STUDIES IN THE ECONOMIC HISTORY OF SOUTHERN AFRICA

VOLUME ONE

THE FRONT-LINE STATES

Edited by
Z. A. Konczacki, Jane L. Parpart
and Timothy M. Shaw

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VOLUME I
THE FRONT-LINE STATES

STUDIES IN THE ECONOMIC HISTORY OF SOUTHERN AFRICA

VOLUME II

South Africa, Lesotho and Swaziland

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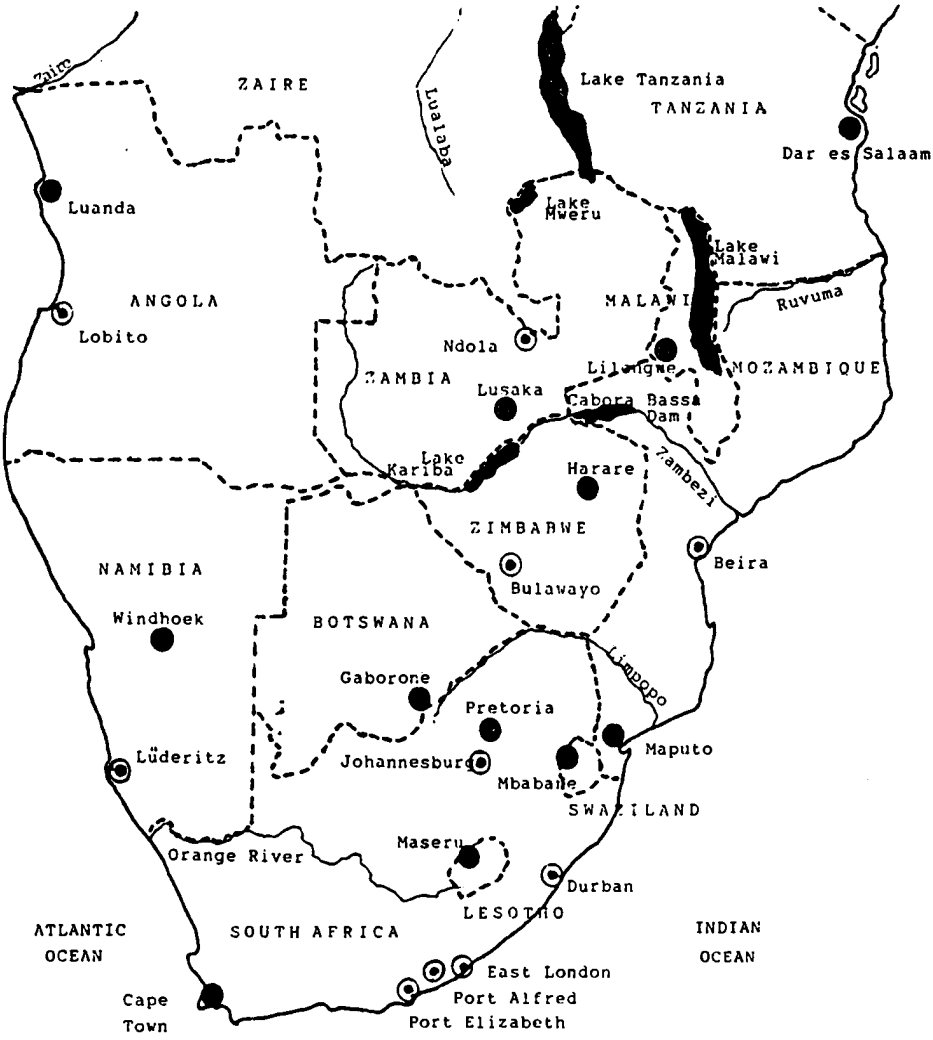

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 1990 in
FRANK CASS & CO. LTD.

