the political and economic life of West Africa."[2] This assertion has been further investigated in relation to the pre-colonial economy in Nigeria.

In the work cited above, Robert Smith, however, lays much more emphasis on the use of canoes for political, especially military, purposes than for economic activities. His keen interest in the use of canoes for military purposes is well demonstrated in his conclusion: "the canoe occupies a place of importance in the history of the coastal, lagoon and riparian peoples equal to that of the horse in the history of the savannah states".[3] (Italics mine). An historian who was more interested in the use of the canoe for economic activities would probably have compared the canoe with the donkey.[4]

The use of the canoe for economic purposes in the pre-colonial Nigeria is the main theme of this chapter. It provided various economic activities - its building, propulsion and use for

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1. Robert Smith, "The Canoe in West African History", JAH, XI, 4, 1970, pp. 513-533.

2. Smith, Canoe, p. 521.

3. Smith, Canoe, p. 532.

4. Robert Smith's earlier works indicate his interest in warfare. E.g. see Ajayi, J. F. A. and Smith, Robert, Yoruba Warfare in the Nineteenth century, Cambridge, 1964, Part I; Robert Smith, "To the Palaver Islands: war and diplomacy on the Lagos lagoon in 1852-4", JHSN, V, 1, Dec. 1969.

transportation purposes. Attention is also focused on the factors which affected its speed and cost of transportation. One important advantage discussed here is its suitability for both short- and long-distance trades.

The immense number of canoes of different sizes that were seen on the water routes in the country by various explorers more than testify to the effective use to which waterways were put for transportation. Like pack animals, water vessels in their different forms were universally known as means of transport. But what type of vessels were first used by different communities is difficult to suggest.

Perhaps the simplest vessel ever used by man was the log, wherever trees were available. It was an unstable vehicle, capable of carrying a person down the stream. Logs were known to have existed in regions as widely separated as North America and Northern Australia.[1] In Europe it was a method which had existed throughout history.[2] People used to sit astride a piece of wood and propel it at a considerable speed. To manipulate such an uneasy craft, unprovided with any accesory stabilizing device, required the exercise of extraordinary dexterity in order to maintain a balance and prevent the log from turning over and unseating the rider.[3]

Stability which the ordinary log lacked could be ensured by adding other logs so that they would not overturn easily. Another development was that the centre of gravity of the log could be brought below the water-line by hollowing the log in order to produce the same effect - stability.[4] Both the raft and the dugout must have

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1. Goodwin, Communication, p. 96.
2. Leighton, Transport, p. 134. Its most successful form was found among the Buduma of Lake Chad, in the extreme north-east of Nigeria.
3. Goodwin, Communication, p. 96.
4. Ibid.

been attempts to make a log more stable, and to enable it to carry a man and his burden more safely.

The raft was an excellent down-stream craft, but the great resistance of the tied logs to the moving water often made it impossible to load and to drag upstream. In Medieval Europe, the raft was used to carry men and cargo downstream. Upon arrival at the destination the cargo and the logs were sold and the raft was broken up.[1]

Like the raft, the coracle and the bark-canoe had developments of their own; and they were widely distributed. In England, the coracle, made from a single ox-skin, stretched over a willow frame, was a common feature on its rivers. For large vessels, two or even three horse- or ox-skins might be used. Such boats of hides were also found on Lake Tana in Abyssinia.[2] The bark-canoe was used by the Lamba of Rhodesia; and it was developed to great heights of efficiency and beauty in Canada, north of Lake Superior.[3] An essential point is that what type of vessel was made and used by a community depended, to a large extent, on the type of local materials available and on the techniques known to a particular culture.

Sewn Canoes

In different parts of pre-colonial Nigeria some of the vessels mentioned above were used. On the Lake Chad, for example, light logs were propelled by the Buduma.[4] But after such trees

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1. Leighton, Transport, p. 134.
2. Goodwin, Communication, pp. 98-99.
3. Ibid., p. 100.
4. Ibid., p. 96.

had been exhausted, small vessels made of small pieces of planks, sewn together were used. In the early 1820s, Clapperton saw on the Logone, near the lake, large canoes built of small planks two or three feet wide, cut from trees which grew in abundance along the banks of the river. Some of them measured nearly fifty feet in length and each was capable of carrying twenty or twenty-five persons at a time.[1] Similar types were seen on the Yobe river by Denham. Those which he saw "were formed of planks rudely shaped by a small hatchet, and strongly fastened together by cords passed through holes bored in them, and a wisp of straw between, which they say eventually keeps out the water: they were high poops like the Grecian boats, and would hold twenty or thirty persons".[2] Denham also saw two hundred canoes like this on Lake Chad; and he was told that the people of Lake Chad had a thousand large ones.[3] Even in the dry season, in February 1824, Clapperton saw on the Shary eight canoes, each carrying about eleven men. He was informed that the Buduma often sent out fleets of sixty to one hundred canoes at a time.[4]

In 1830, the canoes which Richard Lander saw on the Niger, near Bussa, were of the same description.[5] The canoes "are made of two blocks of wood which are sewn together by a thick cord, under which a quantity of straw is placed, both inside and out, to prevent

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1. Denham and Clapperton, Narrative, II, 20.
2. Ibid., I, 82.
3. Ibid., I, 269-270.
4. Ibid., I, 4-7.
5. Lander, Journal, II, 21-22.

admission of water".[1] In 1851, Barth also saw vessels like these on Lake Chad. The vessels "were not more than about twenty feet long, but seemed tolerably broad; ... They had a very low waist, but rather a high and pointed prow. They are made of the narrow boards of the Fogo tree, which are fastened together with ropes from the dum-plan, the holes being stopped with bast".[2] Larger ones which measured about fifty feet long and six and a half wide, constructed in a similar way, were also seen on the lake.[3]

On the rivers Logone and Shari, Barth noticed similar vessels. When he reached the Logone, even in the dry season, in March 1852, he found that "it was enlivened by about forty or fifty boats, most of them about four feet at the bottom and six feet at the top, and remarkable for their formidable prows. All these boats are built in the same way as those of the Budduma, with this exception, that the planks consist of stronger wood...".[4] The Wurubo, on the banks of the Benue between Lan and Ibi, also owned large numbers of such canoes.[5] They were constructed of two or more pieces of plank,

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1. Lander, Journal, II, 21-22.
2. Barth, Travels, II, 66.
3. Ibid.
4. Ibid., II, 448.
5. Ruxton, F. H., "Notes on the Tribes of the Muri Province", JAS, Vol. VII, No. XXVIII, July 1908, pp. 384-5.

sewn together or fastened with iron staples.[1] The use of small planks to build large canoes is remarkable, showing the extent to which the people could adjust themselves to the local environment.

Reed Canoes

With the exhaustion of trees from which planks were obtained, people made use of reeds for making canoes.[2] Such reeds grew abundantly on the banks of Lake Chad and the nearby rivers. Like other canoes, this type also had its own development and was closely related to availability of material and the nature of water routes. Its main advantage is that it can easily move on shallow waters. These reed canoes, the "baris", as they are sometimes called, were common also in Persia, Mesopotamia, Japan and the Upper Nile.[3]

On Lake Chad where they were highly developed, instead of all the bundles of reeds lying parallel, "the gunwale was here formed of a single bundle, curved round to enclose both sides and one end of the canoe. The stern was then rounded off instead of being pointed."[4] But simple floats made of two flat bundles of ambatch sticks lashed together endwise with their narrow end interlocking, also existed. In the 1900s, some Bunduma reed canoes were found on Lake Chad. They were about 18 feet long, and about ten inches thick.

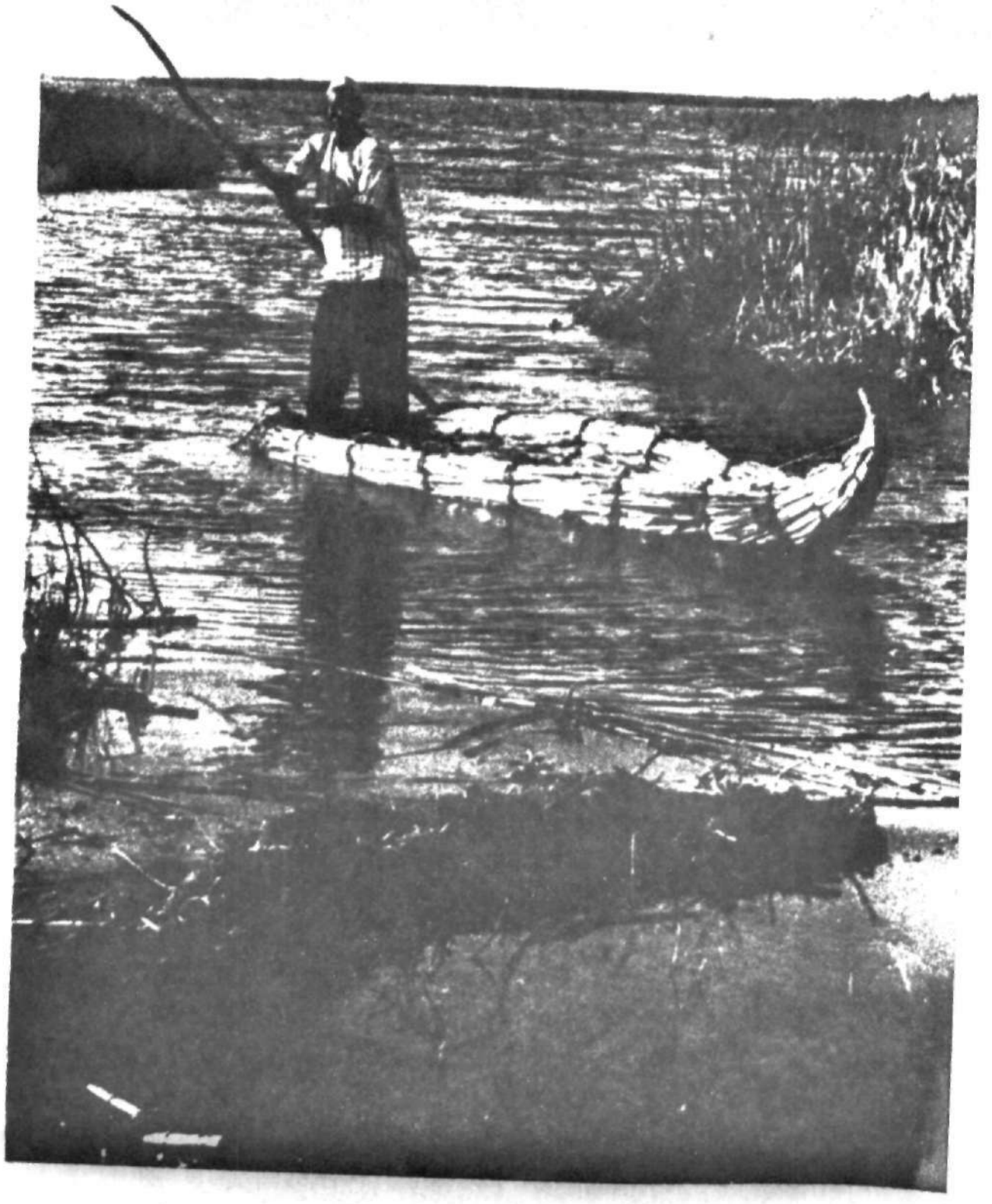
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1. Hutchinson, Edward, "Ascent of the Rever Binue in August 1879; with remarks on the systems of the Shari and Binue", PRGS, II, 1878, p. 296.

2. See Plate 4, a reed boat.

3. Goodwin, Communication, pp. 101-2.

4. Ibid.



Pl. 4

They took not more than a month to build. Yet they were strong enough to last about two years before they became water-logged.[1]

Dugout Canoes

In areas where there were no reeds but where there was plenty of trees, man relied on the use of trunks of trees for building his canoe. As man accumulated more property, the log became inadequate for his purpose. He hollowed out a log of wood already softened by constant use on water or deliberately allowed the trunk to remain on water for a while. In other cases, soft woods were looked for and shaped to the required dimensions, hollowed (or 'dug') out, and the process could be continued by using fire to burn deeper the hollowed out part. Thus the canoe, popularly known as the 'dugout' emerged.[2]

According to one writer "the basic idea (behind the dugout canoe) is to increase the stability and the carrying capacity of a single log by hollowing it out, until the user sits on the floor below water-level".[3] Once man grasped the principles of the dugout canoe, its execution became a matter of patient labour. Without metal tools but with fire carefully controlled and with simple tools such as adzes fashioned of stone or even of hard shells, a rough dugout might be fashioned out of soft woods such as cotton trees. With metal tools to scrape it and polish it properly, an elegant, strong vessel could emerge.[4]

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1. Alexander, Niger to the Nile, p. 324.
2. Smith, Canoes, p. 515.
3. Goodwin, Communication, pp. 105-6.
4. Hornell, James, "Water Transport - origins and Early Evolution", Cambridge, 1946, 189.

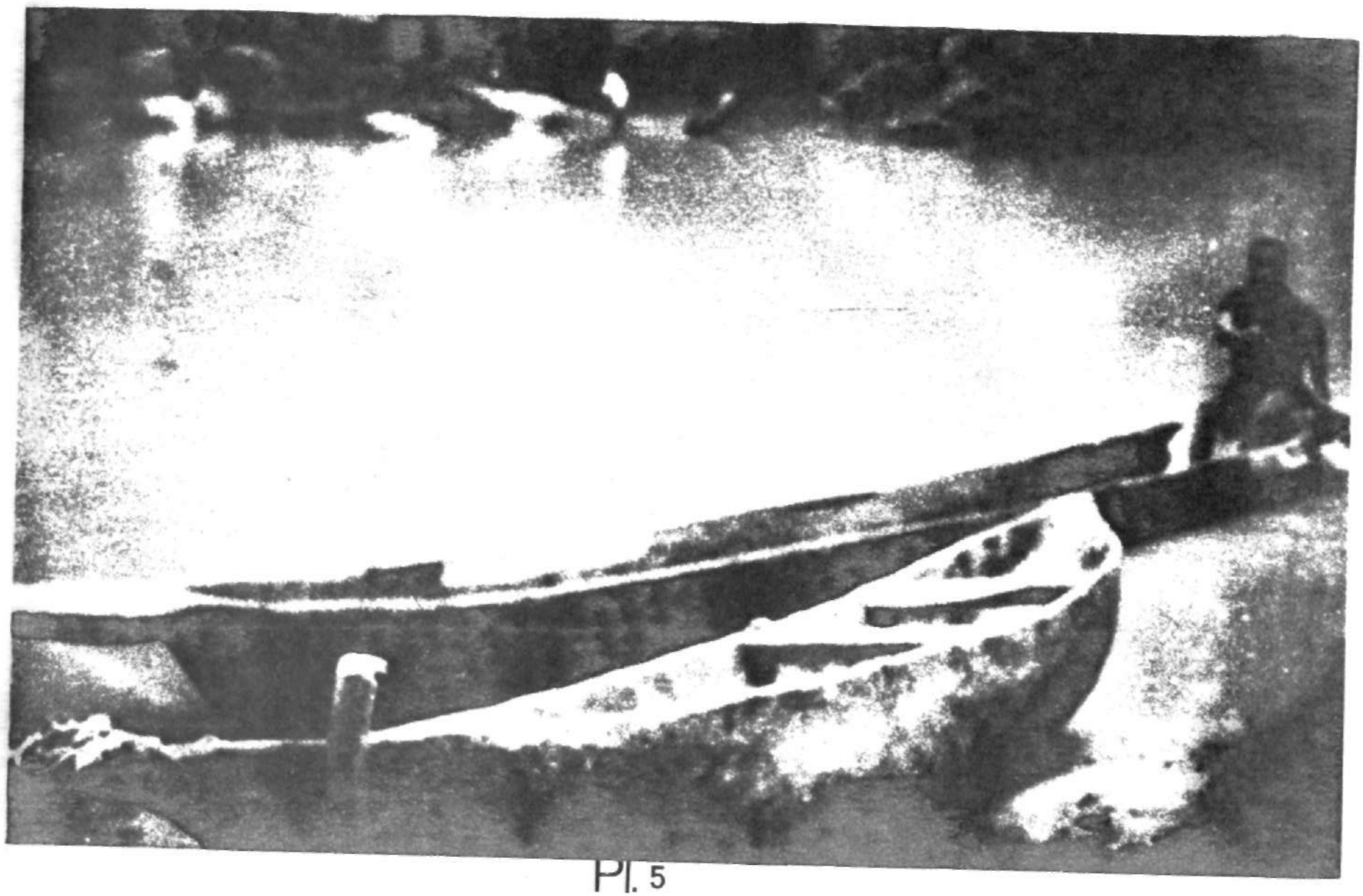
The dugout seems to have a wider distribution than any other form of ancient vessel. Its wide distribution in almost all parts of the world where suitable trees existed is probably indicative of its early adoption in man's history.[1]

In Medieval Europe, for instance, canoes hollowed out of tree-trunks were in use in areas where great supplies of timber existed. According to Leighton, "The boats used by the Scandinavians in their trade with Byzantium were of this type. Each winter, the Slavs made dugouts from large logs for the eastern Vikings. The resulting boats were light enough to be carried around rapids and seaworthy enough to sail on the Black Sea.[2]

Recent discoveries show that the dugout belonged to the prehistoric age in many parts of Europe.[3] One writer remarked that "In prehistoric times the dugout was used throughout Western Europe, and remains dating back four thousand years or more have been found near the Swiss lake-dwellings, and in the great waterways of France, Germany and England".[4] It was also used in prehistoric times in Greece where it was known as scapha, meaning dugout. Pictures showing logs being hollowed out by workmen in Egypt in 2800 B.C. also testify to its use there.[5]

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1. Hornell, James, "Water Transport - Origins and Early Evolution", Cambridge, 1946, 189.
2. Leighton, Transport, p. 134.
3. Hornell, Water Transport, p. 189.
4. Goodwin, Communication, p. 106.
5. Ibid.



Pl. 5

Within historic times, dugouts are known to have been employed in Peru, North America, the West Indies, Australia, on the Indian sea-coast, in southern Asia, the Pacific islands[1] and throughout Africa.[2] It is, in fact, possible that the dugout has already been in existence since the remote past in many other places.

Since water offered to riverain peoples early opportunities for transportation, it is not surprising that a great variety of canoes existed in different parts of the world. What is striking is that a particular craft - the dugout - was so widely employed by peoples of varying history, culture and environment - by peoples so widely separated that it makes it difficult to establish that one people borrowed it from another. The gradual development from ordinary logs to properly constructed boats in many places is perhaps indicative of their independent origins.

In each area that the dugout was used, its construction varied in dimensions according to the available material and technical knowledge, and its adaptability was in line with the local need.

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1. Goodwin, Communication, p. 106.

2. Worthington, S. & E.B., "Inland Waters of Africa - the Result of two expeditions to the Great Lakes of Kenya and Uganda..." London, 1933, pp. 157-165.

3. E.g. Polunin, Ivan, "Traditional Boats of Malaya", Geographical Magazine, XXV, 334-45; and Worthington Inland Waters, pp. 153-165. Both of them showed that the origin of the dugout was independent in their respective areas of study.

Whereas a dugout used in Borneo by the Kayan could be as long as 150 feet,[1] some in East Pakistan, called donga, measured only eight to ten feet in length.[2] The swamp-dwellers of Kioga in East Africa also made little canoes to hold one or two men at a time.[3]

The idea of building a canoe to suit local needs is exemplified by the Malayan boats. According to Polunin who did considerable work on the traditional boats of Malaya, the dugouts "are well fitted for Malayan coastal waters which are always sheltered".[4] Thus each community probably developed the idea of the dugout independently, according to their local material, technique and need.

The dugout canoes that were found in use in different parts of modern Nigeria could also have been independent of those in other parts of the world. Probably they have been used for centuries before any available documentary evidence. If, in its origin, the dugout in different parts of Africa is independent of those of prehistoric times in Europe, there is no reason to suppose that it did not exist at the same time in parts of Africa including Nigeria.

It would, indeed, appear that in this case, extrapolation back to the remote past is justifiable. Human behaviour and

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1. Goodwin, Communication, p. 107.
2. Kamaluddin, A. F. M., "The Development of Transport in East Pakistan", Ph.D. Thesis, Aberdeen, Oct. 1967, p. 46.
3. Worthington, Inland Waters, p. 158.
4. Polunin, Malaya, p. 335.

reaction to certain circumstances have been seen to be identical, apart from differentiations caused by local variations.[1] It has been seen in the last chapter that, by and large, similar obstacles on water routes limited navigation in different parts of the world. If the early man in Asia or in Europe thought of hollowing out a log, his counterpart in Africa probably did the same thing at the same time.

It may be difficult to accept such extrapolation back to antiquity just as it might have been difficult to accept an extrapolation back to the fourteenth century if our earliest information regarding the use of the dugout on the Niger is a nineteenth-century source. But, thanks to Ibn Battuta we know that dugout canoes were in use on the Niger in the fourteenth century because he sailed down the river from Timbuktu "on a small boat, hollowed out of a single piece of wood".[2] In the same way it should have been absurd to extrapolate to as far back as 570 B.C. the existence of a culture in a place known as Daima in northern Nigeria[3] or of a culture at Nok, near Bauchi plateau, around 800 B.C.,[4] if archaeological finds had not suggested it.

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1. E.g. see, in Chapter 3 reasons for circuitout routes in England and Nigeria, and in Chapter 6, human obstructions on water routes in Europe and Africa.

2. Ibn Battuta, Travels, p. 333.

3. Thurstan Shaw, "Radiocarbon Dating in Nigeria", Ibadan, 1968, p. 17. For my discussion on the antiquity of the canoe, I am indebted to Mr. Toso Eluyemi, a colleague at the Centre of West African Studies, Birmingham University, a research student in Archaeology. I am also grateful to Mr. Colin Flight for giving me some information on this subject.