This edition published 2016 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
711 Third Avenue, New York, NY 10017, USA

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data

Studies in the economic history of southern Africa.
Vol. 1: The front-line states.
1. Africa. Southern Africa, Economic conditions, to 1988
I. Konczacki, Zbigniew A. II. Parpart, Jane L. III. Shaw, Timothy M.
330.968

ISBN 0-7146-3379-8(cased)
ISBN 0-7146-4071-9(pbk)

Library of Congress Cataloguing-in-Publication Data

Studies in the economic history of southern Africa / edited by Zbigniew A. Konczacki, Jane L. Parpart, and Timothy M. Shaw.
p. cm.
Includes index.
Contents: v. 1. The front-line states.
ISBN 0-7146-3379-8(cased)(v.1)
ISBN 0-7146-4071-9(pbk)
1. Africa, Southern—Economic conditions. I. Konczacki, Zbigniew A. II. Parpart, Jane L. III. Shaw, Timothy M.
HC900.S78 1990
330.968—dc 19 89-31405
CIP

ISBN 13: 978-0-71464-071-6 (pbk)

Typeset by Selectmove Ltd, London

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Editors' Introduction

The unfolding history and historiography of Southern Africa pose profound challenges for both analysis and praxis in the last decade of the twentieth century. These challenges are reflected in the range of investigations and contradictions, some of which are treated here, which together constitute an intellectual and political conjuncture. The apparently snail-like pace of change in post-Second World War Southern Africa was only occasionally and briefly accelerated before repression and regression occurred – Sharpeville in 1960, the Portuguese coup in 1974 and Soweto in 1976 – until Zimbabwe's independence at the start of the 1980s and Namibia's freedom anticipated for the end of the decade. Yet underneath the appearances of continuity and hegemony, myriad forms of resistance have in fact developed, both theoretical and practical. The emergence of new studies and strategies for liberation in Southern Africa over the last decade confront not only orthodox approaches to the region but also traditional perspectives on Africa as a whole. The contemporary history and historiography of Southern Africa pose challenges, then, to African studies and states in general. Hence the preparation of our two-volume series of original essays on the past, present and prospective economic history of this most absorbing and exciting region.

It could be rightly claimed that a comprehensive economic history of each of the countries of Southern Africa deserves a book-size monograph. While fully realising this the editors of the present work undertook a less ambitious, if perhaps a no less demanding, task. By limiting this book to specialised studies they strove, instead, to cover the region as a whole and to bring out similarities, differences, conflicts and interrelationships between its various parts. In a follow-up collection of studies, the scope is extended to South Africa, Lesotho and Swaziland.

It is hardly necessary to justify the need for such a work at the present time, or its usefulness for future reference. It would be trite to say that the present cannot be understood without the knowledge of the past. An important reason for the timeliness of this work can also be found in the intensity and rapidity of changes which we are witnessing now and which are likely to be viewed in future as a watershed in the history of our century in general, and of economic history in particular.

In Southern Africa[1] the last three decades have abounded in conflicts of profound proportions. Here, the process of decolonisation, more peaceful in many other parts of Africa, went through the turbulence

of the Angolan and Mozambican uprisings, the Unilateral Declaration of Independence (UDI) in (Southern) Rhodesia by the white regime, followed by guerilla warfare in that country, post-independence civil wars in the former Portuguese territories, strife for freedom in Namibia, and the overwhelming drama of the anti-apartheid struggle in the Republic of South Africa. The Southern African region inherited a particularly intense legacy of colonial and settler rule, including exceptional susceptibility to inter-ethnic conflicts related to boundary problems, the relative importance of white settlement with all its unacceptable trappings, lopsided economic structures, and various forms of neocolonialism which could be listed *ad libitum*.

The dramatic changes which we are witnessing presently show a snowballing effect and, as such, are unlikely ever to be reversed. Their outward appearance is political. However, beneath the surface, economic factors are of paramount importance. On the Southern African scene at the end of the 1980s a new development is the apparent willingness of the South African government to grant independence to Namibia, coupled with the prospects of the withdrawal of the Cuban troops from Angola. On the one hand, hard economic reality points to the effects of sanctions on South Africa, including the embargo on international credit and technology, the burdens of foreign debt and overstretched military expenditure. On the other hand, there are immense implications of *perestroika* in the Soviet Union which, among other things, put the material support for class struggles in the non-communist world on the back-burner. This decision affects, in no uncertain terms, the position of several Front Line States vis-à-vis South Africa. To many observers this is a radical change with far-reaching economic and political consequences; to those more open-minded among them, the possibility of unexpected important events in the Soviet Union, in the context of attempted reforms, cannot be excluded. To conclude, the Southern African scene of tomorrow is likely to be very different from what it was yesterday, or even today, albeit with some fundamental continuities.

Of special relevance, from our viewpoint, is also the evolution, if not always radical, yet often vital of the methods and approaches to the economic history of the region. Speculations regarding the direction of this process of change have intensified since the beginning of the present decade.[2] With some important exceptions, the 'old' economic history was the domain of historians; while its 'new' versions passed into the hands of social scientists, especially economists. Whereas this rather oversimplified view of the status of the latter discipline may fit most of the Western world, Africa is an important exception. The economic content of African history has always been considerable from its very beginnings, even though histo-

rians have played a far more prominent role than economists in African historiography. In Africa, economic history continued to be the domain of historians and historically minded anthropologists.

The new economic history (the cliometric school) never took root in the methodology of African history and continues to be of marginal significance.[3] The reason for this are complex. If one tries to identify the most obvious of them, one can find it in the preoccupation with the pre-colonial history, which does not lend itself readily to quantitative treatment and is bound to attract the attention of social scientists other than economists. Moreover, most of the colonial history did not provide a fertile ground for quantitative analysis of the 'cliometric' type. This also explains, at least partly, why African economic history extended its interest to the burgeoning fields of social and cultural history.

An even earlier development was the application of Marxian analysis which tended to imbue the discipline with the spirit of dialectical materialism.[4] It views history, in part, in terms of a dominant mode of production. Here, while the institutional aspects are not ignored and the material forces of production are emphasised, the appropriation of the surplus is viewed as a result of a conflict between classes. Useful as the concept of a mode of production may be, a recent discussion among Africanists has revealed a lack of willingness to accept it unconditionally as a methodological credo.[5] To narrow down the theoretical basis to the concept of class struggle, which for dialectical materialists is the driving force of history, can imply the neglect of many other vital factors – such as e.g. gender, ideology, demography, environment, etc.

In an attempt to find a more comprehensive approach, and to extend the basis for an explanatory effort, one may turn to the contribution made by the Annales group, whose interest has been in 'total history'.[6] Historians in the Annales school devote their attention to a number of disciplines with perhaps a stronger bias towards social history than economics. They are also reluctant to commit themselves to any rigorously defined method. Their open-mindedness permits them to be pragmatic and eclectic – a characteristic which deserves the attention of progressive economic historians, who ought to be aware of the fading boundary between social and cultural history and their own discipline. The protagonists of the Annales school do not reject the pre-statistical periods of history as unworthy of study. In this they show an affinity to most Africanists. Their open-mindedness permits them to recognise the methodological contribution of dialectical materialists to the extent that they find it useful.[7]

As a holistic approach to Southern African or any other history represents an unattainable ideal, one can only attempt to approximate it. Economic historians following this path should proceed with caution so as not to lose their disciplinary identity. However, Douglass North's dictum about the Annales scholars that 'they provide no leadership to aid us in acquiring a more systematic and scientific understanding of the economic past'[8] should not discourage us from drawing a lesson from their extremely valuable contributions.

These aspects are taken into consideration when dealing with the pre-colonial past of Southern Africa. The first chapter attempts to outline the history from the Early Iron Age to the occupation of the region by the Europeans, over a period of four centuries, starting with the Portuguese intrusion and ending with the late nineteenth-century 'scramble' for Africa.

The geographically extended area of the Bantu migrations and the related wide range of economic, social, and cultural interactions between population groups, necessitated the coverage of the whole territory of Southern Africa. Plainly, this approach is intended to satisfy the requirements of the sequel volume on South Africa, the Lesotho and Swaziland. It serves to situate and indicate the extended tradition of regional relations. They thus constitute useful additions to the on-going development of Southern Africana. Regional studies of an interdisciplinary kind have multiplied during the decade of the 1980s. A few appeared before then, but these usually concentrated on either a subset of states (eg. BLS or the then 'unholy alliance' of settler regimes) or a subset of issues – strategic or economic or labour or infrastructure. Until the welcome appearance of contemporary collections by Joseph Hanlon, and by Phyllis Johnson and David Martin, in the mid-1980s[9] there were all too few comprehensive analyses of the political economy of Southern Africa. The independence of Zimbabwe in 1980 transformed the regional context, compelling scholars as well as statespersons to treat Southern African contradictions, both cooperative and conflictual, in a comprehensive manner.[10] The contemporary chapters in this collection identify and analyse the most salient of these.