4. Fage, History, p. 11.

However, sources are unequivocal concerning the use of the dugout within recent times. From the fourteenth century to the present, accounts prove beyond any reasonable doubt that the dugout existed on the numerous water routes in Nigeria. It is a material of not only the past but also of the present. Like porters and pack animals, the dugout can still be seen in use today.[1] As Smith rightly puts it, "the canoe - still in use, and still being built by traditional methods, presumably differs little from those of the past ..."[2] As mentioned above, Ibn Battuta did not only see the dugout on the Niger in the fourteenth century, he also sailed in it.[3]

Duarte Pacheco Pereira's Esmeraldo based on the information obtained at the end of the fifteenth and early sixteenth centuries contain references to the use of dugouts in the coastal areas of the country. He noted that the riverain people inhabiting small islands around the Forcados river communicated by canoes made of a single trunk.[4] But he must have been more impressed by those on the Bonny and New Calabar rivers in the eastern delta of the Niger. According to him, "The bigger canoes here, made from a single trunk, are largest in the Ethiopias of Guinea; some of them are large enough to hold eighty men...."[5]

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1. During my field work in Nigeria, I saw dugouts still being used on the Lagos Lagoon and on the Oshun, near Iwo where they were being used for ferrying. Mr. Joseph Ladela of Ile-Igbo still builds dugout canoes on demand.

2. Smith, Canoe, p. 516.

3. Ibn Battuta, Travels, p. 333.

4. Pacheco, Esmeraldo, p. 130.

5. Ibid., p. 132.

In the seventeenth century, Dapper[1] and Barbot[2] also noted canoes on rivers. According to Barbot some of the canoes were really large - "70 feet in length and 7 to 8 feet broad".[3] The Ijo were seen using this type of canoe in the eighteenth century for trading and for piratical operations.[4] In 1784, Lagos used its war canoes to blockade Badagry.[5]

Nearly in all parts of the country travellers found dugout canoes being actively used in great numbers and in varying sizes in the nineteenth century. John Adams observed that the King of Bonny had war canoes "capable of carrying one hundred and forty persons each".[6,7] In 1825, Clapperton and Richard Lander, while on the Yewa, saw "canoes of singular construction, and exceedingly strong, made purposely to brave .... violence".[8]

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1. Olfert Dapper, "Description de l'Afrique", Amsterdam, 1686 (1st published in Dutch in 1668).
2. J. Barbot, "A Description of the Coasts.... in 1732", (He made his last voyage to Africa in 1682).
3. Barbot, Description, p. 382.
4. Ibid., p. 428.
5. Dalzel, History, pp. 183-4.
6. Curtin (ed) Africa Remembered, p. 231.
7. John Adams, Remarks, p. 136.
8. Clapperton, Expedition, pp. 1-2; Lander, Record, I, 42.

While on the Niger to discover its deltaic mouth, Lander saw "several large canoes, the bottom of which is made of a single tree".[1] On reaching Nupeland he observed canoes "of a particular description, very much resembling what are called punts in England, but are perfectly straight and flat-bottomed ... formed out of one log of wood, and are of an immense size".[2] Even at a small village near Rabba, the chief controlled about six hundred canoes.[3]

On moving southwards to the lower Niger, Lander and his party saw at Abo, a commercial town on the Niger, much bigger canoes than they had earlier seen. One of them contained as many as seventy persons.[4] In 1832, Laird noted that there could not have been less than one hundred to one hundred and fifty canoes being used for economic activities by traders around Abo.[5] In the 1840s, the ruler of Abo could muster about three hundred canoes at a time.[6] The canoes that were found on the coast were also large ones, measuring more than fifty feet in length and broad enough to allow three men to sit abreast with ease.[7]

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1. Lander, Journal, II, 261.
2. Ibid., III, 3.
3. Ibid. II, 315.
4. Ibid., III, 133.
5. Laird and Oldfield, Narratives, I, 98.
6. Allen and Thompson, Narratives, I, 236.
7. Lander, Journal, III, 210.

While in Lagos in 1851, a missionary saw about one hundred large canoes containing from ten to fifteen men each.[1]

Canoes were also found in use by travellers and traders who went from Lagos to Abeokuta on the Ogun river. They were of varying sizes, some were so small as to hold only one man but some were large enough to carry twenty or thirty. In the dry season of 1845, when the canoe in which a missionary was travelling to Abeokuta stopped for the night, he noted that "the whole company of Abeokuta canoes stopped and rested themselves".[2]

While ascending the Benue in 1879, an explorer saw thousands of canoes. It is remarkable that some villages had 300 to 400.[3] At the end of the century, in 1894, Robinson used a dugout on the Niger. He noted that "the larger canoe, which held most of our luggage and ourselves, was about forty or forty-five feet long and four and a half feet wide. It was made out of a single tree".[4]

Gilbert Walker who made a study of transport in Nigeria in 1949 found a great number of dugouts in use. He remarked that "the domestic trade of Nigeria insofar as it is moved by water, was carried in dugout canoes ... found on all the waterways of Nigeria".[5] Some were as large as seventy to eighty feet in length by ten or twelve feet beam and three to four feet in depth from gunwale to the bottom of the boat.[6] There was hardly any water route on which dugout canoes were not found in great numbers.

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1. CMS Achive, Journal of C. A. Gollmer, CA2/044, 7 July, 1851.
2. CMS Archive, Journal of Marsh, CA2/067, 9 June to 31 Dec. 1845.
3. CMS Archive, Journal of Ashcroft, CA3/05/33, Aug. 1879.
4. Robinson, Hansaland, p.258.
5. Walker, Traffic and Transport, p. 55.
6. Ibid., p. 56.

Construction of dugouts

For the construction of the dugout, the most important requirement was a suitable tree. In the southeastern parts of the country such trees were found in great numbers.[1] The maximum dimensions of the canoe depended mainly on the length and girth of the trees which could be felled in the immediate neighbourhood of the water route.

Trees which could be constructed to accommodate a reasonable number of people and their cargo with stability, must be long, straight, forest giants. Where available, soft woods such as the silk cotton tree (Ceiba pentandra and Triplochiton scleroxylon) were in special demand for large crafts.[2] The trees most frequently felled around Calabar were Mahogany and awosa, a rather yellow wood, very strong and fibrous. The latter was in higher demand because stronger canoes could be made from them.[3] At first it was probably not difficult to obtain such trees near water routes, but there was no doubt that deforestation greatly reduced the number of suitable trees.

When this happened, the builders resorted to other alternatives. They could look for such trees in places far away from the water routes. The major problem in this was the carriage of the canoe or the tree trunk to the water route. After the tree had been cut down and hollowed out, a passage was cleared through the bush to the nearest route. Rollers would be laid down, and a long stout rope of fibre was attached to one end for dragging it down to a place near the river route where the process was completed.[4]

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1. Pereira, Esmeraldo, p. 125.
2. Smith, Canoes, p. 520.
3. Partridge, Cross River, pp. 178-9.
4. Ibid.

This method was practised in the Calabar area; and it may well have been widely practised by other canoe-builders.

The Mpongwe canoe-builders in Gaboon, who also made dugout canoes, often had "to transport a sixty-foot canoe eight or ten miles overland to the nearest creek or river".[1] Like the Calabar, they, too, cut a path through the woods, and lay rollers two feet apart, on which the vessel was pushed.

Canoe-builders who had exhausted their trees could also migrate from their homes to live in areas where suitable trees were available and where there was a demand for their crafts. The Kede canoe-builders of Nupe were a good example of this. They were reputed canoe-men and builders on the Niger. As a result of the deforestation of their territory on the banks of the Niger, they were forced to move south down the river to as far as Onitsha where they settled down, forming "a small colony of Kede canoe-builders".[2]

When trees in the neighbourhood of water routes were exhausted or in places where large trees never existed, smaller trees could be advantageously used. The builders could add small planks to each side of the vessel, thus increasing its depth.[3] In 1830, Richard Lander saw such dugouts increased in size by addition of planks. "We have seen today several large canoes, the bottom of which is made of a single tree and built up with planks to a considerable height", was his description.[4] It is most likely

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1. Du Chaillu, Paul, P., Explorations and Adventures in Equitorial Africa, London, 1861, p. 131.
2. Nadel, The Kede, p. 169, Fn. 1.
3. Goodwin, Communication, p. 109.
4. Lander, Journal, p. 261.

that lack of suitable trees for building large canoes led canoe-builders in some areas to devise the method of sewing small planks together. Complete absence of trees compelled the Buduma of Lake Chad to build canoes made of reeds.

When and where suitable trees were available the method of construction was, in general, very similar. Variations, of course, did occur in matters of detail, depending on local material, trees and tools, and techniques. What seems the universal method has been vividly described by Goodwin.[1] His description is quoted in full because it is widely representative of construction in different parts of Nigeria and other parts of the world. The quotation suffices to give a general idea of the basic principles involved in the construction of dugout canoes. His description runs thus:

> Once a suitable tree has been found in the forest it is felled and trimmed. The centre is roughly chipped away to leave a shell above five inches thick, thus lightening the load. A corduroy track of poles is laid down to the river, and a simple windlass is made by placing the stem of a small tree across and behind any two standing trees. Rattans are wound round this windlass, which is turned by means of its own trimmed branches. The roughly shaped boat is launched on the river when the water is running high, so that it can be beached at the village above normal water-level. A leaf-shelter is now built to protect the hull from the weather. The log is then hollowed by firing with wood-chips inside and out. While the firing is done on the outside the hull is filled with water and the charred wood is continually hacked away. While the shell is still hot from the firing and boiling water, stout thwarts are forced into place, so that what was a three-foot gap now becomes six or seven feet wide. The boat may be filled with wet sand, to expand the hull and increase the beam. The shell is left to set and holes are bored every two feet or so. Into these holes dowels are forced, marked in such a way that they will show the exact thickness of the shell at each point. The dugout is now carved down to this thickness,

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1. Goodwin, Communication, pp. 107-8.

> cross-benches are lashed into place, and the sides are built up with added gunwale. Finally, bow and stern are built in, and a suitably carved prow is added.

A careful study of the construction and the impressive number of canoes that were found on water routes, as already mentioned, leads to a crucial point: that canoe-building is a highly organised occupation and not just a casual job for everyone. It required deliberate effort and systematic planning. Construction also involved elaborate investment of time, labour and money in the form of remuneration in kind or in cash. The builders were specialists, like black-smiths or weavers. But such specialization does not mean that they did no other type of job besides canoe-building. They were specialists only to the extent that they or their lineages were a sort of guild who jealously guarded their exclusive right to build canoes and who alone could be approached for constructing state or private canoes.[1]

Specialists of this kind existed in or migrated to many places where there were suitable materials. It would appear that almost every community that lived close to water routes had their canoe-builders. But there were also large scale builders such as the Kede of Nupeland and the Ijo of the Niger Delta. In each locality, reliance was put on available material. Thus the Kede, the Ijo and the Mahin, among others, made their canoes out of single trunks. But the Borgu of Bussa and others in the north made use of small planks while the Buduma used grasses.

In Nupe kingdom, the Kede were the canoemen par excellence.[2]

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1. Oral Evidence from the Oba of Igbogbo, near Ikorodu.
2. Nadel, Byzantium, p. 19.

In the traditions of the origin of the kingdom, the Kede were the canoemen who manned the bronze canoe that carried Tsoede, a favourite slave of the ruler of Idah, from Idah to Nupe. According to this tradition, the Kede were rewarded for their service by being accorded the title of "Lords of the Water" over the aborigines on this part of the Niger.[1] That title gave the Kede unquestioned authority in canoe matters over the other riverain groups such as the Gbedegi and Bataci who devoted less time to fishing and canoeing and more time to agriculture. These other groups could fish only "in the backwaters and creeks of Niger and Kaduna (but) never in the main river, where Kede alone are entitled to fish".[2]

In matters of canoe transport the Kede must have also gained superiority over others. The Gbedegi, the Bataci (marsh dwellers) and others cannot have done without canoes of one type or another before the "Lords of the Water" accompanied Tsoede to Nupe from Idah. Therefore, it must have been only in "the craft of building large canoes"[3] that the Nupe, according to tradition, were ignorant at that time. Before their arrival, the groups probably used small trees to build small canoes for fishing and ferrying. By building large canoes, the Kede certainly revolutionised water transportation, moving large numbers of people and a large volume of cargo from place to place.

By the nineteenth century, it would appear that suitable trees had been exhausted and they resorted to using "broken pieces of canoes and rough boards".[4] The pieces were put together by iron nails.

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1. Nadel, Byzantium, p. 19.
2. Nadel, The Kede, p. 168.
3. Nadel, Byzantium, p. 74.
4. Crowther and Taylor, Journal, p. 199.

But it is not difficult to see the defects of such fragile canoes. In strength, stability and durability they were not comparable to dugout canoes. In order to strengthen a canoe, the builders used an immense number of nails, sufficient to build two or three.[1] The gaps in the boards were stopped by the soft cotton of the bombax fruit. But this did not adequately prevent the canoe from leaking; and constant bailing was often kept up by one or two of the crew or passengers.

In order to avoid using pieces of planks for canoe construction, the Kede often migrated to areas where they could find suitable trees for dugouts.[2] Even those who had no trees were aware of the superiority of the dugouts over the sewn up ones. The ruler of Bussa, for example, told Lander that the dugout canoe belonging to the ruler of Wawa, another Borgu town, was superior to his. He, therefore, requested the ruler of Wawa "to sell a large and good ones, made of a single trunk, instead of one joined in the middle, which .... would not be either so strong or so safe."[3]

The other major canoe-builders were the Ijo groups of the Central Delta of the Niger. Here again, the dominant factor was the availability of suitable trees in the regions of the Upper Benin river. They used fire mainly in causing the wood to expand and thus opening out the canoe, into which thwarts were at once thrust. The Ijo craft varied in size from huge ones, used for war, capable of carrying over a hundred men to the tiny one-man canoes which were so light that they could easily be carried on the head.[4]

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1. Crowther and Taylor, Journal, p. 199.
2. Nadel, The Kede, p. 169.
3. Lander, Journal, II, 104.
4. Talbot, Southern Nigeria, p. 258.

Some Ijo canoe-builders, like the Kede, also migrated to other areas either in pursuit of suitable tree-trunks or in order to meet the demand of their clients. Their canoes were commonly used in their trade with Benin and with Lagos.[1] It is most likely that they migrated as far north as Abo on the Niger. They had a reputation for building large canoes. Lander referred to those he saw on the Lower Niger as "extremely large ... paddled by forty men".[2] They were the only canoe-builders who could build canoes of this size in the Niger Delta.[3] Their large canoes were also probably found at Abo.

Although the Landers noted that "The Eboe (Abo) people are also famous for making large canoes",[4] Alagoa's work, based on oral traditions, refutes Lander's assertion. According to him "no traditions have been found from Aboh or elsewhere to support these claims of the Landers".[5] But Alagoa did not suggest who the canoe-builders at Abo were. It is possible that they were the Ijo who had migrated there. Meek noted that the Kakanda canoes, north of Abo, were supplied by the people of the Niger Delta,[6] presumably the Ijo.

The other people who could have supplied Abo canoes were the Kede who once had a colony of canoe-builders at Onitsha.[7] The

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1. C. M. Gleaner, E. Roper, Vol. III, 1876, p. 23.
2. Lander, Journal, III, 209.
3. Alagoa, Long-Distance Trade, p. 325.
4. Lander, Journal, III, 205.
5. Alagoa, Long-Distance Trade, p. 325.
6. Meek, C., The Northern Tribes of Nigeria, London, 1925, p. 108.
7. Nadel, The Kede, p. 169.

canoes built at Onitsha were probably brought southwards to Abo in great numbers. But Abo did not just have canoes, it was a canoe-building centre,[1] So, if the Abo people built no canoes, some builders must have migrated there. As Abo was within the vicinity of the timber-rich regions of the Upper Benin River where the Ijo canoe-builders settled, the probability is that they were the canoe-builders of Abo.

Lander further noted that the canoes that were found in the rivers from Benin to Calabar were constructed at Abo.[2] It was the Ijo rather than the Kede who could supply the areas within their vicinity. Many Ijo canoe-builders could have migrated to villages in Abo, devoting their time to canoe-building and supplying local chiefs with enough canoes.[3] The Abo themselves hardly had time to devote to canoe-making. They mainly engaged in trading with the Igala in the north and Brass and Bonny in the south.[4] They were also active farmers, growing food crops such as yams, plantain, bananas, corn, and peppers.[5] If the Ijo were the canoe-builders in Abo and supplied the canoes that were being used in the rivers from Benin to Calabar, they must have been the greatest canoe-builders in the pre-colonial Nigeria. Their canoes were also employed on the lagoons from east to Lagos or even further west.[6] As mentioned earlier, they also supplied the Kakanda canoes.

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1. Lander, Journal, III, 205.
2. Ibid.
3. Allen and Thompson, Narrative, I, 236.
4. Ibid., 237.
5. Laird and Oldfield, Narrative, I, 379-380.
6. CMS Archive, Journal of Charles Phillips, CA2/078, 1878.

On a smaller scale, canoes were also built in the inland forests of the country. Almost every village on the banks of the Cross River and even on the banks of smaller rivers possessed some. These canoes were often seen in the bush awaiting transportation to the riverside.[1] On the back of the Benue, there was a great number of small villages which built canoes and which could supply as many as 400.[2]

The canoe-builders on the banks of the Benue included the Bula, the Jukun,[3] the Chamba[4] and the Wurubo.[5] Apart from Ijo canoes, canoes built by the Mahin also plied the lagoon from Itebu in the east to Lagos in the west.[6] On the lagoon was a small village, known as Okemoro, which was notable for canoe-building. In 1901, it was a small settlement of only three or four houses. But the few people who lived there devoted all their time to canoe-building.[7] The canoes that were used on the Ogun were probably made at Itori village, situated between Otta and Abeokuta.[8] But small canoes built on the Lagos beaches must have also been used on the lagoon and on the Ogun. Small canoe-building sites near the Oshun

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1. Partridge, Cross River, p. 178.
2. Hutchinson, River Binue, p. 294.
3. Ibid.
4. Bohannan and Bohannan, Tiv Economy, p. 5.
5. Ruxton, F. H., "Yola", The Geographical Journal, 21, 1, Jan. 1903, p. 382.
6. CMS Archive, Charles Phillips, CA2/078, 1878.
7. C.O. 879/58, Governor, Sir W. Mac Gregor to Mr. Chamberlain, Lagos, No. 190, July 12, 1901.
8. Smith, Canoes, p. 531, Fn. 36.

river in Yorubaland can still be seen today.[1]

Paddles and Poles

Paddles and poles, the "wheel" of the canoe were also constructed by canoe-builders. The paddles were made of hard wood, and might be from three to four feet long. They had a sharp, flat blade and a narrow, strong handle. But any strong long bamboo pole or central stems of palm leaves could serve as poles for punting.[2] Important as poles and paddles were to the manoeuvrability of canoes, it was possible for travellers to underrate them.

In 1830, Richard Lander's party were forced to realise the importance of paddles when they had none and found that no one was prepared to part with his. He noted:

> It is inconceivable what difficulties we had experienced in obtaining paddles for our canoe; nowhere have we found people willing to sell us any, and ... we could induce no one to spare us a paddle; they would not do it for the world.[3]

Lander's experience is suggestive of the significance of poles and paddles.

Thus, it can be said that canoe-building was a specialist work of a few people among those who lived near water routes. It involved a great investment of labour, time and expense. This investment involvement is an important topic that should be further

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1. Mr.Adenijiof Iwo and I visited one Mr. Joseph Ladela, c. 70, of Ile-Igbo, a canoe-builder. As there were no clients, he has given up the trade.

2. Elliot, Niger-Chad, p. 506.

3. Lander, Journal, III, p. 5.
Paddles were used in deep waters, while punting with poles was the method of propulsion in shallow waters.

inquired into. Any attempt to estimate the costs involved may end in gross under- or over-evaluation. This is because such an estimate involved various factors. The amount of labour and the time spent in building a canoe depended on the proximity of trees to be felled, the type of tools for construction, the size of the canoe and the adroitness of the builders.[1]

If the tree trunk was near enough, no time would be lost in starting construction and any amount of labour required would be easily obtained. But if no suitable tree was around, and builders had to move away from their home, labour might be difficult to recruit because it meant that normal work had to be stopped while builders were away. It would most likely take less time and require less labour if the canoe to be built was small and the tools were sharp and enough than when blunt tools had to be used or large canoes had to be built.[2]

As most of the builders were always specialists, it can be assumed that with time they were bound to become adepts in the construction. That would mean spending less time. It is important, however, to note that the pre-colonial economy was based on family, communal and slave labour. Labour could be easily recruited and the only cost of labour was mainly the cost of feeding the builders. The cost of feeding, itself, is difficult to assess since, to a large extent, food could be produced or procured in the areas of

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1. As social obligations and economic factors are almost inseparable in the indigenous economy, no clear cut cost-benefit analysis is possible.

2. According to Mr. Joseph Ladela (70) of Ile-Igbo in Western Nigeria, the building of a large canoe took many months. There were time-gaps between one stage of the construction and the next.

construction.[1]

Judging from the method of constructing canoes, and from their large sizes and great numbers, it would appear that it required proper organisation on the part of the builders and a measure of affluence on the part of the purchasers. The canoes were built mainly when traders, fishermen and other users requisitioned them. In that case, demand would always precede supply. But builders often got some ready in anticipation of demand. Canoes which were not claimed by those who requisitioned them could also be sold to others. While large-scale traders and rulers often ordered canoes individually because of their wealth and power, the small-scale traders could combine to order theirs.[2] Canoes were always in so much demand that only occasionally did travellers find them being exhibited for sale, or find unpurchased ones rotten.[3]

In areas where only small canoes were required for fishing or ferrying, the building was spasmodic. The canoe-builders in

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1. Dr. Jacob Eghrevba (70+) told me in an interview with him (25.11.71) at Benin that no one can say precisely the cost of producing a canoe. The canoe-builders also cultivated farms and paid nothing for their food. My informants at Sapele and Warri confirmed this statement.

2. Alhaj Musa, the Waziri of Bussa (80) gave me this information at New Bussa (10.12.71). I am grateful to the Emir of Borgu who introduced me to informants at New Bussa, Wawa and Kiama.