Thus the essays on the colonial and the post-colonial period, presented in the five case-study chapters, concentrate on particular countries and on particular aspects of their economic history. In so doing, they point to similarities and contrasts, cooperation and conflict over time. They also reflect distinctive aspects of each political economy, notably degrees of authoritarianism and industrialisation, and debates over land and labour, food crops and export commodities. Southern Africa has witnessed considerable variation at the level of politics and rhetoric in recent

decades but its underlying cohesion and comparability remain. New regional institutions seek to advance such cooperation for development into the 1990s which may yet experience the liberation of South Africa as well as of Namibia.

One sector in which there has been considerable change and debate in the region over the last decade is that of food: food security has become a growth industry for consultants and scholars given the incidence of destabilisation and drought, with major disagreements about how to define and secure regional production, storage and distribution.[11]

Lastly, there is the problem of analytic emphasis on the various elements of human lives – Basic Human Needs over time – including the influence of natural environment. When these elements act as the variables which determine the course of historical events, the force of their impact varies with the length of time under consideration. Thus, throughout the millennia of the African Iron Age, demography, environmental, cultural and health factors played a prominent role. In a relatively short run, encompassing just a few decades, the number of factors and their strength changes, leaving more room for the all-important impact of politics on economic and social life; i.e. raw ecological vulnerability was moderated, at least for some societies. This is visible in the influence of internal political forces on economic life, as well as in the degree and mechanics of dependence between the Southern African 'periphery' and the highly industrialised Western 'centre', on the one hand, and the narrower 'periphery' of the Front Line States vis-à-vis the South African 'centre', on the other.

This theme of politics, with its roots deeply embedded in the rich soil of the controversial socio-economic issues, will appear in a widened perspective in the companion collection of studies on the remaining countries of Southern Africa.

NOTES

1. For the purpose of this study Southern Africa is taken roughly as the territories south of the line running between the estuaries of the rivers Zaire, in the west, and Ruvuma, in the east.
2. See a series of articles in the *Journal of Interdisciplinary History*, Vol. XII, No. 2 (1981).
3. For a useful survey and the discussion of the problems encountered by the school see: Donald N. McCloskey, 'The Achievements of the Cliometric School', *Journal of Economic History*, Vol. 38, No. 1 (1978), 13–28.
4. For a discussion of the role played in economic history by the Marxist School see: Jon S. Cohen, 'The Achievements of Economic History: The Marxist School', *Journal of Economic History*, Vol. 38, No. 1 (1978), 29–57.
5. See a series of articles in the *Canadian Journal of African Studies*, Vol. 19, No. 1 (1985), 1–174. An informative discussion of some of the problems faced by the Marxist methodologists can also be found in Mike Morris, 'Social History and the Transition to

Capitalism in the South African Countryside', *Review of African Political Economy*, Vol. 41 (Sept 1988), 60–72.

6. For a discussion of the role played in economic history by the Annales School see: Robert Forster, 'The Achievements of the Annales School', *Journal of Economic History*, Vol. 38, No. 1 58–80.
7. These important characteristics are well epitomized by the example of a collection of studies by Shula Marks and Anthony Atmore, eds., *Economy and Society in Pre-Industrial South Africa* (London, 1980), to mention one of the more recent works of this kind.
8. Cited by Robert Forster, *loc. cit.*, p. 80.
9. See Joseph Hanlon, *Apartheid's Second Front* (Harmondsworth: Penguin, 1986) and *Beggar Your Neighbours* (London: James Currey & CIIR, 1986) and Phyllis Johnson & David Martin (eds), *Destruction Engagement: Southern Africa at War* (Harare: Zimbabwe Publishing House, 1986).
10. For an overview of this literature see Timothy M. Shaw, *Southern Africa in Crisis: an analysis and bibliography* (Halifax: Centre for Foreign Policy Studies, 1986). See also David R. Black *et al, Foreign Policy in Small States: Botswana, Lesotho, Swaziland & Southern Africa* (Halifax: Centre for Foreign Policy Studies, 1988).
11. For insights into these issues see series of reports and annual collections from the University of Zimbabwe/Michigan State University Food Security in Southern Africa Project and Coralie Bryant (ed), *Poverty, Policy, and Food Security in Southern Africa* (Boulder: Lynne Rienner, 1988).