3. Information collected from Mr. Ladela and others at Ile-Igbo, from Dr. Jacob Eghrevba at Benin and from Mr. M.S.A. Odoma of Idah. Also Partridge, Cross River, p. 182.

places as in many parts of Yorubaland were wood-carvers who were also responsible for making household utensils such as mortars and pestles for pounding food stuffs. Canoes for ferrying were built only when the rules ordered one. In this case, the specialists only organised it, the bulk of labour was communal - as organised by the ruler. Such canoes were owned and controlled by the state.[1]

In some other cases, the people of a small village could combine to build canoes, and the canoe was the general property of the builders.[2] In Idah, the Aboko and Agaidoko trading families built their own canoes. But they also bought from the Ibaji who were the professional builders.[3] In Nupe, sometimes the canoes were owned by several persons, some by rulers and influential persons and others by traders who hired them out.[4] Combined building of canoes sometimes came to a fiasco owing to disagreement among the owners. According to a traveller, "sometimes you meet with canoes far away in the bush, dug out long ago, but, for some reason, deserted and left to decay in the place where the tree was felled".[5]

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1. Oral evidence at Owo-eruko village, near Iwo.
2. Ibid.
3. Information from Mr. M. S. A. Odoma of Idah.
4. S. Crowther, C. M. Gleaner, Dec. 1858, p. 138.
5. Partridge, Cross River, p. 182.

Propulsion

Most of the canoes, whether owned jointly or by individuals, were moved about mainly for transportation of people and cargo. They were propelled either by paddles or by punting in shallow waters. A large canoe had a steersman who, standing on the platform at the stern, worked his longer paddle by resting it against the side of the platform.[1] In small, narrow canoes, two or three paddlers could sit, bringing their arms over from side to side according to the required course. The mode of paddling or punting was almost identical in rivers and on the lagoon. Variations were determined mainly by the size of the canoe and the level of water.[2]

The large number of paddlers in large canoes, their dexterity in handling the canoes and their diligence at paddling made a remarkable impression on the minds of the nineteenth-century travellers. When Richard Lander and his master, Clapperton, were penetrating the country from Badagry they observed that the paddlers, about thirteen of them, were "well skilled in the art of rowing".[3] The head rower started navigation by first invoking the spirit of waters, to quell the rage of the sea, praying in a low mornful tone. By that, he inspired the other paddlers with fresh energy. They dashed their paddles into the water and propelled their canoes "with the swiftness of lightning".[4]

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1. Crowther and Taylor, Journals, p. 199.
2. Ibid. pp. 199-200, 328-395.
3. Lander, Record, I, 42-3.
4. Ibid.

Lander also saw punting in 1830. He noted that Adele's canoe at Badagry which was forty feet in length "was propelled through the water by poles instead of paddles",[1] and instead of moving "with the swiftness of lightning" it "moved slowly and silently".[2] While on the Niger, in 1832, Laird wondered how canoes were able to "live in a surf that would have swamped any European boat."[3] The strength of the dugout was partly accountable. But "perhaps the number of paddles which they have, and the dexterous manner of using them, may in some measure account for it", according to Laird.[4] The ordinary small-size fishing canoes in the Lagos lagoon were propelled by three men, one of whom often occupied the stern, propelling and steering. But his main duty was the latter. According to Moloney, "in their management of the craft they are surprisingly clever".[5]

When many were engaged in paddling, it was usual for them to keep in time in order to ensure a maximum speed. Time was sometimes kept with a sort of shouting,[6] or a peculiar hissing noise[7] at regular intervals. Time was also kept by singing. This appeared to be the commonest habit.[8] A large canoe carried in it a drummer and musical instruments.

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1. Lander, Journal, I, p. 56.
2. Ibid., Also Clapperton, Expedition, p. 7.
3. Laird and Oldfield, Narrative, I, p. 63.
4. Ibid.
5. Moloney, Notes on Yoruba, p. 608.
6. Waddell, Twenty-nine years, p. 242.
7. Lander, Journal, III, 71.
8. Laird and Oldfield, Narrative, I, p. 175; Partridge, Cross River, p. 180.

Apart from keeping time with the music, the passengers were entertained and relieved of boredom. This was often a welcome relief because sitting all day in a narrow dugout could be very wearisome indeed. But more importantly, the music invigorated paddlers to move fast and to paddle for a long time without stopping. King Boy, a Bonny trader on the Niger, was once seen encouraging his paddlers by raising songs which the paddlers chanted. That urged the paddlers to apply their full strength and propel with great velocity.[1]

The incredible energy which an entertainment gave paddlers so much impressed Macgregor Laird when he was on the Niger in 1833 that he noted, "In paddling their canoes, the natives have a pleasing custom of singing ... The distance which they get over in these large canoes is astonishing: they think nothing of paddling for twenty-four hours without ceasing, except to have refreshment for a very little while ..."[2]. The speed with which the canoes moved and the ease with which the paddlers turned surprised Baikie in 1854.[3]

It is notable that, besides men, women and even children also paddled. Canoe propulsion began at a very early age so that by the time most of the riverain people grew up they were already adepts in canoeing. Amidst snags and rocks, paddling was skilfully done to the admiration of travellers.[4] Oldfield's remark of Abo people, in 1833, exemplifies this. "The natives of Eboe (Abo) are the most expert people with the paddles, and in the general management of their

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1. Laird and Oldfield, Narrative, II, p. 321.
2. Ibid., I, p. 175.
3. Baikie, Narratives, p. 299.
4. Elliot, Niger-Chad, p. 507.

canoes, that I have yet met with: boys not more than four or five years of age are to be seen pulling with the greatest dexterity".[1]

Many traders often employed little boys to paddle their canoes, presumably because they could be easily controlled. Women also paddled their own small canoes; and on many occasions the crew of a canoe was composed of both sexes, even of girls not more than twelve years old.[2] Neither were women paddlers inferior to their male counterparts. In 1841, Crowther was amused to see "men in their canoes, and women in theirs, each contending who should out-paddle the other: for women, sometimes, are not inferior in the management of their canoes".[3] In 1833, Oldfield also observed a great number of females paddling their canoes with great dexterity.[4] The involvement of both sexes - young and old - in canoe transport is indicative of its intensive use.

The paddlers were so expert that few accidents occurred,[5] despite the multifarious obstructions on waterways. Paddling had become part and parcel of many riverain peoples' life, so that even when the canoe was manoeuvred with little care, and when an accident was envisaged, nothing happened. In 1854, Baikie was surprised that no accident happened when he saw three or four canoes hurrying towards a common point. "Every second the concerned spectator expects to hear the crash of a collision, and to see the occupants struggling

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1. Laird and Oldfield, Narrative, II, p. 381.
2. Schon and Crowther, Journal, pp. 280-1.
3. Ibid.Also Lander, Journal, II, 22.
4. Laird and Oldfield, Narrative, II, 375.
5. Basden, Among the Ibos, p. 25.

in the tide; but no - just as destruction, to the eye of a stranger, seems inevitable, with a dexterous movement of the foot and a smart stroke of the paddle the catastrophe is avoided".[1]

There were occasional accidents. For example, canoes sometimes capsized on the Calabar river.[2] In April 1785, Antera Duke of Calabar recorded a canoe accident in his diary. His trading canoe capsized and everything, including the canoe itself, was lost.[3] David Hinderer also recorded an accident on the Ogun in 1855. The canoe went to pieces but no life was lost.[4]

In order to avoid accidents canoemen could avoid night paddling. When night approached and the journey had not been completed, the canoe was moored to trees along the river banks. Canoes going on the Ogun between Lagos and Abeokuta often passed the night at small villages on the back of the river.[5] Another missionary, Clarke, referred to restless nights he spent on the banks of the Ogun while travelling on it from Abeokuta to Lagos.[6]

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1. Baikie, Narratives, p. 229.
2. Forde, Darryll, (ed), "Efik Traders of Old Calabar", OUP., London, 1956, p. 70.
3. Forde, Efik Traders, p. 30, Antera Duke's Diary, Entry for 11.4.1875.
4. CMS Archive, Journal of Hinderer, CA2/049, March 19, 1855.
5. CMS Archive, Hinderer, CA2/049, Dec. 5, 1855.
6. Clarke, Travels, pp. 19-20.

But when the canoemen were quite sure of their route and could easily avoid snags and rocks they travelled all night. For example, Basden's canoeman continued his journey on the Niger even when it got dark. The canoeman "carefully raised himself with a foot on either side of the canoe. In this position he paddled with long sweeping strokes. He maintained this attitude for some four hours...".[1]

Speed

With their expert paddling, it is of considerable interest to know what their speed per hour or per day was. As with other forms of transport, speed is a crucial factor to consider in water transport. Some factors which limited canoe speed have been mentioned in the last chapter, when considering human and physical obstructions to water transport. Among the obstacles created by man to limit the speed of a canoe are the collection of tolls and such interruptions as piracy, warfare and political dissension which often limited the extent of navigation. But these limitations were variable and the extent to which they delayed canoeing depended on the degree of their intensity and extensiveness.

A more permanent impediment to speed was the effect of the sharp distinction between the wet and the dry seasons.

Canoes' speed could also be affected by the use of sails, the direction of travelling (up or down the river), the build of the canoe and physical conditions.

Whereas speed of porters and pack animals, in general, fell below the average in the wet season, the speed of the canoe often

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1. Basden, Among Ibos, p. 24.

increased during that season, with some exceptions. Although the level of water might fluctuate even in the wet season, there was usually sufficient water to move canoes about. But in the dry season when all various forms of snags were conspicuous, the canoe had to be carried over them. In the same way it had to be carried when, owing to low water, it ran aground.[1] A place that would take one day to reach when the river was full of water might take two or three days in the dry season when the river was low.

As has been noted, one thing that helped paddlers increase their speed was the hissing noise or singing that was used to keep time of paddling strokes and to stimulate the paddlers to work hard. Sails were also used on many water routes to ensure good speed and relieve the paddlers while going downstream. Sails were used on broad rivers and on lagoons.[2] They were generally triangular, but larger quadrangular ones were often employed in the estuaries off the coast. Small sails were sometimes composed of sleeping mats sewn together.[3] On the lagoon, the Yoruba used woven palm branches held upright and turned as the occasion demanded.[4]

The canoes plying between Badagry and Lagos and eastwards towards the Niger Delta used square sails. While going downstream the paddlers relied on the sail to push the canoe while they sat resting.[5]

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1. Burton, Abeokuta, Vol. I, p. 58.
2. Whitford, Trading Life, p. 105.
3. Talbot, Southern Nigeria, p. 931.
4. Ojo, Culture, pp. 59-60.
5. C. M. Gleaner, E. Roper, Vol. III, 1876, p. 24.

In about 1865, John Whitford also noted that on the lagoon, square sails were spread. According to him "The sails are made of strong cotton cloth, woven in the interior, coloured blue or white or striped; sometimes they spread butterfly sails, after the manner of Queen Elizabeth's invention of studding sails and they then go along rapidly".[1] Although the canoemen in Fernando Po were not very expert in the management of their canoes, they were advanced enough to make use of a mast and sail. Their sail was constructed of grass fibre,[2] probably woven into mats.[3]

When reliance was only on paddling, the direction in which a canoe was being paddled could affect the speed. The speed was usually higher while a canoe was descending a river, even without sails, than when it ascended it. In 1859, Crowther noted that the Nupe canoemen, on descending the Niger, sat comfortably and left the canoe to drift in the current, because they considered it useless to exert themselves while the current did the work for them.[4] Usually the speed of a canoe descending a river was greater than the general velocity of the river. On entering the Niger at Yawuri, the Lander Brothers found it to be running from two to three miles an hour, but the current carried them southwards very rapidly at a speed of three or four miles an hour.[5] While on the Benue in 1833, Oldfield's canoe moved at a rate of four knots, whereas the current was at only two

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1. Whitford, Trading Life, p. 105.
2. Allen and Thompson, Narratives, II, 207-8.
3. Lander, Journal, III, 299.
4. Crowther and Taylor, Journals, p. 200.
5. Lander, Journal, III, 8.

and a half knots. When they were on the Niger, the current was about three and a half knots; and that enabled the canoemen to propel it with great velocity.[1] With a judicious use of the current the speed of a canoe could be greater than that of a man walking.

Conversely, when ascending a river, propulsion was a difficult and slow job. A journey that took two days or so while descending often took up to five days while ascending.[2] It was estimated, for example, that to descend the Ogun from Abeokuta to Lagos (a distance of about ninety miles) might take 27 or 28 hours, an average speed of 3.3 m.p.h. But to ascend it might take up to 45 hours, or an average speed of 2 m.p.h.

Even the European steamers were susceptible to this problem. A large steamer would spend only two days descending the Niger from Lokoja to Burutu, a distance of about 330 miles. But it could take up to ten days going up the river to cover the same distance.[4] When Ashcroft, a missionary, was on the Benue in 1879, he was told that Kebi, a village on the river, was three and a half days, going up the river. But it took them only two and a half days to reach the same destination by land.[5] In such a case travellers

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1. Laird and Oldfield, Narratives, II, 143.

2. Alhaj Musa, the Waziri of Borgu (80) informed me that Bussa to Jebba down the Niger took two days, but five days while ascending on return. Also Mr. M.S.A. Odoma of Idah said it took the Idah five days to ascend the Niger to Lokoja but only two days to descend it.

3. Burton, Abbeokuta, p. 52, Darwin, Lagos, p. 15.

4. Tremearne, The Tail Head-Hunters, p. 24.

5. CMS Archive, Ashcroft, CA3/05/33, Sept. 1879.

and traders often chose the land route, sending their heavier load by water.

The weight of load that a canoe carried could affect its speed. Most canoes were loaded to a vanishing point, leaving just a few inches of the gunwale above the water level. Such a canoe would move fast in deep waters but might have to be dragged by punting in shallow waters.

Differences in the construction of the canoes probably made by the Ijo and used by the Kakanda and those made and used by the Nupe explain a variation in their respective speed.[1] Those used by the Kakanda seem to have been designed for speed. They were round bottomed with pointed ends, shorter and wider and because of their shape were more easily propelled by poles or paddles than the Nupe type.

Although those built by the Nupe were, like those used by the Kakanda, dugouts, boarded up on the sides to the requisite height, they have been designed more for carriage of heavy and bulky goods than for speed. They had flat rather than round bottoms and were sharply squared off in front and behind instead of being pointed. But they were more stable. Centre-poles and cross-bars were not built into them in order to make it possible to carry and accommodate traders and trade commodities, including livestock. Furthermore, a large and roomy Nupe canoe could be made into quite a comfortable houseboat for long-distance river journeys.[2] The price of its capacity to haul so much at a time was its slow speed.

The physical conditions of a waterway could also limit a canoe's speed. Quite apart from fluctuations in water level,

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1. Falconer, Through Nigeria, p. 112.

2. Ibid.

there could be sandbars, snags and rocks which might not totally impede navigation but which might slow it down. Within a short distance of ninety miles or even sixty miles, remarkable variations in the average speed could be experienced.

This is well exemplified by a canoe journey from Kuramo (identified as Lagos) to Makun, eastwards, as described by Osifekunde, a nineteenth-century Ijebu travelling merchant.[1] From his narration Robert Smith derives the following:[2]

Kuramo (Lagos)	to Ikorodu	(11 miles),	10 hr. (1.1 m.p.h.)
Ikorodu	to Ikosi	(24 miles),	7 hr. (3.4 m.p.h.)
Ikosi	to Epe	(20 miles),	9 hr. (2.2 m.p.h.)
Epe	to Makun	(34 miles),	11 hr. (3 m.p.h.)

As can be seen, the average speed ranged between 1.1 m.p.h. to 3.4 m.p.h. The slow speed between Lagos and Ikorodu is probably due to "the strong currents caused by the out-flows of the Ogun and other rivers into the lagoon".[3] Paddling for ten hours to cover only eleven miles, at an average speed of 1.1 m.p.h. must have been a herculean task for the canoemen. The slow speed here brought down the average speed for the whole journey to 2.4 m.p.h.

Similar fluctuation in speed can be seen in the short distance of sixty-four miles that Burton, another nineteenth-century observer, travelled on the Ogun from Lagos to Takpana, a village on the Ogun, about fifteen miles from Abeokuta.[4] From the account of his journey the following has been derived:

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1. Curtin, (ed), Africa Remembered, p. 239.
2. Smith, Canoe, p. 523.
3. Ibid.
4. Burton, Abbeokuta, I, 59.

	Lagos to the Agboi Creek	(8 miles), 2 hr. (4 m.p.h.)
	Agboi Creek to R. Ogun	(7 miles), 3 hr. (2 m.p.h.)
	R. Ogun (Confluence) to Igaon	(9 miles), 3 hr. 15 min. (3 m.p.h.)
	Igaon to Mabban	(18 miles), 6 hr. (3 m.p.h.)
	Mabban to Takpana	(22 miles), 8 hr. (2.8 m.p.h.)
i.e.	Lagos to Takpana	(64 miles), 22 hr. 40 min. (2.8 m.p.h.)

Here again, as can be seen, the outflows of the Ogun and other rivers into the lagoon caused such a violent current that it slowed down Burton's speed to 2 m.p.h., falling below the average speed of 2.8 m.p.h. It is interesting to compare Burton's average speed of 2.8 m.p.h. with Osifekunde's account which gives an average speed of 2.4 m.p.h. on the lagoon. Burton's speed would probably have been greater if he had been descending the Ogun instead of ascending it.

A strong current could even hold up canoe movement for days. In the wet season when water levels were always high, navigation was dangerous because of swift currents in many water routes.[1] For example, in 1907, when a traveller was on the Gongola river, there occurred "such a strong current in the river that it was impossible to get along by means of poles".[2] In 1854, Baikie also recorded that the Benue "continued to rise upwards of four knots, causing canoes to upset".[3] With currents were always violent storms, and these could be disastrous to canoe travelling. When a storm occurred on the Gongola river in 1907, one canoe with forty loads was sunk in water six feet deep.[4]

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1. Margery and Bull, Lugard, p. 37.
2. Alexander, Niger to Nile, p. 153.
3. Baikie, Narrative, p. 149.
4. Alexander, Niger to Nile, p. 153.

A favourable wind could ease the work of a canoeman while an unfavourable one could slow him down or even detain him for hours. This was exactly what a missionary experienced on the lagoon from Badagry to Lagos in 1865. According to him they "sailed on very smoothly till the day break the next morning, when suddenly the north-east wind turned round and flew furiously from the south-west".[1] They realized the danger they were in and had to push the canoe to the side until the winds subsided. A strong current was also dangerous to a canoeman while going up stream. Whenever the current was strong during the wet season, it could take a canoe about a week to go up the Ogun to Abeokuta but only twenty-four hours going down to Lagos.

In the dry season, however, a canoe could take three days over the return journey.[2] Although these situations were occasional, they could delay a canoe journey for days. Low water level could always lead to portages for a considerable length of a journey. Therefore, in their different ways, both the wet and dry seasons could reduce the speed of a canoe.

As noted above, in Osifekunde's account, the average speed was 2.4 m.p.h., but it was 2.8 m.p.h. in Burton's. An explorer, Gallwey, who had the reputation of being the first European to travel in a canoe from the Benin river to Lagos, covered the 170 miles in five days, paddling only during the day, between 5 a.m. and 9 p.m.[3]

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1. CMS Archive, Journal of Joseph Smith, CA2/083, June 15th, 1865.
2. CMS Archive, Journal of H. Townsend, CA2/085, 1852.
3. Gallwey, H.A., "Exploration on the Oil Rivers", PRGS, XIV, 1892, p. 124.

That gave an average speed of 34 miles per day. As he travelled 16 hours a day, his average speed per hour was about 2.1 m.p.h.

Although these journeys took place in the nineteenth century, they do not necessarily stand typical of all the journeys even in that century - because various problems faced canoemen on particular water routes at particular times. Apart from external factors that were beyond the control of canoemen, there were differences in the prowess, skill and diligence of canoemen. These alone were sufficient to cause variations in speed. Whereas Gallwey's travelling day was a long one of sixteen hours,[1] Burton's day was only eight hours.[2] These two examples are particularly interesting because both of them were foreigners who employed canoemen. Yet one's travelling day was about twice that of the other. This shows the unreliability of a traveller's number of days of travelling.

Canoemen who spent only a few hours a day could travel for many days consecutively in a week or a month. Whereas it was only a target-traveller such as Gallwey, who only wanted to accomplish a feat within the shortest possible time, who could spend as much as two-thirds of a day paddling. Such long hours of paddling had the effect of reducing the average miles per hour. Whereas Gallwey's average speed was about 2.1 m.p.h., that of Burton, whose hours of travelling was half of Gallwey's was 2.8 m.p.h.

A traveller could spend many hours of a day travelling if his canoe was well manipulated, and if it was going downstream with a favourable current. In 1833, Oldfield accomplished 33 miles in a day, going at an average speed of four miles per hour, and doing eight hours travelling.[3] Richard Lander recorded that his canoe

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1. Gallwey, H. A., "Exploration on the Oil Rivers", PRGS, XIV, 1892, p. 124.
2. Burton, Abeokuta, p.52.
3. Laird and Oldfield, Narrative, II, 143.

covered a hundred miles within a day.[1] This is a possibility since he was going downstream and since he could easily replace his paddlers when some were tired.

Smith's assertion that "Es-Sadi's claim to have navigated 300 miles in 5 days on the Niger is perhaps exaggerated"[2] is unwarranted. Es-Sadi's speed was on an average of 60 miles a day. A well-covered and well-provisioned canoe could spend twenty hours a day travelling, particularly if it was going downstream and if he had favourable winds. There was not much to delay it since it needed no fueling. Travelling 60 miles in a day of 20 hours would give an average speed per hour of three miles. If he spent 16 hours a day, like Gallwey, his speed would still be a reasonable one of 3.75 m.p.h. After all, John Adams recorded that the canoe which carried him from New Town to Warri "proceeded at about the rate of four miles an hour".[3] But the average speed could be lower for going upstream or even for normal travelling.

If the experience of Osifekunde (2.4 m.p.h.) and of Burton (2.8 m.p.h.) are taken as a basis of reckoning, the average speed would be about 2.6 m.p.h. It is more difficult to reckon how many hours a canoeman worked per day. Sixteen or even twenty hours a day was possible only for special or occasional trips, it seems abnormal for regular canoe transport. Burton, who spent 8 hours a day, did about 2.8 m.p.h. or 22.4 miles a day.

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1. Lander, Journal, III, 14.
2. Smith, Canoes, p. 519.
3. John Adams, Remark, p. 120.

Elsewhere Burton recorded that going up the Ogun, a distance of about 90 miles, took him 36 hours including a rest of 9 hours.[1] Reckoning at 36 hours gives an average speed of 2.5 m.p.h. or of 3.3 m.p.h. at 27 hours a day. Oldfield who also spent about 8 hours a day actually did 33 miles a day, while ascending the Niger.[2] Another traveller, Alexander, recorded a total journey of 8 hours a day.[3]

Some other travellers recorded more hours per day. In 1858, Crowther noted that the canoemen going from Onitsha northwards to Idah paddled from six in the morning to six in the afternoon, even when going upstream. According to him "no regular time was allowed for taking meals ... they worked at the paddles from morning till late in the evening, when they got into a halting-place".[4] When some paddlers took a rest and ate, others could carry on paddling. Thus they could put in 12 hours or, at least, 10 hours in a day. It is reasonable, therefore, to reckon a trader's speed at about 25 miles per day, at an average speed of 2.5 m.p.h. for 10 hours.

Going up a river might even be slower than that. Baikie recorded, in 1854, that "a day's journey up the river (Benue) seldom exceeds from twelve to fifteen miles".[5] Four years later, Crowther noted that Nupe canoes, which were designed more for haulage than for speed, managed "to go thirteen or fifteen miles a day in their ascent, when the current (was) very strong".[6] In 1907, Alexander, who travelled up the Benue, noted that his party made

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1. Burton, Abbeokuta, p. 52.
2. Laird and Oldfield, II, 143.
3. Alexander, Niger to Nile, p. 153.
4. Crowther and Taylor, Journal, p. 395.
5. Baikie, Narrative, p. 148.
6. Crowther and Taylor, Journal, p. 199.

an average speed of about fifteen miles a day.[1] It is not known how many hours were allotted a day. But if Burton who went up the Ogun was able to do 2.8 m.p.h. for 8 hours a day, a trader would not do much less than his 22.8 miles a day. Part of the time that traders lost in going upstream could be regained in going downstream. The average speed of a canoe would not be less than twenty miles a day, travelling almost every day of the week.

Compared with the porter and the pack animal, each of which could do fifteen to twenty miles a day, a canoe was no better if it was no worse, regarding a day's journey. But it has to be realized that a porter or pack animal being living beings could easily become tired, could be sick or could even die. A canoe, on the other hand, could be used every day of the week by anyone. It could neither conspire nor rebel like a porter, nor be troublesome nor tricky like a pack animal. Such factors as feeding or resting that often delayed porters and pack animals needed not delay a canoe.

Its services were undisturbed as long as it remained unbroken and as long as there were paddlers to manipulate it. Although the paddlers, like porters, were human beings, anyone, even children, could operate a canoe carrying a load of up to a ton or more. Canoes were therefore more suitable for long-distance journeys. Viewed on a long term a canoe would cover an average of more miles per week or per year.

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1. Alexander, Niger to Nile, p. 22.

By its construction - burning its inside with fire and using dry grass as fuel - the dugout was prevented from being easily eaten up by insects, from rotting or decomposing or becoming water-logged. It was often strong enough to break through violent waters. Some were even specially built to provide some comfort for the users while on a long journey. In such canoes, 'houses' in the form of sheds were constructed to provide shelter from the rays of the sun or from downpours of rain. These canoes also allowed sufficient room for cooking, for keeping household utensils and even for sleeping; they also carried an enormous amount of goods.

Richard Lander's description of those he saw on the Niger in 1830 shows how impressive they were. In many of the canoes,

> "sheds, or houses as they are called, have been erected, which are thatched with straw, and in which fires are kindled, food prepared, and people sleep, and indeed live together. The roof is circular, and formed in much the same manner as the upper part of a covered waggon in England, as with their assistance merchants are enabled to travel with some degree of comfort, with their wives and household, several days' journey up and down the Niger, without being under the necessity of landing, except to purchase provisions, or whenever they feel inclined to do so".[1]

In 1876, Roper, a missionary, also found, to a lesser extent, such a canoe on the Ogun. He noted that the roofs of the canoes were made of mats tied to a frame that was made in the shape of a triangle.[2]

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1. Lander, Journal, II, 261.

2. C. M. Gleaner, Vol.III, 1876, p.23.

The most important factor that made canoes adequate for long-distance journeys was their high carrying capacity. How much a large canoe was capable of carrying can be gleaned from sources. A war canoe on the rivers Bonny and Calabar carried eighteen or twenty paddlers and seventy to eighty warriors. In addition, it carried enough provisions for their subsistence.[1] Those propelled by more than twenty men could be even bigger with higher carrying capacity.[2] At Eggan, Lander was impressed by the "immense number of large, bulky canoes" which he saw.[3]

On the Lower Niger, the Brassmen's canoe in which Lander's party literally lived for a while was "extremely large and heavily laden ... paddled by forty men and boys", and carrying more than twenty persons. It was also furnished with a cannon, a vast number of cutlasses, a quantity of grape shot, powder, flints, a number of boxes which were filled with liquors, cotton, silk goods, earthenware and many other articles of European manufacture. Besides, there was abundance of provisions for immediate consumption for at least the sixty inmates of the canoe. In addition to all that, the dugout still carried two thousand yams.[4] This dugout, measuring about fifty feet in length, must be categorized as a large one, capable of carrying fifteen to twenty tons of cargo.[5]

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1. Barbot, Description, p. 266.
2. Lander, Journal, II, p. 275.
3. Ibid., III, 29.
4. Ibid., III, 209-210.
5. Walker, Traffic, p. 56.

But apart from this impressionistic assessment, the carrying capacity of a canoe could be determined by the number of puncheons of palm oil it could carry at a time. According to Walker, a puncheon weighed 1,400 lb., nearly two-thirds of a ton.[1] The canoes were, in general, in five categories. The large ones measured 50 to 60 ft. in length by 7 or 9 beam and 3 ft. in depth from gunwale to the bottom of the boat. They could carry 20 to 30 puncheons or 15 to 20 tons, reckoning at 1½ puncheons to the ton. Those of medium size were about 30 to 40 ft. long, 5 to 7 ft. beam and 2 to 3 ft. deep and had a capacity of 10 to 20 puncheons or 7 to 14 tons. Even the small ones were about 30 ft. long by 4 ft. beam and under 2 ft. deep. Such canoes would carry 2 to 10 puncheons, that is, one to seven tons.[2]

There were, of course, numerous smaller canoes which could accommodate no more than half a ton to a ton of load. There were also many others which were so small that they could not carry more than one person weighing a few stones. Yet, even these small ones could carry a surprising amount, as they were often laden to vanishing point.

Uses

Apart from being laden with trade goods, canoes were immensely useful for other purposes. Their use was not confined to economic pursuits alone; they also played enormous roles in political and, especially, military activities in precolonial Nigeria.

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1. Walker, Traffic, p. 56.
2. Ibid.

As this aspect of the role of the canoe has been well examined by Robert Smith, it is unnecessary to go into it here.[1]

What has been less investigated is the use of the canoe for economic purposes. Of about twelve pages that Smith devoted to discussing the use of the canoe, only two were related to economic purposes in West Africa. But his detailed examination of "the canoe in war" throws light on two points.

First, as mentioned earlier, it shows the extent to which water routes were disturbed and how a war interrupted economic pursuits. Little or no economic activity went on when a route was bombarded, since unlike land routes, alternative water routes leading to the same destinations were rare. Furthermore, whenever a canoe was being employed for military purposes, it could not, at the same time, be used for economic purposes.

Secondly, the great number of canoes that were used for transporting troops and weapons were surely not left idle in peace time. They were actively employed for economic activities.[2]

Such economic activities included using canoes for fishing and transportation - both as a ferry and as a means of communication. It would appear that the canoes that were employed for fishing[3] and ferrying[4] were smaller than those for trading and warfare. In both the Niger Delta and in Nupe territory most fishing canoes were so small that they contained only one person each.[5]

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1. Smith, Canoe, pp. 521-532.
2. Allen and Thompson, Narratives, I, 236.
3. See Chp. 2: - production.
4. See Chp. 3: - Land Routes.
5. Crowther and Taylor, Journal, pp. 31-3; 188-9.

The Ijo, Kede and Buduma canoe-makers built quite a great number of small canoes which were used mainly for fishing. Members of the 1841 expedition saw such small canoes at Abo, on the Niger. According to one of them, "some are so very small that it is surprising how they contrive to make use of them. They have, in fact, no room for the legs, which are extended right and left over the gunwale, and serve to keep the balance."[1] Samuel Crowther also noted that the Bataci employed their time mostly in "fishing in their small canoes ... and ferrying farmers, passengers, and petty traders to the other side of the river".[2]

For trading, however, large canoes were often employed especially by the large-scale traders.[3] One important factor that proves the antiquity of river trade in Nigeria is the use of the dugout canoe. As mentioned earlier, the origin of the dugout in Africa, including modern Niger, was independent. For example, it helps to indicate the high antiquity of trade on the Niger. It must have been used for centuries before Ibn Battuta saw it on the Niger in the mid-fourteenth century.[4]

Canoes must also have long been used on the water routes that the Portuguese steamers used to reach Gwato where they established their trade in 1486.[5] Before this time, Benin was

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1. Allen and Thompson, Narrative, I, pp. 245-6.
2. Crowther and Taylor, Journal, p. 198.
3. Ibid., p. 199.
4. Ibn Battuta, Travels, p. 333.
5. Fage, History, pp. 60-61.

"already a considerable kingdom". Its power "was effective in the west to, at least, as far as the fishing and trading settlement at Lagos, while in the east Benin influence extended to the Niger."[1] Without efficient water transport, which was, undoubtedly, by canoes, Benin should have been unable to control the lagoon westwards to the fishing and trading settlement at Lagos. More convincingly, Fage has argued that there had been an established trade between the Benin region and the Gold Coast.[2]

Canoes were the only means of carrying on such trade. After all, "canoes can travel from beyond the Dahomey frontier to the south-east of Nigeria without entering the open ocean ...".[3] Smith also noted that "on the lagoons behind the coast, stretching for some 500 miles from the Volta estuary to the Niger Delta, there are indications that a genuine naval warfare was conducted, in which the crews of opposing canoes engaged in battles on the water ..."[4] There is no doubt that the canoes must have been employed in Benin Gold Coast trade in the 1470s or earlier.

Prominent among the exports from Benin was Akori beads.[5] David Northrup noted that "one of the places where Benin traded for these beads in the early sixteenth century was 'Gaboe', which was eight days by canoe from Benin city".[6] He identified Gaboe with

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1. Fage, History, p. 98.
2. Fage, Some Remarks, p. 344.
3. Buchanan and Pugh, Land and People, p. 221.
4. Smith, Canoes, p. 530.
5. Fage, Some Remarks, p. 344.
6. David Northrup, "The Growth of Trade Among the Igbo Before 1800", JAH, XIII, 2, 1972, p. 221.

Aboh (or Abo) on the Niger.[1] If this is accepted, either the Benin people went overland to Asaba and then southwards to Abo using their canoes, or they went southwards to the Niger Delta and then northwards on the Niger, also using their canoes to reach Abo. It is likely that the canoe was employed either by the Benin people or the Abo for this trade.

Well before the advent of Europeans on the Niger Delta, states had been well established.[2] These riverain people were dependent on canoes for almost every part of their lives. For moving about within their immediate vicinity, their canoes were indispensable. The use of canoes for ferrying, fishing and trading purposes must have been as old as the states. As Alagoa has succintly put it, "the new overseas trade was grafted on to an earlier system of long-distance trade within the Niger Delta."[3]

Since most parts of these coastal areas were unsuitable for cultivation of agricultural products, they relied, from the early times, on long-distance trade for their food. They devoted most of their time to production of salt and dried fish which were in good demand in the neighbouring hinterland.[4]

This shortage of farm crops on the coastal states and of salt in the hinterland reflects a geographical necessity which explains the antiquity of trade on the rivers which run from the hinterland to the coastal areas. The trade on the Niger, for example, must have been of a high antiquity. From the areas of the

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1. Northrup, Growth of Trade, pp. 220-1.
2. Alagoa, Long-distance Trade, pp. 319-321.
3. Ibid., p. 319.
4. Ibid., pp. 325-6.

Niger Delta, large canoes carried marine products up the Niger "to the Ibo kingdom of Aboh, to Onitsha, and even beyond, to the Igala kingdom of Idah".[1]

By the time that the Europeans reached the coastal areas, the trade on the Niger had developed to such a large scale that very large canoes were being employed. Pacheco's evidence testifies to this.[2] Canoes that were large enough to hold about eighty men arrived at the coast, carrying yams and livestock, such as cows, goats and sheep.[3] The delta people exchanged salt mainly for the hinterland products.

Pacheco's mention of yams from the interior is significant. Several varieties of yams are indigenous to West Africa, dating from pre-iron age times.[4] As mentioned above, Murdock and Wrigley have argued for a high antiquity of agriculture in West Africa.[5] It is possible that yams had been produced and transported to coastal areas by canoe as early as around 4500 B.C., when agriculture probably developed in West Africa.[6]

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1. Alagoa, Long-distance Trade, pp. 325-6.
2. Pereira, Esmeraldo, p. 132.
3. Ibid.
4. D. G. Coursey, "Yams", London, 1967, p. 8.
5. Murdock, Africa, p. 64; Wrigley, "Speculations", p. 62.
6. Murdock, Africa, p. 64.

It was possible for the cultivators of yams to have used "stone-weighed digging-sticks" which even a nineteenth-century community probably used.[1] Yams, being a crop of antiquity, and a nourishing and stable food, must have been carried in canoes from the hinterland to the coast from time immemorial.

Pacheco's account also points to the use of canoes for carrying slaves.[2] This trade was also a matter of antiquity. Domestic slavery was an old institution in many parts of the country. Because they constituted a strong labour force, they must have been moved from one area of production to another, for a long time. In 1833, at Abo, Laird saw a lady who told him that she had more than two hundred slaves whom she employed in collecting palm oil, cultivating yams and in trading, using her numerous canoes.[3]

Salt was also a trade product of high antiquity. It was the major product that was acceptable to the food producers of the hinterland. Apart from being a trade product, it was also locally consumed. It had been produced for centuries before the advent of European traders on the coast.[4]

In the same way that the delta people relied on canoes for the supply of their needs, such a place as Lagos also relied on them for its food products. Lagos island with a little

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1. Wrigley, Speculations, p. 64.
2. Pereira, Esmeraldo, p. 132.
3. Laird and Oldfield, I, 100.
4. G. I. Jones, "The Trading States of Oil Rivers , London, 1963, p. 35.

agricultural land solely "depended for its very life on its fleets and its water-borne warriors".[1] Thus it would appear that the first use into which canoes were put was for carriage of food products directly from producers to consumers.[2]

With the arrival of European merchants on the coast, the use of canoes was intensified. From the sixteenth to the nineteenth centuries, canoes carried many slaves, palm oil and food crops for feeding the slaves from the interior to the Europeans. In the eighteenth century, Antera Duke of Calabar recorded the carriage of slaves, yams and palm oil on the Cross river. One of his records reads thus: "I went down to put yams in my canoe. We went down in three big canoes with 32 slaves".[3] He also noted that he sold to one merchant 25 slaves, about 6,000 yams, and probably to another one he sold 250 slaves and two tons of palm oil.[4] About a week later, he recorded that he "sent two canoes with 1,500 yams for 150 copper to pay Capt. Hughes. Capt. Hughes carried away 480 slaves".[5]

At Bonny in the early nineteenth century, Adams recorded that "large canoes, capable of carrying 120 persons, were often launched for slaving voyages. After about six days the large canoes often returned with about 1,500 or 2,000 slaves who were later sold to European traders.[6] Bowdich was informed that slaves

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1. Smith, Canoes, p. 531.
2. See Table 10 on p. 391
3. Ford, Efik Traders, p. 40, Diary, Entry for 14.12.1785.
4. Ibid.
5. Ford, Efik Traders, p. 41, Diary, Entry for 22.12.1785.
6. Adams, Remarks, p. 130.

were partly carried to Lagos by water in very large canoes that were capable of transporting about a hundred slaves at a time.[1] In 1830, Lander noted that a large canoe in which he lived carried, among other things, a few slaves and two thousand yams.[2] It appears that the carriage of slaves and yams dominated other products in this era.

Although palm oil must have been an essential product which canoes hauled from river banks to the coastal areas from early times, its importance as a commercial product was not remarkable until the advent of the Europeans. In the nineteenth century, palm oil trade largely replaced the trade in slaves. Canoes played a vital role in carrying puncheons of palm oil and other products such as ivory and cotton from the interior to the coast. In exchange, they carried back European manufactured goods such as bracelets, guns and gunpowder, colourful cloths, alcohol and especially salt.[3] Pereira noted that for eight or ten copper bracelets traders often obtained one slave at Bonny or Fernando Po.[4]

In Bonny, traders devoted only a few of their canoes to carrying palm oil during the slave trade era. But with a change in demand, they had no problem in converting their canoes to full carriage of palm oil. According to Adams:

> "The trade in palm oil has been increasing at Bonny for some time past ... (whereas) when the slave trade here was in its greatest activity, masters of vessels sometimes found much difficulty in obtaining two or three puncheons of palm oil for the use of the slaves on the middle passage, and have been compelled to send for it to Old Calabar".[5]

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1. T. E. Bowdich, Mission from Cape Coast Castle to Ashantee , London, 1819, pp. 225-6.
2. Lander, Journal, I, 100.
3. Adams, Remarks, pp. 233-265. Also Pacheco, Esmeraldo, pp. 132-134.
4. Pereira, Esmeraldo, pp. 132-4.
5. Adams, Remarks, pp. 244-5.

On the Ogun, in the nineteenth century, canoes carried hundreds of tons of palm oil, cotton, and other produce from the hinterland to Lagos.[1] In 1833, Laird was highly impressed by the great numbers of canoes that were being used to carry palm oil and other products on the Niger. He noted:

> "At day break I was much pleased to see a fleet of canoes of all sizes leaving the town for the purpose of collecting palm-oil, yams and other provisions, for it gave an assurance of the regular and industrious habits of the people. There could not have been less than from one hundred to one hundred and fifty: and in the evening they came dropping in with their cargoes of yams, bananas, and palm oil in large gourds".[2]

Thompson also noted that he saw large canoes deeply laden with puncheons of palm oil on his way to Bonny.[3]

In the second half of the century, John Whitford made frequent observations concerning canoes deeply laden with palm oil and kernels, heading towards the coast. There were also a number of canoes which were waiting to collect palm oil along the banks of the Niger.[4] Again, in 1873, he noted that long canoes, laden with palm oil, and paddled by twenty or thirty boys lay close to the ship on each side of the Niger.[5]

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1. Hutchinson, Impression, p. 271, Crowther to Hutchinson, Lagos, 10th Sept. 1856.
2. Laird and Oldfield, I, 98.
3. Allen and Thompson , Narrative I, 193-4.
4. Whitford, Trading Life, p. 149.
5. Whitford, Trading Life, p. 285.

Apart from the large-scale canoe users, there were numerous small-scale canoe traders plying the rivers and lagoons, carrying products of the hinterland to exchange those of the coast. Such traders did not specialize in any particular commodities but carried all sorts of trade goods. Thus those that Whitford noticed on the lagoon going eastwards to Lagos from Badagry area were "deeply laden with palm-oil in jars, kernels in bulk covered with mats, bullocks, goats, sheep, corn and various other produce from the interior".[1] Besides, they carried a good number of passangers who were mainly traders.[2]

It was common to find articles such as salt, kola-nuts, gun-powder and rum in canoes that were bound for the interior. Idah canoes that contained such articles were seen by Crowther on the Niger in 1858.[3] Laird and Oldfield also saw, on the Niger, about eighty canoes carrying corn, plantains, yams, fowls, eggs, goats, mats and red pepper, obviously going towards the coast.[4]

The Kede canoes, too, are known to have carried trade goods up and down the Niger for centuries.[5] According to Nadel,

> "The Kede ship south: gowns (of Hausa and Nupe make), horses from Hausa, potash from Lake Chad, Nupe-made mats and straw hats, fish and rice from the Niger; and north: kola nuts from the markets in southern Nigeria, European salt, and palm oil".[6]

The Ijo canoemen employed their canoes to as far north as Nupeland, spending up to ten days on the journey up the Niger.[7] They probably

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1. Whitford, Trading Life, p. 105.
2. Ibid.
3. Crowther and Taylor, Journal, p. 392.
4. Laird and Oldfield, pp. 374-5.
5. Nadel, The Kede, p. 169.
6. Ibid.
7. Clapperton, Expedition, p. 28.

exchanged salt and other European products for food crops and livestock.

In the water traffic, the canoemen assumed three roles. They could be large-scale traders, trading directly with the people at either end or with European merchants or small-scale traders serving as agents for large-scale traders. Secondly, they could be contractors who hired their canoes and crew, including themselves, for specific journeys, or in the service of rulers who were also traders. Thirdly, they could be both traders and contractors in one, carrying their own trade goods in some canoes and those of the other traders or producers in other canoes.

Among large-scale traders using their own canoes for trading were Antera Duke of Calabar,[1] King Eyo Honesty of Creek Town,[2] King Eyamba of Bonny[3] and King Boy also of Bonny.[4] They employed the labour of their slaves, family and relatives to paddle their canoes and trade for them. But they also engaged in active trading, using their canoes on the rivers. For example, Antera Duke was always on the lookout for his trading canoes, and he was often seriously disturbed whenever anyone failed to return in good time.[5] In 1833, King Boy was seen on the Niger, with his paddlers. He accompanied some of his canoes but many plied the Niger for him. In 1841, his canoes were seen, carrying traders and their cargo.[6] In 1846, Waddell saw both King Eyo Honesty

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1. Forde, Effik Traders, pp. 28-62.
2. Waddell, Twenty-nine years, p. 242.
3. Ibid., p. 287.
4. Laird and Oldfield, Narrative, II, 321.
5. Forde, Effik Traders, p. 30, Diary, Entry for 11.4.1785.
6. Allen and Thompson, Narratives, I, p. 236.

and King Eyamba among their paddlers, trading in palm oil.[1]

Among large-scale traders, using their own canoes must also be included rulers such as King Obi of Abo in Iboland. In 1841, he had at least two large canoes which were engaged in trading. He also had about fifteen large and small ones which were essentially employed for both trading and war.[2] The influential men of a town often had their own canoes. For example, each of the ten elders at Abo had from two to six war canoes which were employed for trading purposes in peace time.[3]

The existence of numerous small canoes suggests a great number of small-scale traders using their own canoes, or as with donkeys in Hausaland, borrowing from their neighbours. Such small canoes were employed for short distances. In some parts of the delta area the canoe provided the only means of communication. In the wet season, especially, there were travelling canoe 'shops' which provided the only contact with the merchandise of other regions.[4]

Small canoes were employed to carry trade goods to local market-places. According to Walker:

> "A trader, or more usually a related group of traders from the same village, sometimes as many as fifty, bring their wares to market and to the produce beach, jointly pulling a communally owned canoe and taking back imported merchandise and other goods for disposal in the village and through the smaller markets in the bush".[5]

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1. Waddell, Twenty-nine years, pp. 242, 287.
2. Allen and Thompson, Narratives, I, p. 236.
3. Ibid.
4. Buchanan and Pugh, Land and People, p. 221.
5. Walker, Traffic, p. 56.