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1

Socio-Economic Formations of the Southern African Iron Age: An Overview

ZBIGNIEW A. KONCZACKI

INTRODUCTION

The antiquity of the *Homo sapiens* in Southern Africa[1] goes back at least 80–100,000 years as indicated by the discoveries of human remains which include the archaeological finding made in 1974 at Border Cave (kwaZulu) (21, pp.212–15). No evidence has been found for the presence of the Neanderthals or "Neanderthaloids" in the southern sub-continent or, for that matter, in Africa south of the Sahara. Instead the population is typified by an early *Homo sapiens* variant with some Khoisan-Negro affinities. It developed a relatively advanced Stone Age technology and economy indicated by the presence of specialised tools and the intense exploitation of marine resources (4, p.416).

A pertinent question arises – what were the conditions of life and the related distribution of the early populations of Southern Africa during the last glacial period? The important fact is that unlike during some previous periods of glaciation the sub-continent was not covered with ice, but climatic changes which took place on a large scale strongly influenced vegetation, human, and animal life. The last glacial maximum, with its cold and dry climate, occurred about 18,000 years ago. At that time, there were no significant changes in seasonal distribution of rainfall as compared with that of the present, but changes in total annual rainfall were considerable. The relevant archeological evidence has produced few traces of the population of hunter-gatherers, the ancestors of the San of Southern Africa, who depended for their subsistence on the natural environment. A visible change took place with the coming of the present interglacial epoch, some 12,000 years ago. Between 10,000 and 8,000 years ago, the largest increase in human population took place,

when the climatic optimum led to greater productivity of environments. Subsequently, there was some deterioration in the conditions of life. An instance of extremely unfavourable conditions is found in the Transvaal highveld, where hunter-gatherer population was absent between 8,000 and 2,000 years ago, i.e. until the arrival of the Iron Age agriculturalists (16, pp.325–7).

Iron Age farmers, who practised shifting cultivation, contributed to the destruction of the original dry forest and shrub. Grazing herds also played a role in modifying plant cover. Of particular significance was the impact of grass fires both man-induced and natural. The age-old practice of grass-burning had been noticed by Vasco da Gama who, in 1497, because of the dense smoke seen along the coast of the south-western Cape, called it *Terra de Fume*. Grass burning had been used already in prehistoric times against wild animals, for hunting purposes, and later on by pastoralists to induce the growth of grass. Subsequently European immigrants adopted the methods of the local inhabitants in order to increase the utilisation of natural pasture. Seasonal burning has undoubtedly been an ecological factor of considerable importance for a very long time. Its effects were manifold: the most important was an adjustment in plant species, as only fire resistant trees and shrubs could survive; second, a reduction in the formation of humus, the lowering of the soil pH; and third, an increase in soil erosion caused by the seasonal disappearance of plant cover (45, pp.166–8).

The results of recent studies have radically altered our views on the pace and the nature of the long-term ecological change. The older 'wilderness model', relying on the reconstruction of the Southern African flora in AD 1400 by J.P.H. Ackocks, assumed that, at that time, the environmental impact of the Iron Age farmers and pastoralists was insignificant in comparison with the role played by commercial cultivation and livestock-rearing of the colonial period (1, passim). A number of subsequent archeo-botanical investigations carried out in various parts of the region point to far-reaching modifications in the plant cover during the last two thousand years. The presently existing forests are only a remnant of the earlier Holocene biome. While the higher lying areas were probably covered with grasslands, the valleys and coastal plains, on the other hand, were overgrown with woodlands which were removed prior to the arrival of the whites. In eastern Botswana floral characteristics of certain locations allowed them to be identified with the Iron Age middens dating back to the ninth and the thirteenth centuries. Similar detective work has been done by archeologists in the Transvaal lowveld where the presence of *Acacia* indicated early village sties. In Zululand, as well, woodlands dominated by *Euclea divinorum* had replaced the original forests

felled in the pre-colonial period as the result of extensive iron-smelting activities (35, p.12). The appearance of secondary savanna and the shrub encroachment following the cessation of cultivation are, as a rule, tangible evidence of Iron Age occupation (29, pp.150–1).

Vegetation is also affected by significant changes in humidity, whether represented by alternating long periods of wet and dry climate (pluvials and interpluvials) extending over centuries or even millenia, or the shorter term year-to-year variations in weather conditions.