Hundreds of canoes could be seen going to markets at the same time. In 1833, Oldfield saw some three hundred canoes on the Niger, going up to a market place.[1]

Small canoes were engaged not only in transportation of products but also in harvesting. The Wurubo, who lived on the bank of the Benue, owned "large numbers of very small canoes".[2] They often employed canoes in collecting their maize in the mouth of August when water had risen two feet or more over the stalks.[3] The Buduma of Lake Chad also used their canoes in collecting and transporting white slabs of potash which they produced in abundance.[4]

On the lagoon and on some creeks and rivers where heavy reliance was placed on canoes, arrangements for hiring out existed. The Northern Nigeria Administration which often hired pack animals, also hired canoes. The Administration itself had some boats which it employed in carrying cargo and passengers.[5] But these were not enough in the initial stage. Its steamers were not very useful in the dry season when water level often fell considerably. It then had to resort to hiring canoes from the indigenous owners. According to the 1906-7 Report, about 400 canoes entered the northern territories from the south in a year. This did not include about 300 Kede canoes which were always hired.[6] Apart from the Administration, companies also

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1. Laird and Oldfield, II, 178.
2. Ruxton, Muri Province, p. 285.
3. Ruxton, Yaba, Murri Province, p. 284.
4. Alexander, Boyd, "Lake Chad", JAS, Vol. VII, No. XXVII, April 1908, p. 230.
5. N. Nigeria Colonial Report, 1906-7, pp. 229, 545; 1908-9, p. 675.
6. Ibid.

hired canoes to carry produce down the small rivers and creeks to the main shipping points.[1]

Large-scale indigenous traders also hired canoes. They often bought yams, pots, mats and such other commodities on the banks of the Benue and the Niger, and sent their purchases to Onitsha in chartered canoes. They travelled with the cargo or consigned it in the care of some trusted slaves or relatives on the others.[2]

Hiring out a canoe was an economic ventury on its own. It encouraged building more canoes to meet such demands. But, essentially, the same canoe that was often used for trading could also be hired out by its owner when he wanted to relax or engage in other activities. In 1902, hiring out a canoe or using it for ferrying could bring in for the owner at least £2 a month.[3] This was a considerable sum when it is realized that a labourer would generally take about a shilling a day, or about £1 10/- a month at this time.

Costs

Estimation of the transportation cost must take into consideration the capital cost of the canoe and the running costs - the paddlers' wages and tolls. The canoe-builders sold some of their canoes and used many others. No line of demarcation can be drawn, in fact, between a canoe-builder and a canoe-user. They were, by and large, one and the same. When a canoe was sold, its price

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1. Walker, Traffic, p. 56.
2. Ibid.
3. N. Nig. Colonial Report, 1902, p. 113.

depended on its area of construction and its demand in relation to supply. In 1830, Lander was told at Yawuri that a canoe would cost not less than a hundred dollars[1] or about 150,000 cowries.[2] The high demand for canoes for both fishing and transportation at Yawuri and the great difficulty in obtaining planks for building them which seriously limited supply must have made their price soar.

The price would also depend on the size of the canoe. A small one which could conveniently convey six persons and which Crowther bought at Raba in Nupeland in 1858 cost him fifteen heads of cowries (30,000). This he equated to about £ 3 5s.[3] If the one at Yawuri was a much larger one, then its price could not be said to be too high. If a canoe cost less than £5 and could be used for up to fifteen years[4] or even less, it should be considered cheap mainly because it required no special care or fuelling like a porter or a pack animal.

However, it required paddlers who had to be paid, fed and cared for. Irrespective of whether a canoe was bought or hired, paddlers had to be remunerated in kind or in cash. In 1858, Crowther hired two young men to paddle his canoe. He paid each of them 200 cowries,[5] an equivalent of 5.2d per day. If the canoe did an average speed of 20 miles per day, it meant that apart from the original cost of the canoe, all that a canoe which carried six *persons would pay for a day's journey would be a low cost of about* 400 cowries or 10.5d. But this was not necessarily typical of all times and all places.

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1. Lander, Journal, II, 40.
2. At that time and place, Lander equated 1500 cowries to 1 sp. dollar, Journal, II, 77.
3. Crowther and Taylor, Journal, p. 159.
4. Smith, Canoes, p. 520.
5. Crowther and Taylor, Journal, p. 159. If 30,000 cowries = £3.5s. $200 = \frac{200}{30,000} \times \frac{65 \times 12}{1}$ d $= 5\frac{1}{5}$ d or 5.2d.

Almost everyone who lived close to water routes could paddle, so there were no professional paddlers.[1] Remuneration depended largely on the demand for labour at a particular time, on the number of people willing to undertake a journey, on the distance and direction of a journey and on the season of the year, and indeed, on numerous other considerations. As in the cases of porters and pack animal drivers, many paddlers preferred a short-distance journey to a long one which involved entering unknown territories, and entailed many risks and total absence from home and normal work. Paddlers who were prepared to go on long-distance journeys had to damn these consequences. They would only be lured into such an action by very attractive remuneration.

In the same way, travelling in the wet or dry season, up or down the river might determine differentials in charges. Even when the Northern Nigeria Administration operated water transport, it charged different prices according to the season and direction of travelling. Transport charges of cargo from Burutu to Lokoja in 1902 were as follows:[2]

Burutu to Lokoja (up)	Wet season	30s per ton.
	Dry season	40s per ton.
Lokoja to Burutu (down)	Wet season	15s per ton.
	Dry season	20s per ton.

As can be seen, the charge during the wet season was only three-quarters of the cost in the dry season. The cost for going up the river doubles that of coming down for the same weight of load. This 50 per cent increase is explained by the difficulty and slowness of going up rivers, against currents.

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1. Based on oral evidence.

2. N. Nig. Report, 1902, p. 183.

According to the study of Gilbert Walker, in Warri at the Delta, in 1949, a canoe could then be hired for a shilling to one and six pence a day.[1] At least two paddlers were required for a small canoe that would carry about two tons of load; and for a large one that was capable of carrying about four tons would be required four or six paddlers. In 1949, a puller could earn up to 2s. a day for eleven hours, including stops for food.[2] Reckoning a day's journey to be of the order of 20 miles, a small canoe with two tons' capacity would require two paddlers who would be paid a total wage of 4s. That would give a low average cost of 1.5d per ton-mile.[3]

In an hypothetical example, Jakpa gives an average cost of 0.4d per ton-mile for a short distance and of 0.21d per ton-mile for a long one.[4] One defect of his estimation was that it did not take the season of travelling into consideration. Nevertheless, the cheapness of the transport is in no doubt.

Since many traders used their own canoes, they hardly made special distinction between their transportation cost and labour cost when selling their wares. They nevertheless realized that they must sell their goods at a profit that was high enough to cover transport and labour costs. In many cases, slaves and family labour were relied on. In this case, feeding was the main form of remuneration. It was usual for those who traded in palm oil to make not less than 75 per cent gross profit.[5] If a trader made use of slaves as his

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1. Walker, Traffic, p. 56.
2. Ibid.
3. A day's journey = 20 miles, capacity of canoe = 2 tons, cost of hiring a canoe =1/-, Wages of 2 paddlers @ 2/- each =4/-
   Cost per ton-mile = $\frac{60}{20x2}$ = 1.5d.
4. Jakpa, Thesis, p. 41.
5. Laird and Oldfield, Narrative, I, p. 82.

paddlers, he regarded his entire profit as net. The continuity of trading on the rivers and the opposition of the traders to European steamers on the Niger are indicative of the high profits which middlemen made with their canoes.

With an average speed of about 2.5 miles per hour or 15 to 20 miles a day, the canoe was as slow as a porter or a donkey. But its high carrying capacity for long-distance journeys with little running or operational costs makes it by far the cheapest mode of transport in the precolonical period in Nigeria.

In emphasizing the low cost of water transport, Adam Smith compared it with land transport by waggon. According to him:

> "A broad-wheeled waggon, attended by two men, and drawn by eight horses, in about six weeks' time carries and brings back between London and Edinburgh near four ton weight or goods. In about the same time a ship navigated by six or eight men, and sailing between the ports of London and Leith, frequently carries and brings back two hundred ton weight of goods. Six or eight men, therefore, by the help of water carriage, can carry and bring back in the same time the same quantity of goods between London and Edinburgh as fifty broad-wheeled waggons, attended by a hundred men, and drawn by four hundred horses."[1]

A ship would carry what fifty waggons, drawn by four hundred horses and attended by a hundred men, would carry at the same time.

In 1905, the Northern Nigeria Administration carried 244 tons of material up the rivers at a cost of £5 per ton. According to Lugard's calculation, about 10,000 carriers (who were not easily obtainable) would have been required to convey this quantity at five times the cost, about £25 per ton.[2]

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1. Cited by Pratt, Inland Transport, p. 37.

2. N. Nig. Report, 1905-6, p. 446.

An important advantage of water transport over land transport was not in speed but in overall cost and in saving labour, when and where it was scarce, for alternative purposes. Whereas a porter would carry a maximum load of about 70 lb. and a camel, which had the greatest carrying capacity among the pack animals would carry a maximum of 5 cwt., a small canoe paddled by two men would carry about two tons of load.

It meant that a small canoe's capacity was equivalent to that of sixty-four porters or that of eight camels. If 20 miles is reckoned as a day's journey of a porter, a camel and a canoe, it meant that what two paddlers accomplished in one day would be accomplished by a porter in sixty-four days and a camel in eight days. Viewed in this way, a canoe was the cheapest mode of transport for both short- and long-distance journeys in pre-colonial Nigeria.

S E C T I O N I V

CONCLUSION

CHAPTER 8

Conclusion : The Relevance of the pre-Colonial Transport to the Economy

In the previous chapters an attempt has been made to examine the role that transport played in the economy of pre-colonial Nigeria. Having discussed the economic function of transport, the pre-colonial economy which the transport served has been examined. Land and water routes are described and the carriers - porters, pack animals and canoes - which used the routes have been analysed. As has been noted, the physical and human obstructions on the routes did not prevent porters, pack animals and paddlers from moving trade goods about.[1] Indeed, the routes (shown in the maps) suggest that an extensive economic and social intercourse existed in the country.

In this chapter,[2] first,the trading systems that were used in many parts of the country are discussed; secondly, it is concluded that with these transport facilities, internal and external trade was carried on, and social and economic needs largely met; thirdly, it is suggested that transport cannot be isolated as the only constraint on the pre-colonial economy. Other likely constraints which require further research in close relation to the pre-colonial economy in Nigeria are mentioned.

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1. Maps 1-7 show the main routes used up to and mainly in the nineteenth century. Map 1 is copied from NEDECO, Rivers in Nigeria (in the Folio). Maps 2-7 are derived from many different sources.

2. In this conclusion, only a few specific references are made in order to avoid repetition of references already made. The content of the chapter is drawn from the writer's general impression of the whole study and his personal experience as a participant in the traditional economy of the country.

The Trading Systems

In the pre-colonial era in Nigeria, there were basically two systems of trading. One was a "relay" system and the other was a system of "long-distance trading networks". In "The Trading Towns of Bouna in the Pre-colonial Economic Situation in West Africa", Boutillier discussed these two types of trading systems.[1] In the relay system, "goods were exchanged at the borders of each tribe and in that way passed from tribe to tribe."[2] But the long-distance net-work "involved the transport and exchange of goods over a large area by the same traders, no matter what their connections with the tribes they met on the way".[3]

The use of the relay system of trade is not due only to the political frontiers. There are other reasons such as the limitation of transport facilities, and the large size of the internal trade.

In certain parts of the country, a trader's movement was restricted to the territory controlled by his ruler. Both on land and water routes, this happened not only to traders but also to other users of the routes. For example, the Egba and the Ijebu in Yorubaland controlled trade routes from the interior to Lagos, preventing the Ibadan and others in the interior from reaching the coast in the nineteenth century.[4] The traders from hinterland

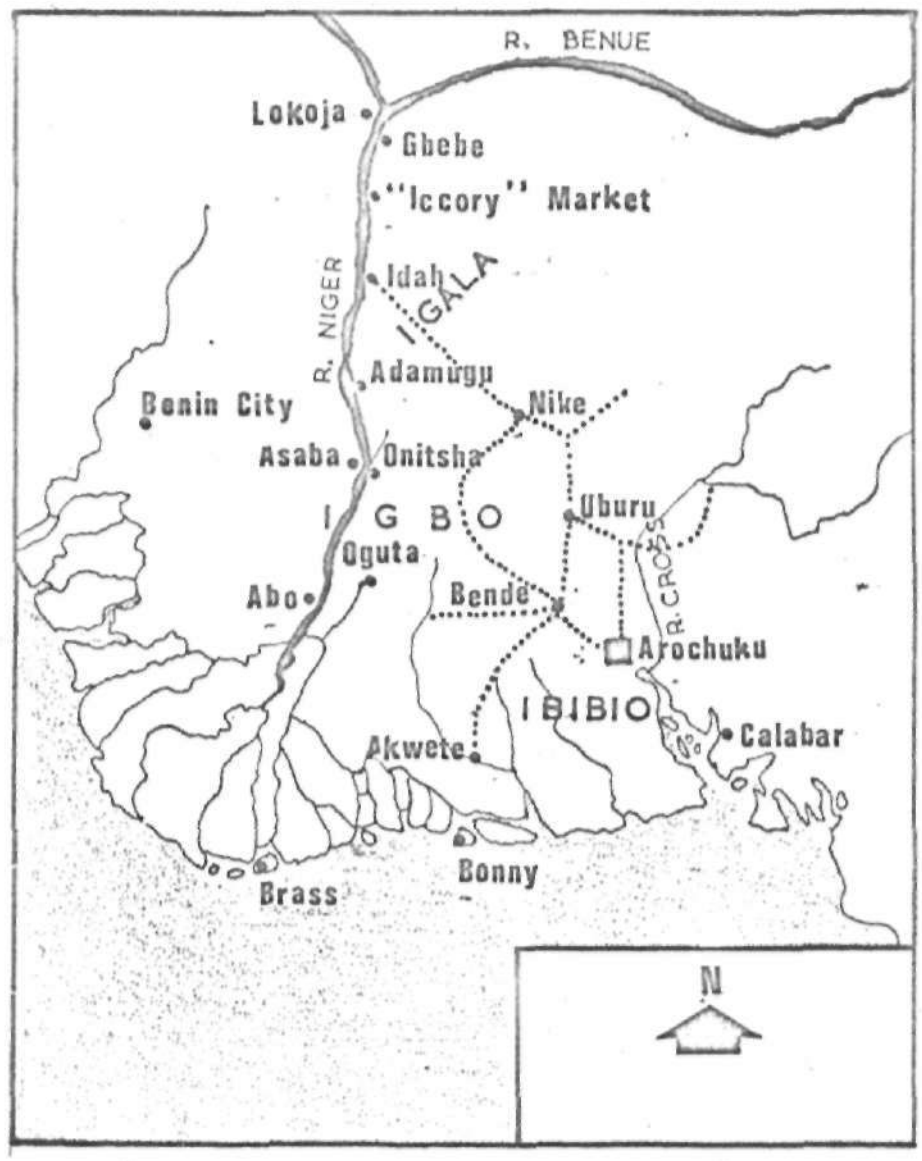
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1. Jean-Louis Boutillier. "The Trading Towns of Bouna in the pre-colonial economic situation in West Africa", in Meillassoux, Trade and Markets, Chp.XI, pp.251-2.

2. Boutillier, "Trading Towns", p.25.

3. Ibid.

4. PP. Relating to the war among the Native Tribes in the neighbourhood of Lagos; 1865, XXXVII, 533, June 4, 1862, Despatch No.20.



6 ARO TRADE ROUTES IN THE NINETEENTH CENTURY

had to stop at Oru, a large toll-collecting centre in Ijebuland. In this town the batons of relay trade were exchanged. Trade goods were headloaded from there to the coastal market places at Epe and Ejinrin. Canoes were then used to carry the goods to other places such as Lagos[1] to the west and Benin[2] to the east.

Dissensions among the local chiefs sometimes compelled a relay system of trade. Water routes, in particular, were jealously guarded and only a member of the community could transact trade within the territory. Trespassing into other territorial waters could be punished with seizure of canoes. This happened on a section of the Niger in the 1850s.[3] Crowther observed that between Rabba in Nupeland and the mouth of the Niger, there were "five changes of conveyance, owing to the jealousy of the native chiefs."[4]

The relay system of trade was also necessitated by existing forms of transport. Human porterage was expensive for long distances, except where slave porters were employed. But it was much less expensive for short distances mainly because it was easier to recruit local labour which could be cheaply remunerated. Most porters were employed to carry goods to market places or stopping places where traders could exchange the trade items and transport them to other places.

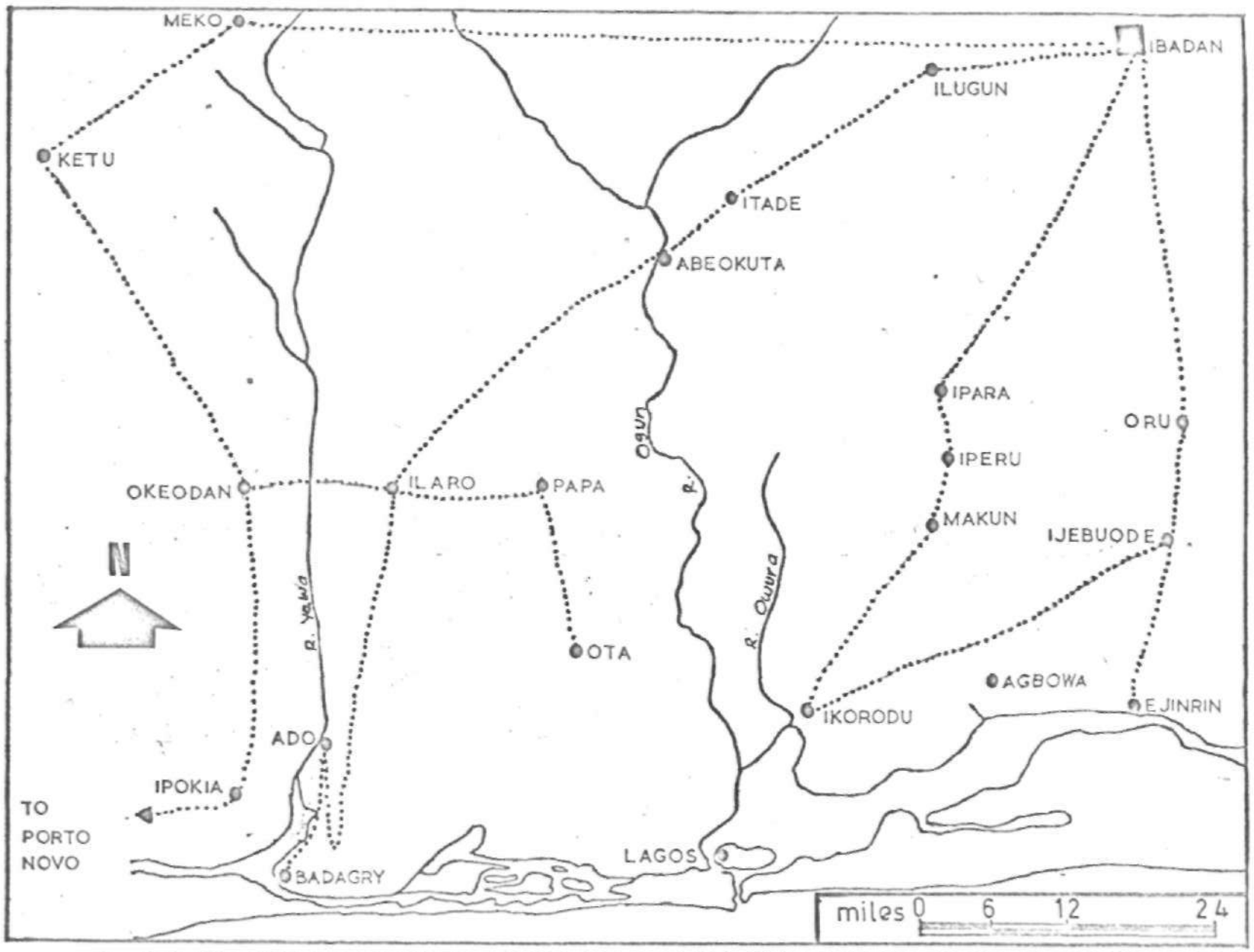
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1. C.O. 879/33. Milison to the Colonial Secretary. Encl.1, in No.23.
2. For this information I am grateful to Dr. Wale Balogun of Dept. of Mechanical Engineering, University of Lagos, who introduced me to his grand-mother, Madam Safuratu Sumola, 93, at Imushin town, near Ijebu-Ode.
3. See, e.g. Crowther and Taylor, Journals , pp.VII-VIII.
4. Ibid.

Although pack animals could cover long distances, their use was limited only to the areas that were not infested by the tsetse. Donkeys were used to transport trade goods from the north to the south, but they could not remain long in the south. It might take weeks or even months before products were got ready for transportation to the north. By that time many donkeys could have fallen victims to the tsetse. The reasonable thing was to use donkeys to carry loads to a point in the south where they could wait for a long time in order to transport products back to the north. At that point, other traders took over and carried the goods further south to another point.

The canoe could also be used to transport goods for hundreds of miles at a stretch. But, like porters, it was more difficult to recruit paddlers for long distances than for short journeys. Although canoe transport was very cheap, it could become more costly if paddlers were scarce and they had to be very highly remunerated. Even if paddlers could be hired cheaply for long distances, there were sometimes frontier barriers that limited the extent of their journeys.

By their natural distribution, water routes run through particular places. The goods that were carried on the water ways by canoes were first moved to the banks either by porters or by pack animals. A relay system of trade, was thus necessitated. Producers or brokers exchanged their products at the banks of rivers. Then canoemen moved them up and down the rivers to other places of exchange.



7 MAJOR TRADE ROUTES FROM IBADAN TO THE COAST IN NINETEENTH CENTURY

Refreshment centres (or "coaling stations"[1]) were essential places where exchange of goods took place. Neither the porters nor the animals on long distances could travel for more than a few hours before looking for stopping places. The stopping place could be at a road junction, or at a ferrying point, or at a toll-collecting centre. Many of these places developed to be trading centres where a group of short-distance traders sold their wares and returned home with those exchanged. Rabba has been referred to as a busy ferrying point where many traders met and exchanged their wares with the long-distance traders who were bound for Salaga in modern Ghana.

The bulk of internal trade in pre-colonial Nigeria was in the hands of the local traders and local market places were the main distributing centres. They served as points where the batons of the local commercial relay were handed over.

An important product that serves as an example is salt. European salt from the coast reached Ilorin by the relay system. Rather than carrying salt directly from Lagos to Ilorin, a distance of about 200 miles,[2] salt was exchanged from hand to hand.[3] If the same porters had been employed to carry salt for 200 miles, the transport cost would have been very high and ultimately the selling price of salt could have been too high for the purchasing power of the Ilorin consumers.

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1. Adu Boahen, The Sahara, p.114.

2. See Table 8. Ilorin to Lagos could be done in about eleven days. If porters walked 15-20 miles a day (see Table 9) the distance would be 165-220 miles.

3. Oral evidence; Alfa Ali, the Baba Kekere of Oyo (80). Also Alfa Kolo (70), Ilorin.

TABLE 8: TIME SPENT IN TRAVELLING SOME DISTANCES IN NIGERIA IN THE NINETEENTH CENTURY.

PLACES		DISTANCES		REMARKS
From	To	Mls.	Days	
Oyo	Ardrah	180	90	Mainly by land[1]
Eggan	Oyo		15	By land[2]
Oshogun	Iseyin	20		By land[3]
Kano	Zungeru	800	32	By land[4]
Tripoli	Ghat		40	By land[5]
Ghat	Kano		6-7 wks	By land[5]
Kano	Ibadan		40	Mainly by land[5]
Kano	Tripoli		7 mths	By land[5]
Lagos	Shonga		15	By water[6]
Kano	Rabba		70	Mainly by land[7]
Borgu	Araha in Ashanti		39	By land[8]
Araha	Kumasi		9	Araha- Sawaha or Salaga[8]
Kano	Daura	22	1	By land[9]
Ilorin	Rabba or Shonga		4	By land & water[10]
Ilorin	Lagos		11	Mainly by land[10]
Lagos	Rabba or Shonga		15	Mainly by water[10]
Kano	Sokoto		20	By land[11]
Ikorodu	Ibadan		3	By land[12]
Zaria	Kano		8	By land[13]
Rabba	Bussa		4	By water[14]
			7	By land
Coast	Lokoja	300		By water[14]
Abeokuta	Llorin		6	By land[15]
Abeokuta	Ibadan		2-3	By land[16]
Abeokuta	Lagos		2	By water[17]

TABLE 8 *Footnotes*

1. Adams, Remarks, p.79
2. Schon & Crowther, Journals of, p.180.
3. Schon & Crowther, Journals of, pp.370-385
4. Lugard, "Northern Nigeria Report"(1902), p.102.
5. Lugard, "Northern Nigeria Report" (1904) p.296.
6. Mockler & Ferryman, Up the Niger, p.189.
7. Crowther & Taylor, Journals, p.98
8. Crowther & Taylor, Journals, p.103.
9. Denham & Clapperton, Narrative, II, p.242.
10. Crowther, Report, p.20.
11. Lander, Record, p.260.
12. Anna Hindever, Seventeen Years in Yoruba Country, London.1872, p.230.
13. Robinson, Hausaland, p.100.
14. Lander, Journal, p.154
15. Hinderer, CA2/049, 1849.
16. Hinderer, CA2/049, 1850.
17. Hinderer, CA2/049, 1855.

TABLE 9. COMPARATIVE ANALYSIS OF TRANSPORT FACILITIES IN THE NINETEENTH CENTURY

Carrier	Carrying Capacity	Speed	Cost per ton - ml.
Donkey	112 lbs[1] 150 lbs[2] 100 lbs[3]	20 mls a day[4] 15-20 mls a day[5]	1.6d - 2d[6]
Bullock		20 mls a day[7]	9d[3]
Ox	120-140 lbs[3] 200 lbs[8]	2¾ m.p.h.[8]	9d[3]
Mule	67 kilos[9] (147 lbs)		
Camel	4-5 cwt[10]	3½ - 4 m.p.h.[11] 20 mls a day[12] 30-40 mls a day[13]	10⅞d[3]
Porter	60-70 lbs[14] 90 lbs[15]	15-20 mls a day[5] 3 - 3½ m.p.h[16] 28 mls a day[17]	29.2d[18] 6.4d[18]
Canoe	20-30 tons[19] 1 - 20 tons[20]	13-15 mls a day[21] 2.8 m.p.h.[22]	1.5d[23] .21 - .4d[24]

TABLE 9. Footnotes

1. "Northern Nigeria Report", 1909, p.703.
2. Tremearne, Hausa Superstitions, p.38
3. Kirk-Greene, "Lugard Documentary Record", p.197
4. Bovill, Golden Trade, p.17
5. Clarke, Travels, p.218.
6. Chapter 5, p. 268
7. Bovill, Golden Trade, p.16
8. "Northern Nigeria Report", 1904, p.312
9. Pankhurst "Transport and Communication", p.71.
10. Marion Johnson, "Cowries", p.29.
11. Hogben & Kirk-Greene, Northern Nigeria, p.13; Rodd, the Veil, p.193.
12. Rodd, The Veil, p.172
13. Raymond Mauny, Tableau Geographique de L'Ouest Africain au Moyen Age, IFAN, Dakar, 1961, p.394.cited by Mabogunje, A.L., Urbanization in Nigeria, London, 1968, p.53.
14. Bowen, Adventures, p.307.
15. Robinson, Hausaland, p.50.
16. Raphael, Through Unknown Nigeria, p.226.
17. C.M.S. Archive, G3, A9/O, Richardson, A.E. to Baylis, No.7, Jan.26, 1900.
18. Chapter 4,pp. 212-213
19. Hopkins, Economic History, p.72.
20. Walker, Traffic, p.56
21. Crowther & Taylor, Journal, p.199
22. Burton, Abbeokuta, I, p.59.
23. Chapter 7, p.377
24. Jakpa, "Transport", p.41.

It was through the relay system that many products of the north reached the south. For example, natron produced in Kuka was widely distributed, reaching as far south as Lagos. It was not feasible for a trader to carry natron all the way from Kuka to Lagos (a journey of more than a thousand miles even by a direct route). In practice, natron was carried from Kuka to Cumnel or to Kano direct. At Kano it was distributed to the south and to other places.

Redistribution took place at large trading centres. For example, traders collected natron at one place and handed it over to other traders in another place. By such a roundabout movement, natron and many other products passed[1] from traders to consumers. It would, therefore, appear that the relay system of trade was dictated by the existing transport facilities. Since a much greater number of traders engaged in local trade than in long-distance trade, the relay system seems to have suited the pre-colonial economy.[2]

The other system of trading was the long-distance network which involved the transport of goods over a large area by the same traders. Unlike the relay system, the same products

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1. Alhaj L. Abudu, 50, Kano, oral information.

2. For this brief discussion on the relay system of trade I am grateful to Dr. A.E. Afigbo of the University of Nigeria, Nsukka. Apart from directing my attention to the theme at the Kano Conference of the Historical Society of Nigeria, December 1971, he also gave me invaluable information by correspondence.

could be carried from the producers directly to their consumers.

The external long-distance trades included the trans-Saharan trade, the trans-Atlantic trade and the Kuka-Salaga trade.[1] Internally, long-distance traders existed among many communities. A notable example on the land route was the Katsina tobacco producers already referred to.[2] On the water route, the Abo traders were also famous for using their canoes for long-distance trade[3] up and down the Niger.

This pattern of long-distance trade often involved all the existing forms of transport. For long distance journeys where; neither river craft nor pack animals could be used, slave porters did the whole journey. For example, the Aro long-distance traders relied on slaves for most of their trading activities.[4] At the destination of the journey some slaves who were less faithful or lazy could be sold.[5]

But human porterage only supplemented pack animals and river craft in some cases. For example, in moving European salt from Lagos to Oyo, canoes were used as far as Ikorodu. Porters then took over and carried salt to Oyo. Also, forest products going northwards

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1. See Map 4.

2. See Chapter 5. Pack Animals.

3. See Chapter 7. Canoes.

4. See Map 6. This map is derived from Northrup "Trade among the Igbo", p.219.

5. I am grateful to Dr. A.E. Afigbo and Mr. Egbor, a colleague at the Centre of West African Studies, University of Birmingham, for their discussion with me on the use of slaves by the Aro long-distance traders.

were transported there partly by porters and partly by pack animals. For example, three forms of transport could be employed in transporting products from the hinterland to Lagos. In Table 10, an example of such products is given.

TABLE 10. SOME PRODUCTS IMPORTED INTO LAGOS FROM THE INTERIOR BETWEEN 1ST FEBRUARY AND THE 29TH FEBRUARY 1872.

Product	Quantity
Benniseed	61 tons 6 cwt 1 qt.
Bullocks	123
Calabashes	160 packages
Corn	15,693 bushels
Cotton	3393 cwts 3 qt 16 lbs
Country Cloth	16,766 pieces
Country pots	1,669
Egusi seeds	633 packages
Fowls	8939
Goats	632
Groundnuts	8 tons 18 cwt 2 qt.
Guinea fowls	570
Horses	15
Indigo	7482½ lbs
Ivory	124 pieces
Kolanuts	225 packages
Mats	41 packages
Palm Kernels	2,995 tons 7 cwt 3 qts
Palm Oil	79,351 galls
Pigeons	853
Potash	107 packages
Shea butter	379 packages
Sheep	936
Soap	671 packages
Turkeys	18

Footnote: C.O. 147/23, W.J. Maxwell, Deputy Collector of Customs.

In looking for constraints which were responsible for the economic backwardness of many developing countries, it is easy to see transport as a major factor. This is probably because it is easier to identify poor transport as an index of a country's backwardness than to see the technological backwardness of the economy as a whole. It would appear that the role of the transport facilities of a country can best be judged only when seen in the context of the country's technology.

In many parts of Africa, "agriculture has meant hoe farming",[1] and neither the plough nor the wheel was adopted from the earliest times. According to Jack Goody, "The absence of the wheel meant that man was not only unable to make use of animal power, but of the power of wind and water as well".[2] Slowness in technological development in Africa seems to have contributed to economic backwardness in comparison with Europe. "In the absence of the wheel, the plough, and all the concomitant aspects of the "intermediate technology", Africa was unable to match the developments in productivity and skill, stratification and specialization that marked the agrarian societies of early medieval Europe."[3]

Although slow technological development could have contributed to slow economic development in Africa, it can be argued that the mere possession of technical knowledge does not necessarily confer economic development on a country. This is amply demonstrated by Joseph Needham in his remarkable study of China.[4]

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1. Jack Goody, Technology, Tradition, and the State in Africa. OUP, London, 1971, p.25.

2. Goody, Technology, p.26

3. Goody, Technology, p.76

4. Needham, Joseph, Science and Civilization in China, Vol IV, Cambridge 1965; and Clerks and Craftsmen in China and the West. Cambridge, 1970.

Needham examines the classical Chinese contribution to science and technology. No one who is acquainted with his exposition can be left unimpressed by China's development of technology in general and of the wheel in particular. In this respect, China was in fact ahead of Europe for centuries. Needham writes:

> "Long suspected to have been a Chinese invention, which did not reach Europe until the late Middle Ages, this simple expedient (wheelbarrow) of replacing a pack-animal or one of two hod-carriers by a wheel will be seen to have originated in China certainly by the third century and in all probability by the first". (A.D.). [1]

Yet it was in Europe rather than in China that modern technology was applied to economic development.

As discussed in Chapter 5, wheeled vehicles extended to the Niger bend, but there is no evidence yet to suggest that the wheel penetrated further south. Although the absence of the wheel was in line with the absence of the plough and of advanced technology, some reasons for this may be suggested.

First, the difficulty of keeping a large number of draught animals greatly reduced the chances of a traditional use of wheeled vehicles in the forest areas of the country. As mentioned in Chapter 5, there were problems of tsetse flies, of fodder and of penetrating the thick forests. Although pack animals could reach the forest areas, only a few could remain there. The large number that would be required for wheeled transport on a large scale could not remain there for long.

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1. Needham, Science and Civilization, p.82.

Secondly, if the major reason why wheeled transport was not used in the forest areas was the problem of keeping pack animals there, why then were wheeled vehicles not in use in the savanna areas of the country where pack animals were widely used? The problem here is mainly the difficulty of securing the necessary capital and running costs for establishing and maintaining carts, wagons and enough draught animals.

Even if money was readily available, if a cost-benefit analysis of the use of wheeled transport in the pre-colonial era was undertaken, the cost might be much greater than the benefit. If the animals were used mainly for transport purposes, their use would be confined to the dry season and yet they would have had to be kept doing almost nothing in the wet season. In addition, the existing footpaths which were not adequate for wheeled transport would have had to be greatly improved to make them useful for wheeled transport. The cost of constructing the roads would have been too great to make the enterprise a profitable one in the pre-colonial era.

Moreover that the road would have to pass through sparsely populated areas where, like the railway, the wheeled vehicles would have only a few people and products to carry. If all the capital and running costs of the wheeled vehicles and roads are calculated, it may well be that any gain from greater traction would not only have been reduced but would have been nullified.

As mentioned in Chapter 5, the attempt of the Colonial Administration of Northern Nigeria to use carts failed; and it had to return to the use of pack animals which "were relatively cheap to

buy, inexpensive to operate and well suited to the terrain".[1]

Thirdly, it could be that "the absence of the wheel was a matter of decision rather than of chance or ignorance".[2] This is an important suggestion that requires further discussion because the whole issue of technological development largely depends on the decisions and the needs of a society. Perhaps people did not use the wheel because they "did not need to move quantities greater than those which could be carried by donkey or by their head-porterage".[3]

It is unrealistic to expect transport to develop in its own regardless of economic development. It is usual for transport and the economy it serves to grow together. Regarding Britain, Dyos and Aldcroft noted that "the economic condition of Britain and its transport system have always been most intimately and directly related".[4]

It is even possible for the economy to grow in advance of the transport. For example, the transport systems that had to cope with the Industrial Revolution in the eighteenth century in Britain were based on medieval techniques, but used on a grander scale. It was not until "existing techniques had been pushed to their limit (that) the nineteenth century turned to the development of railways and steamships".[5] A form of transport

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1. Hopkins, Economic History, p.74
2. Ibid.
3. Morgan and Pugh, West Africa, p.170.
4. Dyos and Aldcroft, British Transport, p.17.
5. Samuel Lilley, "Technological Progress and the Industrial Revolution 1700-1914", Carlo M. Cipolla, (Ed) The Fontana Economic History of Europe - The Industrial Revolution. p.191.

which suits an industrial society may be too costly for a pre-industrial one. As Burford noted, "the need of a new technoligical device for technological development is a practical answer to particular demand, not a mystical accident."[1]

For example, a railway may be more costly than human porterage in an economy where production is seasonal, small and limited; and in which labour is abundant. According to Milne:

> "The economic significance of the opening of railway communications between two centres of population, previously served only by pack-horse, is not the substitution of a train service for horse-transport but the production of a more efficient form of transport in the sense - the economic sense of efficiency - that the costs of the new form of transport to the users of transport are less than the costs of the old form of transport."2

For transport to be cheap it must be suitable to the economy.

Economic progress results from an association of a number of widely differing events. The contribution of each event or occurrence, whether it is a mechanical discovery, or a transport improvement, cannot be separated from the other events with which it is associated. Developments in industry and trade and developments in the field of transport have an interacting influence.

As has been noted, the development of transport in Europe was not significantly different from the development of transport in Africa. In Europe, the highways of the post-Roman era were numerous and were not more than well-beaten tracks, passable only by horse and foot traffic. But like the tracks in pre-colonial Nigeria, they largely sufficed to meet the requirements of the

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1. Burford, A. "Heavy Transport in Classical Antinquity", The Ec.His. Rev., 2nd Series, XIII, 1, 1960, p2.

2. Milne, Inland Transport, p.24.

economy, with respect to mobility.

In pre-colonial Nigeria, many agricultural products required movement only over short distances to and from market places, between adjoining villages and between villages and nearby towns. The housing needs of the people were also largely met. For example, many societies depended on local material for constructing their houses. In the forest south, roofing leaves and supporting poles were fetched from the adjoining farms and forests. In the savanna north, grass for roofing was abundant. In each case, no stone or mud for building the walls needed to be carried on a long distance. There was not much that needed to be carried that could not be carried by porters in the south, or donkeys and porters in the north, and by canoes, wherever there were waterways.

There is no doubt that people also moved about to perform social obligations - visiting friends, contracting marriages, performing funeral and religious ceremonies. But it is essential to realise that most of the travelling designed to fulfil social obligations was very local in nature. Even up to now, marriages, religious festivals and other ceremonies are largely on a local basis. Walking to spouses' or parents' houses could be done within a day or even in a matter of a few hours.

It is difficult to identify a single factor as a major constraint on the economic growth of any country that is now usually branded "Third World". The high cost of transport can be seen as one of the factors. As argued in Chapter 4, the cost of transportation by human porterage, even for short distances, could

be high. But the cost was not so high when slave labour was used and when slaves carried their own food or when free food could be obtained. When the slave was not bought but inherited, captured or rescued or when pawns were used as porters, the capital cost could be zero and the running cost could be extremely small.

A more important constraint on the pre-colonial economy in Nigeria is the smallness of the market for the country's production. The traditional economy could not absorb the full potential energies of the population. The reason "was not the alleged laziness of the African race, but the absence of an adequate market for produce over and above the needs of local subsistence."[1]

As stated in chapter 2, the pre-colonial domestic economy was more varied than is often supposed. It included agricultural and non-agricultural productions as well as a wide range of other economic activities. Production was geared not merely to local needs but also to both internal and international trade. All these economic activities were carried out to the extent that there was a market for them.

Other constraints on the economy and on the extension of the market are the low purchasing power of the people and the general slowness in technological development. One reason for the low purchasing power of the people was that two major basic factors of production - land and labour - did not enter the money

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1. Wrigley, "Colonial Phase", p.429.

market on a significant scale until late in the nineteenth century. A majority of the labour force - slave, family and age-group - was not directly paid. This meant that a great number of people had small purchasing power and would neither buy much nor save. Even as early as late nineteenth century, a good number of consumers produced much of what they required and had little money to spend on luxuries.

Land, too, could not be sold by any single member of a family. Although the family-head could allocate part of it to members of the family or outsiders for temporary use, he could not sell it entirely. If land could be sold to outsiders, money that accrued from the sale would have greatly increased family income which could have been spent on buying whatever was needed.

In certain parts of the country, the population was sparse and the labour force that could develop the area was small in relation to the abundant land. This situation can lead to at least two consequences. Under-population could prevent market growth because people tend to cultivate extensively, living in scattered settlements and tending towards self-sufficiency. This is not a situation in which market could be extended and production expanded. Secondly, land and labour and other resources could be under-utilised. The fact that the land is much more abundant than labour suggests an important limitation on output.

The situation could be ameliorated if land and labour were easily purchased. Labour could then be directed from areas of surplus capacity to areas of scarcity; with an extra labour force, land that was hitherto wasted could be bought and fully used for productive purposes.

Another factor that reduced the purchasing power of the people was the currency being used in the different parts of the country. As pointed out in Chapter 2, it is too much to expect that the great number of communities that make modern Nigeria,with hundreds of languages and dialects, with diversified cultures and without a single unifying authority would have adopted a single currency. But one might expect that where one currency, such as the cowry shell, was being used, the same type would be acceptable to all the communities in the same area. This was not always so. Some people in the eastern part of the country accepted only the small species and totally rejected the larger ones although both are cowry shells.[1] This type of uncertainty in a currency could limit the extent of the market.

Although many people had little purchasing power, the chiefs and influential traders were better off. Since the proceeds of slave and family labour concentrated in their hands, they must have been much richer than the other members of their household. One could ask why the chiefs did not use their wealth to revolutionise agriculture as the landed gentry did in Europe. One could also ask why technological innovations did not receive people's attention in Africa as they did in Europe.

It does not seem that anyone has been able to find answers to the questions and to hundreds of such questions that an economic historian of West Africa can ask. Technical innovation could both expand production and extend the size of the market in

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1. Basden Among the Ibos. p.198. See Table 1.

two ways. With technical innovation, products which hitherto had been slowly made by hand could be rapidly made by machines. Production could then be on a large scale, and in the long run, the capital costs of plant would be offset and products would be produced so cheaply that consumers with low purchasing power would be in a position to buy them.

Technical innovation could also lead to improvement in transport; and cheap transport could mean cheap production cost. If raw materials are cheaply transported to areas of production and if finished products are cheaply transported to consumers, the size of the market would be enlarged. As Adam Smith notes:

> "Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly upon a level with those in the neighbourhood of the town. They are upon that account the greatest of all improvements. They encourage the cultivation of the remote, which must always be the most extensive circle of the country.... Though they introduce some rival commodities into the old market, they open many new markets to its product." [1] (Italics mine)

It might appear that an improvement in transport facilities was a panacea that would have healed all the economic diseases of the pre-colonial Nigeria. But that could only be so in a situation where the rate at which transport was improving was considerably less than the rate of growth of the whole economy. It would appear that the problems of transport, the extent of the market, the purchasing power of consumers and technical innovation are all intricately linked together.

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1. Adam Smith, Wealth of Nations, p.62.

Among the major problems that faced pre-colonial Nigeria was the acquisition of the capital required for technical innovation. The rulers, who were the most affluent members of society, preferred to invest their capital in acquiring slaves rather in co-ordinating their efforts to acquire technical innovations. But according to Lynn White (Jnr), "we know little about the psychic elements influencing the degree of technological dynamism in a society. Necessity explains nothing until the need is felt, and we cannot yet tell why some groups respond to needs - or desires - which in other groups remain unformulated and unfilled."[1]

It can be assumed that if transport had been cheaper than it was in the pre-colonial era in Nigeria, the market must have been extended, output must have been greatly increased and technical innovation must have automatically followed. But it can also be assumed that technical innovation applied to production would have lowered production costs, increased the size of the market, provided wage labour, thus increasing purchasing power, and that improvement in transport facilities must ultimately have followed.