It goes without saying that vegetational patterns have been formed over thousands of years as a result of slow changes. They have also been modified by man's interference. Thus the present plant cover cannot be considered as entirely 'natural' and the landscape which is seen today may be mainly anthropogenic.

EARLY IRON AGE (EIA): BANTU MIGRATIONS AND ECONOMIC CHANGE

Prior to the great movement of the Bantu-speaking agriculturalists from the north, Southern Africa was inhabited solely by the San and Khoi peoples.[2] In contrast to the immigrant black-skinned Bantu-speakers, the San and the Khoi were yellow-skinned and their languages were related. The San came from East Africa in the distant past. The penetration of the Bantu, who arrived long before the coming of the first European settlers in the seventeenth century, initiated the Southern African Iron Age. The spread and growth of Bantu-speaking groups among the local Khoisan peoples[3] was gradual and largely peaceful, unlike the rapid movement of the Europeans in the eighteenth and nineteenth centuries, which was often accompanied by armed conflict. Whereas the Bantu-speaking people brought with them the benefits of the African Iron Age to the Late Stone Age population, the impact of European technology had a traumatic and disruptive effect on the indigenous peoples.

The beginnings of the dynamic process of migrations of the proto-Bantu speakers throughout sub-Saharan Africa can be traced to the original settlements in Cameroun and neighbouring Nigeria around 1,000 BC or even earlier. It was a movement of neolithic population which had left traces of pottery, ground stone artifacts and grindstones, made use of oil palm and consumed fruit of *Canarium schweinfurthii.* It is important to note that the Western Bantu did not cultivate cereals (82, p.132). Subsequently, as these migrants moved further to the south they began to grow yams on the forest fringes and clearings. Their food supply, which was complemented by hunting and gathering, allowed for population growth.

In recent years views on the Bantu expansion have changed reflecting the rapidly growing archeological evidence, the re-evaluation of older archeological material, the accumulation of linguistic evidence, and the positive results of linguistic and archeological correlations.[4]

According to D.W. Phillipson (66, pp.210–20), the expansion of Bantu-speakers was channelled into two streams: the Western and the Eastern. Between 1000 and 400 bc[5] some Bantu-speakers moved eastwards, along the fringes of the tropical forest into the Great Lakes region of East Africa where they established an Early Iron Age culture. This occurred when they came into contact with mixed-farmers who were probably the speakers of ancestral Central Sudanic languages. Apart from adopting the herding of domestic cattle and sheep and certain cereal crops (including sorghum), the Bantu-speakers acquired metal-working techniques (66, p.227).

The Western Stream of Bantu-speakers moved into northern Angola and between 300 and 100 bc was joined by a splinter group which left the Eastern Stream and proceeded around the southern margin of the equatorial forest, bringing with them Iron Age technology. These two groups coalesced into the Western Stream, which by 100bc entered northern Namibia, and between ad 400 and 500 reached Shaba and western Zambia, spreading out from there, after ad 1000, to the eastern part of Southern Africa. Meanwhile, about ad 100 to 400 the Eastern Stream reached the coast of southern Kenya. From there through the highlands, west of Lake Malawi, they moved into the Transvaal. Another branch of that stream moving east of Lake Malawi reached southern Mozambique, Natal and the eastern Transvaal.

Some of the assumptions of Phillipson's two-stream hypothesis, and the facts on which it is based, have been the subject of a lively debate in archeological literature (43, p.135; 38, p.447; 42, pp.223–7; 20, p.11). The controversy is likely to continue until discovery of some new facts and the publication of new radiocarbon dates make further revisions of the present views on this matter possible. It is already known that some of the population movements took place earlier than was originally thought. For instance, it has been discovered that Bantu settlements were in existence on the Mozambican coast by AD 200, if not earlier.[6] It also appears that the Western Stream sites in Zimbabwe (Rhodesia)[7] were at least as early as the Eastern Stream sites in Natal, which have recently been dated to the fourth century AD (43, p.136), while widespread presence of EIA communities in north-western and north-eastern Botswana goes back to the middle of the first millennium AD (20, p.14).