Transport is dictated by the nature of demand in the economy as a whole. For example, canals were not built in Britain until the need arose for them. At the beginning of the industrial revolution in the eighteenth century, the existing forms of transport were found inadequate to cope with the movement of raw materials and of coal to centres of production.

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1. Lynn, Technology, p.144.

Therefore industries were located at the coalfield areas. But it was still necessary to move coal from the pit-head to the location of the manufacturing process. It was in order to do this that the early canals were built.[1]

It would appear that it serves a more useful purpose to examine what actually happened in the economic history of a country than to concentrate on what should have happened. The main purpose of this study has been to examine the transport facilities that existed in the pre-colonial economy of Nigeria. It has been argued that the widely separated communities were linked by trading activities. Water and land routes did not just run north and south to connect forest and savanna; they also connected the communities in the east to those in the west; this is suggestive of the variety of economic activities and of adequate transport facilities.

Moreover the existence of internal and long-distance trade is indicative of the effective use of transport facilities. With the transport system, ideas, culture, religion, and technology spread from one place to the other. For example, Islam with Islamic culture and Christianity with Western civilization could not have reached different parts of the country without the routes which traders, travellers and missionaries took to the people.

Even the main argument of many writers that the transport cost was very high is based mainly on the assumption that alternatives existed. The term 'high' itself is relative

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1. Milne, Inland Transport, p.35.

and in places where human porterage was the only possible means of transport, it is difficult to see how high the cost was and what a low cost of transport would have been.

From economic and social points of view, transport facilities largely met the needs of the people. "Output targets were geared not merely to subsistence needs, but also to trade which was regular, widespread and of great antiquity".[1]

Contrary to common belief, the cost of pre-colonial transport was not necessarily high when used by indigenous traders. The capital and the running costs cannot be computerised as can be done in an industrial economy. Cost-benefit analysis is limited by the infiltration of social obligations into economic analysis. It can be misleading to look at pre-colonial transport with an eye on an industrial economy.

In conclusion, what has emerged from the present study is that pre-colonial transport largely suited the pre-colonial economy in Nigeria. From the point of view of the indigenous economy, of the seasonality of agricultural production, and of abundant labour and land, it appears that the transport facilities were, to a large extent, adequate and met the needs of many people. The transport system worked so well that it not only continued till mechanical forms of transport were introduced in the late nineteenth century, but it still goes on even now. Today, motor cars, cycles, and engine-powered canoes have not replaced the non-mechanical forms of transport. Porters, pack animals and canoes are still in use in many parts of the country almost as much as they were in the pre-colonial era in Nigeria.

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1. Hopkins. Economic History, p.75.

APPENDIX: CURRENCIES IN NIGERIA IN THE NINETEENTH CENTURY

Form of currency	Place	Time	Equivalents (Approx)
Thin plates of iron	Logone	1824	30 = 10 rottala = 1 dollar[1]
Iron	*Doma*	1850s	36 = 1 slave[2]
Pins	Rabba	1830	1 = 15-30 cowries[3]
Kantai or Kantar	Kano	1851	1 = 30 dollars = 75,000 kurdi or cowries [4]
" " "	Bauchi	1850s	100 = 1 male slave[5]
Copper rods	Old Calabar	1805	1 = 1½ (But declined to 2d or 3d in 1840)[6]
" "	" "	1857	1 = 1½[7]
"Bars"	Brass & Bonny	1857	1 = 3d[8(a)]
Copper rods	Afikpo	1900	1 = 3½[8]
Pawn of salt	Bonny	late 18th & early 19 century	1 = 1 bar = 2/6d[9]
" " "	Warri	" " "	1 = 1 bar = 3/-[10]
" " "	Abo or Aboh	1850s	10-12 bags = 1 male slave [11]
Salt	Zaria	1894	½ cwt. = 80,000 cowries.[12]
Gubbuk,i.e.strips of cotton, 3" x 36"	Bornu	1824	3-4 or 5 = 1 rottala[13] (30 rotalla = 1 dollar)
White shirts	Kanem	1851	Standard Currency (ref.oth.forms)[14]
Leppi,i.e.strips of cloth 2¼" wide	Adamawa	1851	
Maria Theresa $	Kuka	1851	1½ = a very good ox of 600 lbs.[16]
" " "	Hausaland	1851	2 = 1 pack-ox.[17]
" " "	Katsina	1853	40 = 100,000 cowries.[18]
" " "	Hausaland	1894	1 = 3/6d. worth of cowries.[19]
" " "	Zaria	1894	1 = 5,000 cowries[20]
Cowries	Benin	1590	Standard currency.[21]
"	Lagos	bef.1800	1600 = 16 ackies = k ounce = £2[22]
"	Katunga (Old Oyo)	1826	2,000 = 1 spanish dollar.[23]
"	Kano	1826	500,000 = 1 horse (rather unusual)[24]
"	Yawuri	1830	1500 = 1 spanish dollar.[25]
"	*Bocqua (on* R.Niger)	1832	1000 = 1½.[26]
"	Gori (On R.Niger)	1841	500 = daily wage per man[27]

Form of currency	Place	Time	Equivalents (Approx)
Cowries	Abeokuta	1840s	60,000-100,000 = 30-50 dollars[28]
"(Kurdi)	Zinder (Nth of Nigeria)	1851	30,000 = 1 camel.[29]
"	Kano	1851	2,500 = 1 spanish or Australian $[30]
"	"	1851	50,000-60,000 = £4-£5,i.e. 50 = 1d.[31]
Cowries(Kungona)	Bornu	1851	8 = 1 gabaga(i.e.1 strip of cloth)[32]
" "	Yorubaland	1853	40 = 1d; 2,000 = 4/2d.[33]
"	Duke Town	1857	40 = 1d; 2,000 = 1 dollar.[34]
"	Lagos	1857	2,000 (1"head") = 1 dollar.[35]
"	Lagos	1858	4,000 = 1 dollar.[36]
"	Ilorin	1858	3,000 = 1 dollar.[37]
"	Beyond Kowara(R.Nig)	1858	2,500-2,000 = 1 dollar.
"	Lokoja	1850s	50,000 = £3-£4 = 1 slave (boy)[39]
"	Badagry	1850s	2,000 = 1 dollar.[40]
"	Yorubaland	1850s	4,000 = 1 dollar.[41]
"	Lagos	19thC	25,700 = £1-5/-[45]
"	Lagos	1860	20,000 = £1-£2[42]
"	Abeokuta	1862	6,400 = 1 dollar[43]
"	Eggan	1860s	20,000 = 12/6d.[44]
Bullocks	Logone	1824	30-40 = 1 slave.[46]
"	"	1824	100-150 = 1 horse;2-3 = 10 dollars[47]
Horses	Abeokuta	1840s	1 = 60,000 - 100,000 cowries.[48]
"	Bauchi	1850	1 = 5 male slaves.[49]
Slaves	Sokoto	1826	1 male,13-20 = 10,000-20,000 cowries[50]
"	Katunga (Old Oyo)	1826	1 female,13-15 = 30,000-40,000 " 1(prime)= 40,000-60,000 cowries.[51]
"	Bonny & Old Calabar	1830s	1 (able-bodied) = £4.[52]
"	Abo or Aboh	1850	1 male 6,000-7,000 cowries[53]
"	Lokoja	1850s - 60s	1 = 20,000-60,000 cowries (paid by Baikie to redeem slavesBaikie)[54]
"	Onitsha	1880s	1 boy = £6; 1 girl = £5.
"	Kano	1896	1 man,30,=£4; 1 man,18,=£6. 1 girl, 14, = £7-£10.[56]

Footnotes

1. Denham and Clapperton, Narrative, I, 17-18

2. Baikie, Narratives, p.114.

3. Lander, Records, II, 295.

4. Barth, Travels, I, 516

5. Baikie, Narratives, p.220.

6. Latham, A.J.H. "Currency, Credit and Capitalism on the Cross River in the Pre-Colonial Era", J.A.H., XII 4, 1971, 601.

7. Hutchinson, Impression, p.256.

8. Ottenburg, "Afiko Markets" in Markets, p.124

8(a). Hutchinson, Impression, pp.255,256.

9. Adams, Remarks, p.116

10. Adams, Remarks, p.243.

11. Baikie, Travels, p.317

12. Robinson, Hausaland, p.87

13. Denham and Clapperton, Narrative, I, 157, II,191.

14. Barth, Travels, II, 283.

15. Barth, Travels, II, 151.

16. Barth, Travels, II, 57.

17. Ibid.

18. Barth, Travels, III, 138.

19. Robinson, Hausaland, p.85.

20. Ibid.

21. Welsh in Hodgkin, Perspective, p.117.

22. Adams, Remarks, p.240.

23. Clapperton, Second Expedition, pp.57-9.

24. Clapperton, Second Expedition, p.173.

25. Lander, Record, II, 77.

26. Laird, Narrative, II, p.167

27. Schon & Crowther, Journal, p.298.

28. Freeman, Journal of Various Visits, p.232.

29. Richardson, F.O. 2/6. pp.88-9.

30. Barth, Travels, I, 522.

31. Barth, Travels, I, 511-2.

32. Barth, Travels, II, 55.

33. Tucker Abbeokuta, p.26

34. Hutchinson, Impression, p.253.

35. Hutchinson, Impression pp.77-8.

36. Crowther & Taylor, Journals p.211.

37. Ibid.

38. Ibid.

39. Baikie, Narratives, p.225.

40. Bowen, Adventures, p.98.

41. Clarke, Travels, p.295.

42. Talbot, Northern Nigeria, p.875

43. Iwe Irohin, Nov.5, 1962.

44. Whitford, Trading Life, p.92.

45. Burton, Wanderings 1, p.319.

46. Denham & Clapperton, Narrative I, p.36.

47. Ibid.

48. Freeman, Journal of Various Visits, p.232.

49. Baikie Narratives, p.220.

50. Clapperton, Second Expedition p.222.

51. Clapperton, Second Expedition, p.59.

52. Laird, Narrative, II, p.361.

53. Baikie, Narrative, p.317.

54. Whitford, Trading Life, p.319.

55. Mockler-Ferryman, Up the Niger, p.20.

56. Robinson, Hausaland, p.131.

S O U R C E S

Sources of information for this thesis have been arranged as follows:

I UNPUBLISHED

A. Archival

(a) The Public Record Office (PRO), London

(b) The Royal Commonwealth Society Library, Northumberland Avenue, London

(c) The Church Missionary Archive, London

(d) The National Archive, Ibadan

B. Theses

C. Oral

II PUBLISHED

A. Parliamentary and Official Papers

B. Newspapers and Periodicals

C. Articles

D. Books

SOURCES

I UNPUBLISHED

A Archival

(a) The Public Record Office (PRO), London

C.O. 147/1-179: Papers relating to Lagos (1861-1906)

C.O. 148/1-3: Parliamentary Acts, Lagos (1862-1905)

C.O. 149/1-7: Sessional Papers, and minutes of the Legislative Council (1872-1906)

C.O. 520/47-68: Concerning Railway construction and roads

C.O. 879/15: Concerning Lagos Settlement, 1879

C.O. 879/24: C.S. Salmon's proposal for the development of trade with the interior country in the vicinity of the British settlements on the West Coast of Africa.

C.O. 879/33: African (West) No. 399. Lagos correspondence, Native Affairs and Mr. Alvan Millson's Mission, 1889.

C.O. 879/58: African (West) No. 580. Lagos correspondence, 1899-1902.

C.O. 879/67: Concerning railway construction

Foreign Office Records (F.O.)

F.O. 2/6: Expedition to Central Africa: Bornu and Soudan in the years 1850 and 1851 by James Richardson.

F.O. 2/44-47: Concerning Sir John Clover

F.O. 84/1634: Miscellaneous

F.O. 84/1660: Treaties concluded between native chiefs on Rivers Niger and Benue and Edward Hyde Hewett, the Consul in 1884.

F.O. 84/1701-2: Treaties

F.O. 97/433-37: Baikie to Russell, Niger Expedition, 1861-7

(b) The Royal Commonwealth Society Library, Northumberland Avenue, London

Papers of Sir John Hawley Glover (1829-1885):

File 1: Folder of correspondence 1862-69

File 2: Folder of correspondence 1870

File 3: Folder of Proceedings in Vice Admiralty Court of Lagos

File 4: Folder of correspondence 1871, Egba Assembly

File 5: Folder of correspondence 1872

(c) The Church Missionary Archive, London

C A2/04: Correspondence between missionaries and the Colonial Government, 1853-78

C A2/06: Correspondence between missionaries and native chiefs

C A2/07: Correspondence between the Colonial Government and Native Authorities, 1851-72

C A2/08: Correspondence and Treaties between Naval Authorities and Native Chiefs and Authorities, 1851-63

C A2/022: Journals of Braithwaite, I.A., Native Catechist, Leke, 1877-78

C A2/028: Letters and Journals of Coker, Rev., Daniel, Native Pastor, Badagry, 1873-79

C A2/033 Letters of Davies, J.P.L., Native Merchant, Lagos, 1856-74

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C Oral

I was in Nigeria for seven months (June 1971 to January 1972) for fieldwork to collect oral and documentary evidence.

As mentioned in Chapter 1, problems of finance, transport and language confront a research student attempting to collect oral information from the multifarious communities in the country. For these reasons it was not possible to reach many parts of the country. But at the Kano Conference of the Historical Society of Nigeria, I was fortunate to meet a number of people who came from different parts of the country. They kindly furnished me with necessary information on their areas and also communicated some details to me by correspondence. Among such informants are Dr. A. E. Afigbo and his party from the University of Nigeria, Nsukka, and Mr. M. S. Odoma of Idah.

It is not possible to give a full list of respondents to interviews conducted in seven months. The list given below is to show the names (with ages in brackets) of my main informants and the date and place of the interview.

Date	Place	Informant
13.07.71	Oyo Palace	Oba Lamidi Adeyemi, the Alafin of Oyo (40)
14.07.71	"	Alfa Ali, Baba Kekere (80)
14.07.71	Oyo Didisa Gate	Mr. Jimoh, grandson of the Onibode of Didisa (50)
16.07.71	Oyo, Akinmorin Gate	Mr. Raji Salami, grandson of Abudu, the Onibode of Akimorin Gate (40)
19.07.71	Isale Oyo	Chief Ikoloba, the Asipa of Isale Oyo (60)
20.07.71	Oyo, Asipa Compound	Chief Bello Oyekola, the Asipa of Oyo (90)

20.07.71	Oyo, Asipa Compound	Mr. G. Egbeyemi, Head of Asipa slaves (50)
31.07.71	Erin-Ile	Mr. Joseph Agbede, lay-reader of St. Mathia's Church, Chairman of United Churches of Erin-Ile (72)
01.08.71	"	Mr. Ajibade Adewuyi (40)
10.08.71	"	Mr. Opoola (40)
15.08.71	Iwo	Mr. David Adeniji (67)
22.08.71	Ile-Igbo	Mr. Joseph Ladela (70)
24.08.71	Ibadan	Alfa Lamidi (80)
09.09.71	Ifaki Ekiti	Mr. John Adewuya (70)
10.09.71	"	Mr. Akolona (80)
10.09.71	"	Madam Yeyemole (60)
11.09.71	"	Mr. J. A. Adewuya (40)
12.09.71	"	Mr. Fadiya (40)
15.09.71	Akure	Mr. J. A. Adeniran (40)
15.09.71	Idanre	Mr. D. O. Ogunsola (30)
20.09.71	Ondo	Mr. M. A. Akingbongbe (60)
21.09.71	"	Mr. Ogunyoye, the Oloja Ifore (70)
21.09.71	Ondo, Igbingboda St.	Mr. Adegoke Akisulie (70)
25.09.71	Iseyin, Ile-Alahoro	Mr. Adeleke (70)
25.09.71	"	Madam Mojoyin (70)
16.10.71	Ijebu-Ode	Madam C. O. Adebanjo (60)
16.10.71	"	Mr. Adebanjo Oshijo (70)
18.10.71	Imushin	Madam Safuratu Sumola (93)
18.10.71	Idoko Aleda	Mr. F. O. Okunowo (63)
20.10.71	Epe	Chief M. O. Kazeem (60)
28.10.71	Ibadan	Mr. Ladejo Akano (65)
30.10.71	"	Mr. Bello Lanipekun (75)
30.10.71	"	Mr. Alhaj Yesufu Adesokan (70)

08.11.71	Kishi	Chief Ali Olatunbasun (70)
08.11.71	"	Mr. Sanusi Amoo (65)
18.11.71	Ogbomosho	Mr. Ojewole (80)
18.11.71	"	Mr. Soba Omorilewa (30), Guide
18.11.71	"	Alhaj Adepoju (55)
20.11.71	Shaki	Chief S. O. Bada (70)
25.11.71	Benin	Dr. Jacob Eghrevba (70)
26.11.71	Sapele	Mr. Gilbert Erhabor (55)
28.11.71	Abeokuta	Mr. Ayo Shofoluke (70)
28.11.71	"	Mr. Fasasi (50)
08.12.71	New Bussa	Alhaj Aliyu (60)
09.12.71	"	Malam Aliu (80)
09.12.71	"	Mahamman Gani (70)
10.12.71	"	Alhaj Musa, the Waziri of Bussa (80)
11.12.71	Ibadan	Mr. Lawale (60)
11.12.71	"	Madam Adepele (55)
13.12.71	Kaduna	Mr. Olaode (40)
14.12.71	Zaria	Mr. Oyeyipo (30)
14.12.71	"	Mr. Abiodun Oni, student, guide (21)
19.12.71	Kano	Alhaj L. Abudu (50)
20.12.71	"	Madam Musa Karaye (60)
22.12.71	Ilorin	Alfa Kolo (70)
23.12.71	"	Madam Olarewaju (60)
04.01.72	Oke-Odan	Mr. Orebiyi (65)
05.01.72	Otta	Mr. E. E. Akingbola (60)
07.01.72	Ikorodu	Mr. Olu Fuwa, guide (30)
08.01.72	Igbogbo	Oba of Igbogbo (70)
09.01.72	Agbowa/Ikosi	Mr. Rickett (80)
11.01.72	Ibadan	Mr. Ogunfunmilayo (70)

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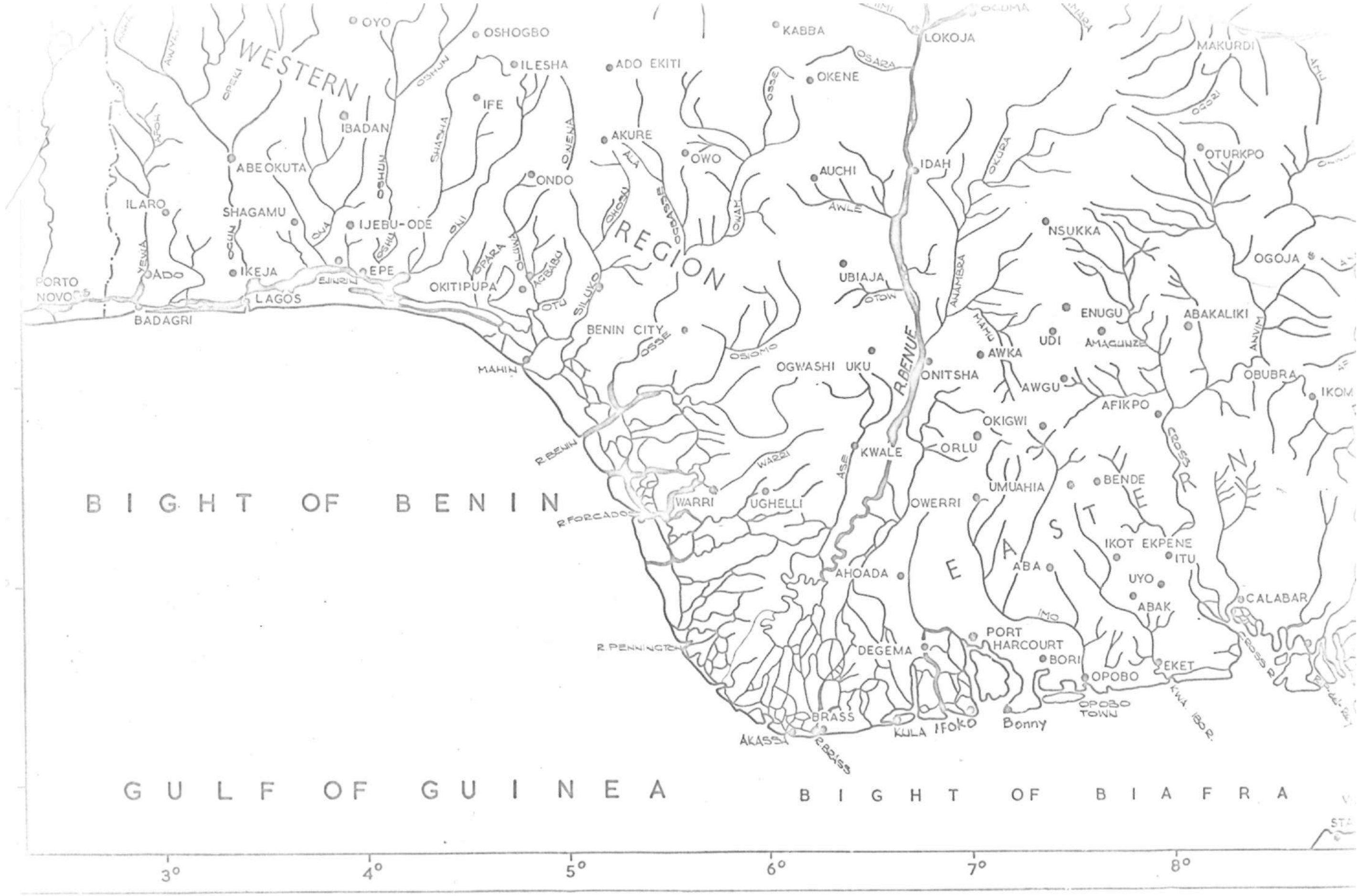
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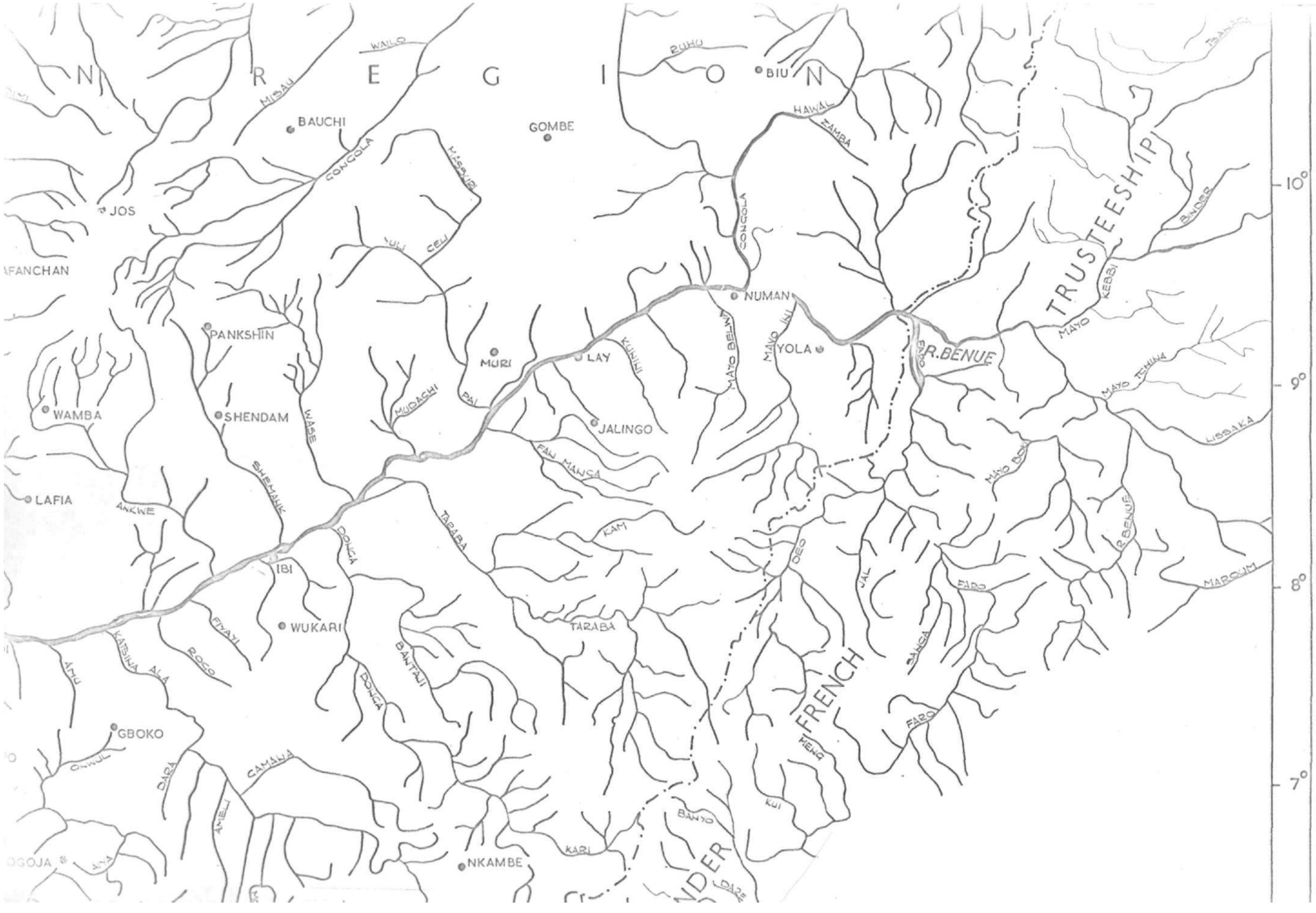
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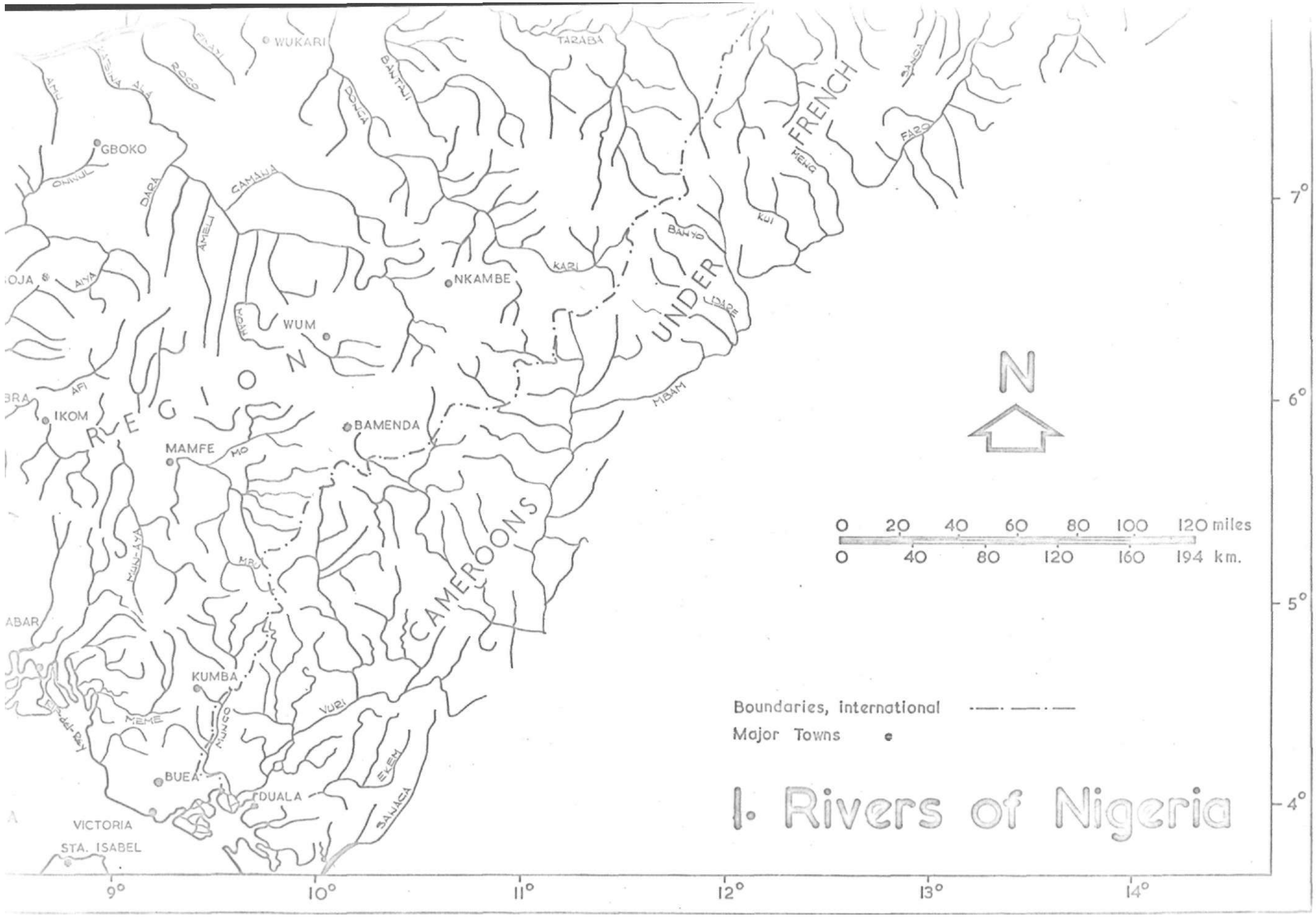

WESTERN
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ILARO
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IJEBU-ODE
IKEJA
EPE
LAGOS
BADAGRI
PORTO NOVO
ADO
OKITIPUPA
ONDO
AKURE
ADO EKITI
OWO
KABBA
OKENE
LOKOJA
AUCHI
IDAH
UBIAJA
BENIN CITY
MAHIN
OGWASHI UKU
ONITSHA
AWKA
AWGU
OKIGWI
ORLU
OWERRI
UMUAHIA
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BENDE
MAKURDI
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NSUKKA
OGOJA
ENUGU
UDI
AMAGUNZE
ABAKALIKI
OBUBRA
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ITU
UYO
ABAK
CALABAR
ABA
AHOADA
DEGEMA
PORT HARCOURT
BORI
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Bonny
BRASS
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IFOKO
AKASSA
R. BENIN
R. FORCADOS
R. PENNINGTON
R. BASS
R. BENUE
CROSS R.
KWA IBO R.
BIGHT OF BENIN
GULF OF GUINEA
BIGHT OF BIAFRA
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KONKWESSO
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YERIMADUGU
KAIAMA
NUNU
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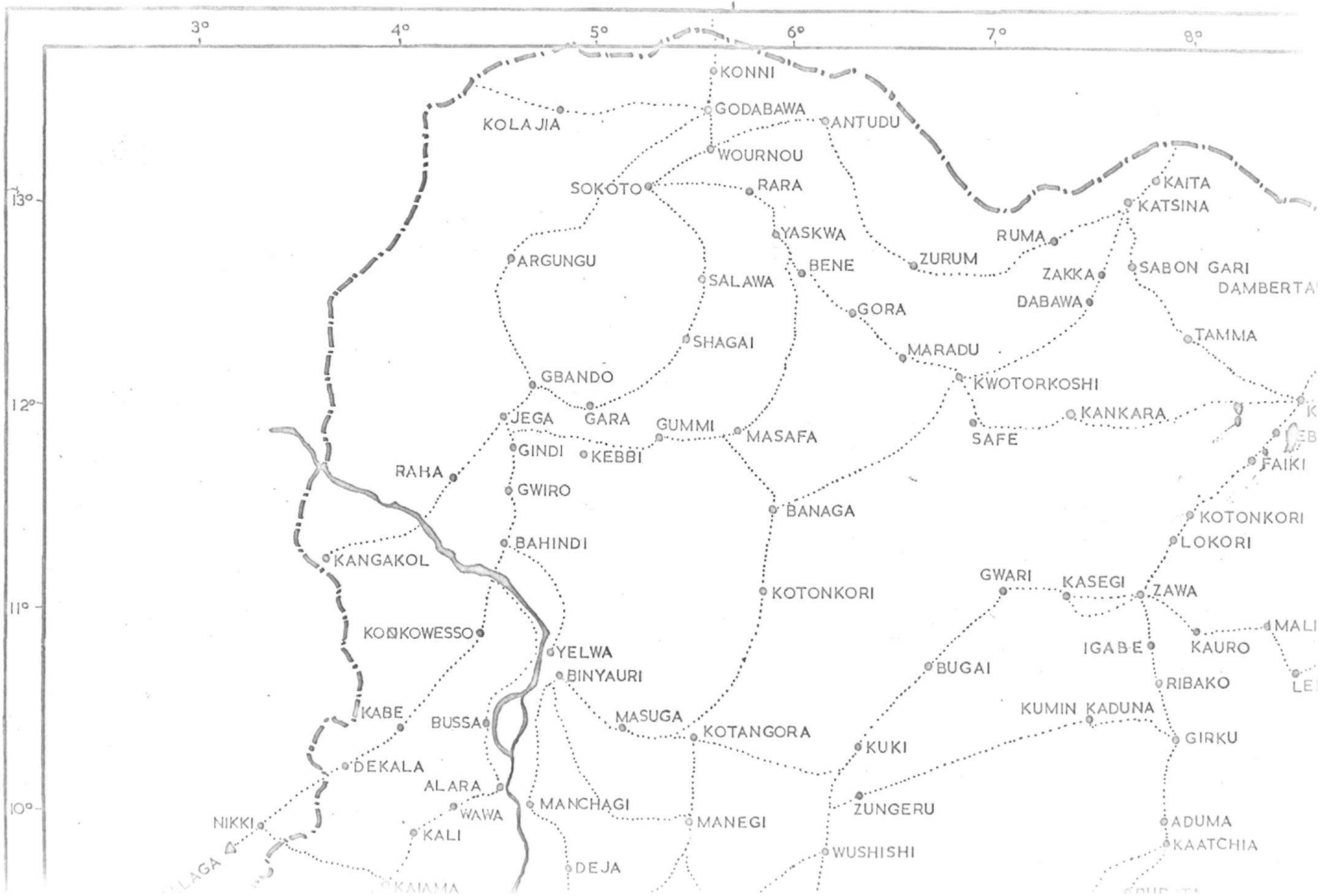
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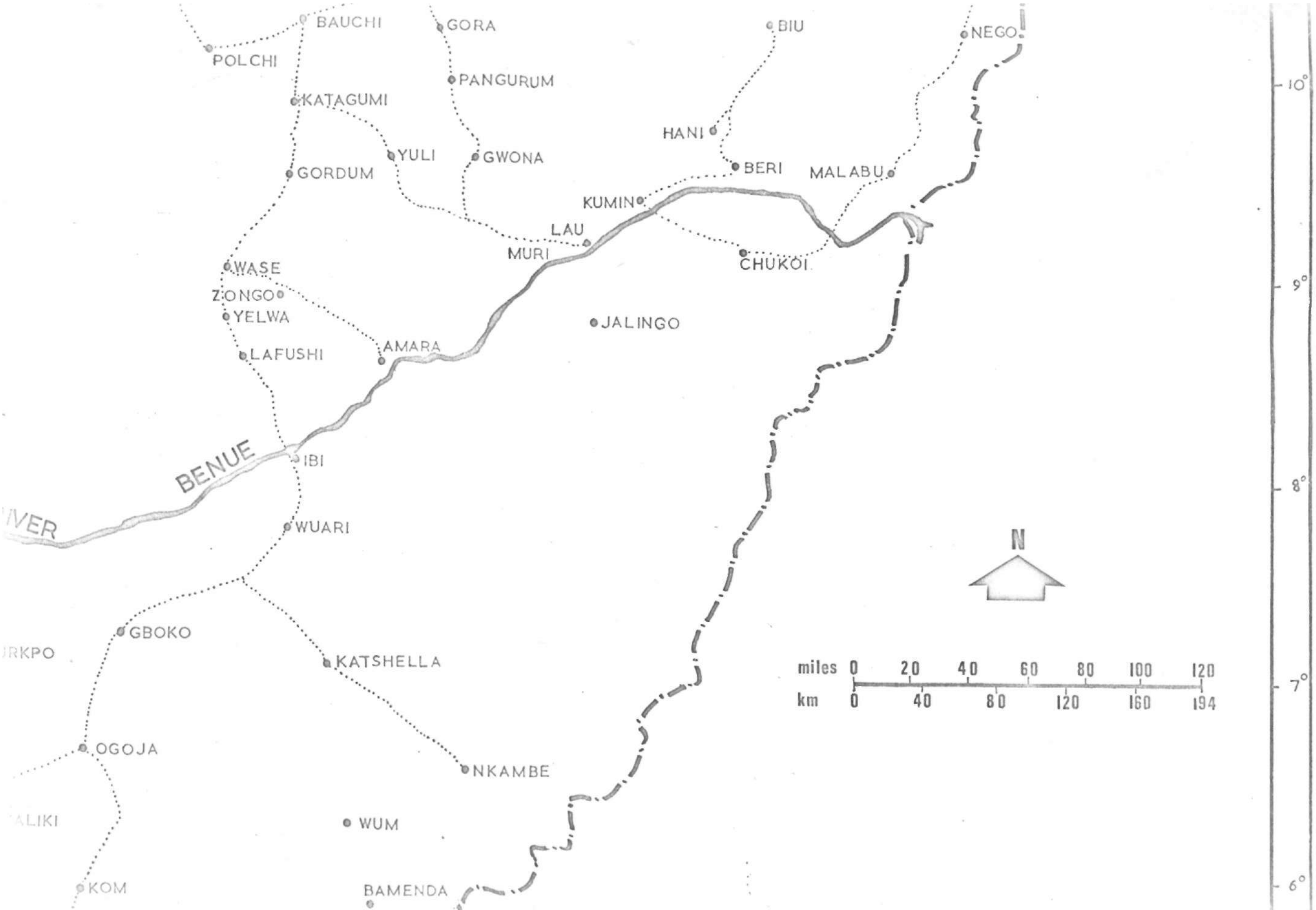
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I. Rivers of Nigeria


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GORA
DABAWA
SHAGAI
MARADU
TAMMA
GBANDO
KWOTORKOSHI
JEGA
GARA
GUMMI
MASAFA
KANKARA
SAFE
GINDI
KEBBI
FAIKI
RAHA
GWIRO
BANAGA
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MANEGI
ADUMA
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BAUCHI
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DILLUA
LEBU MALARAMI
KUKAWA
NGORN
MORGORNU
LANTAWA
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MONGUL
GUBAI
DIKOA
MAIFONI
DARDINGEL
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MOLGUE
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GWONA

WUARI

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NKAMBE

ALIKI

WUM

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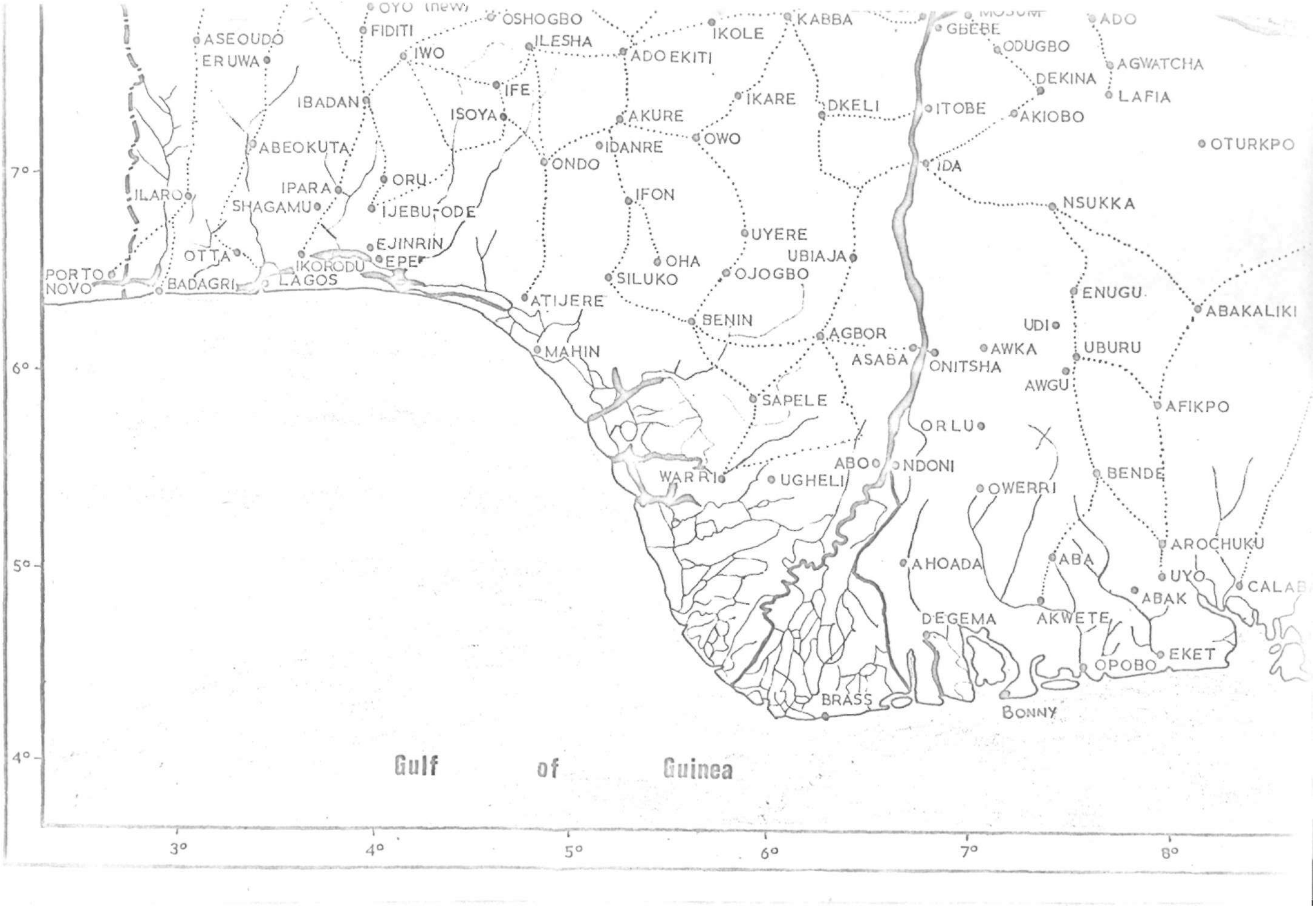
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NIGERIA

2. PRINCIPAL TRADE ROUTES UP TO NINETEENTH CENTURY


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MANCHAGI
MANEGI
ZUNGERU
NIKKI
KALI
WUSHISHI
ADUMA
KAATCHIA
TO SALAGA
DEJA
KAIAMA
PURATA
BASSERU
OKUTA
JEBBA
MOKWA
WUYA
KISHI
RABBA
GUDU
ABUJA
KUKWI
BIDA
SADU
BIGWA
ILESHA
RIVER
NUPIKO
BALLANGARA
OYO
(old)
BODE
BAGA
IGBOHO
SHAKI
KOS
PATIGI
KEFFI
KWAKWA
IGBETE
EGGA
GWANJA
ILORIN
OFFA
IBAJA
NASSAKAWA
EGBI
AGITA
BAKONO
DUFO
ERIN ILE
RACHI
TUNGA
OGBOMOSHO
SHALE
RUMASHA
LOKO
ISEYIN
PATI
SURA
OKEMESI
LOKOJA
MOSUM
ADO
OYO (new)
OSHOGBO
KABBA
IKOLE
GBEBE
FIDITI
ASEOUDO
ILESHA
ODUGBO
IWO
ADO EKITI
ERUWA
DEKINA
AGWATCHA
IFE
IKARE
LAFIA
IBADAN
ISOYA
AKURE
OKELI
ITOBE
AKIOBO
OWO
ABEOKUTA
IDANRE
OTURKPO
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UYERE
EJINRIN
UBIAJA
OTTA
EPE
OHA
IKORODU
OJOGBO
PORTO NOVO
BADAGRI
LAGOS
SILUKO
ENUGU
ATIJERE
BENIN
UDI
ABAKALIKI
AGBOR
MAHIN
AWKA
UBURU
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ONITSHA
AWGU
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AFIKPO
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OYO (new)
OSHOGBO
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