With this framework in mind we can now pass on to the agricultural history of the Bantu-speaking settlers. The typical EIA villages consisted

of small huts. These were made of mud (*daga*) which was applied over a pole and wattle frame and covered with a thatched roof. Storage bins raised above ground, and structured in a similar manner, as well as storage pits, were common. The preferred sites of these settlements were close to water-courses because of the growing dependence on cereals. Occupation was of relatively limited duration in keeping with the practice of shifting cultivation. In the areas of high soil fertility the occupation of land was more prolonged. Estimating population densities is difficult due to frequent changes of the place of residence. A small community on the move could easily create an impression of being numerically far larger. Nonetheless, it has been suggested that in many areas the EIA populations were too small to displace the autochthons. Low population densities permitted a peaceful coexistence between the newcomers and the indigenous population.

The acquisition of new crops by the former probably intensified their movements in search of suitable environments but, because of the largely different modes of procuring food supplies, the preferred environments of the two population groups did not overlap to any significant extent. Thus the open, dry country and densely forested areas remained the domain of hunters and gatherers (83, pp.138–9). Demographic pressures began to appear only many centuries later on.

Archeological evidence indicates the presence of domestic animals several hundred years before the advent of the Iron Age. The Late Stone Age herders were present in Western Zimbabwe (Rhodesia) by 200 BC, and in Namibia and the Cape at the beginning of the first millennium AD. Bones of domestic sheep, goats and cattle radiocarbon-dated to the fifth century ad have also been found at Broederstroom in the Brits District, west of Pretoria. In northern Botswana good grazing lands, in the area around the Okavango Delta and the Makgadikgadi Pans, may have been of crucial importance in the southward spread of livestock (66, p.120; 20 pp.4–6).

C. Ehret's study, based on linguistic evidence, dates the introduction of domestic animals into northern or northeastern Botswana to the second half of the first millennium BC. James Denbow indicates the early pastoral neolithic communities in East Africa of 3000–2000 B.C as a likely source of livestock for the Late Stone Age peoples of the Southern African region, and he finds the obstacle of a large geographical distance as 'not necessarily serious' (20, pp.6, 9).

The Khoi acquired their small stock from East Africa when their range extended much further north. Tsetse fly presented no barrier, hence one possible route to the south was via Mozambique. An alternative route led westward from the Makarikari Lake (northern Botswana) southwards

through Namibia to the Cape of Good Hope. It permitted the Khoi sheep-herders to avoid the crossing of the Mopani scrub veld which was deficient in grass.

According to C.K. Cooke the first sheep to reach the southern Cape were of the fat-tailed variety. When the Khoi came into contact with Bantu-speakers, the possessors of hairy thin-tailed sheep, the Khoi animals were cross-bred with the latter (84, p.437; 12, pp.268–9, 271–3). The acquisition by the Khoi of the fat-tailed sheep was, most likely, due to the advantages derived from their coarse wool and the fat deposit on the tail.

The goat, on the other hand, was not raised by the southern Khoi tribes at the time of the first European settlement at the Cape. Its acquisition was due to the Bantu-speakers who, in turn, obtained goats from their neighbours in the north (26, vol.2, pp.255, 258).[8]

The archaeological evidence of domestic cattle in Southern Africa is derived from a fairly widespread occurrence of bone remains. According to Phillipson none of the Eastern Stream cattle occurrences predate the meeting with the Western Stream cattle, which probably took place in the vicinity of the Victoria Falls region between ad 400 and 500. Passage through tsetse-infested lands of southern Tanzania must have deprived the Eastern Stream migrants of their cattle. This loss was only remedied after contact with the Western Stream Bantu was established. The latter's cattle escaped a similar fate and entered the area of the Gokomere Tunnel Site in Zimbabwe (Rhodesia) sometime after AD 600. Cattle remains (*Bos taurus*)[9] recovered from that site and from Mabveni have been radiocarbon dated to ad 530 ± 120 (SR-26), 570 ± 110 (SR-79) respectively (66, pp.146–7, 230; 79, p.461)

Phillipson's hypothesis regarding the re-acquisition of cattle by the Eastern Stream after the two streams had met, has been recently questioned, as new evidence from Malawi points to the presence of the cattle already in the third century (60, p.436).

In so far as cultivation is concerned the archeological findings are sufficient to give us a broad idea of the crops adopted by the EIA farmers. Their distribution was, however, far from being widespread and general. The settlement depended largely on the ecology. Adequate rainfall and deep alkaline soils were sought for the cultigens like grains, legumes and cucurbits which were the main crops. Sweet grazing was preferred as well as places where a good supply of timber was available for domestic fires, construction of huts and iron smelting. The areas which satisfied these requirements were limited and as the EIA way of life extended to the south it followed the narrow belt between the sea coast and the interior grasslands. The latter suffered from such disadvantages as acid soils,

drier climate, less palatable grazing and a shortage of timber. In fact, Tim Maggs used the Natal pattern as a predictive model for other parts of Southern Africa and suggested that a major environmental boundary is reached where the mean annual rainfall is less than 200 mm and the precipitation during the three summer months (December to February) becomes less than is required for the growth of the cultigens which were grown by the EIA farmers (55, pp.7–9). This explains the absence of cultivation to the south-west of the straight line drawn between Port St. Johns and Mafeking, with the exception of the coastal sites elsewhere and the deeply incised river valleys which provided a favourable environment for mixed farming of the Bantu migrants.

The earliest evidence indicates the presence of the EIA farmers on the east coast of Mozambique and in Natal at about AD 200 and in Malawi, Zimbabwe (Rhodesia), Zambia and the Transvaal a century and a half later[10] (43, p.135; 54, p.176; 28, p.160; 60, pp.436, 449, 452; 65, p.7; 75, pp.184, 185). The Natal site, at the rock shelter of Shongweni, gives direct evidence for the early cultivation of *Eleusine coracana* (finger millet), *Pennisetum americanum* (bulrush millet) and *Lagenaria sinceraria* (bottle gourd) (55, p.5). In Malawi, the Munga Hill site cattle remains have been dated to the third or fourth centuries. Archeological data from Zimbabwe (Rhodesia) and from Makwe in Zambia's Eastern Province suggest that the beginnings of the EIA in that region were roughly contemporary with similar developments in Malawi. In the Transvaal traces of bulrush millet at the third-century Silver Leaves site are another confirmation of the appearance of EIA cultivators to the south of the Limpopo River (66, pp.113–20; 55, p.6; 60, p.449).

As regards the technology of the EIA industrial complex, the most common product encountered by archeologists is pottery, and ceramic traditions have been used by them for the purpose of identifying other finds. According to Phillipson, in contrast to the later practice among Bantu-speakers, women were the EIA potters, although there is some probability that men may have also participated in pottery-making. By contrast, T.N. Huffman's careful analysis points to the absence of any convincing evidence that would indicate that men were the potters during the early Iron Age. Their participation in this craft was probably an exception rather than the rule (66, pp.147, 150; 42, p.237).

Whether or not pottery vessels were the object of trade, other than local, is an unresolved question. The likelihood that it may have been transported over long distances is small. Nonetheless, the existence of the trade in salt, a rather bulky commodity, raises the possibility that pottery may have been transported, as well, over long distances. Alternatively, pottery whose style ran counter to the local tradition may have been the

work of migrant potters, who, prompted by the desire to acquire some foreign goods, such as copper, visited distant localities. Numerous finds of copper ingots in places far removed from the mines indicate extensive trade in this metal.

Whereas ceramic industry is traced back to the Stone Age, the smelting and working of iron initiated a distinctive new period in Southern African prehistory. Nevertheless, owing to the scarcity of iron, only small objects, such as arrowheads, knives and hoes were manufactured. Larger tools continued to be made of stone and the coexistence of the two industries practised by the Bantu-speakers lasted for many centuries.

The absence of both the Copper Age and the Bronze Age in Black Africa can be explained in terms of the relative scarcity of copper and tin, prior to the discovery of copper in Zaïre and Zambia, as compared to iron. This does not mean that other metals were unknown to the Iron Age metal workers of Southern Africa. In order of importance iron was followed by copper and gold.

In Angola, the earliest Iron Age radiocarbon date goes back to the second half of the first century ad, and is related to a location (Furi, Lunda) in the north-east. There are still vast areas in the centre and the south of that country where no systematic excavation has taken place (17, pp.491, 504).

The regions extending to the South – Namibia, Botswana and the northern parts of the Cape Province – because of their climatic characteristics, were not likely to attract settlers who were primarily interested in good farming land and adequate supply of wood. All these regions could offer were pastures of highly varying quality, and in comparison to the contemporary settled farmers, nomadic pastoralists, who used them, left very few traces of their existence. Little evidence is available and not much weight should be attached to isolated radiocarbon dates. At their best they can indicate the location and the earliest appearance of a given phenomenon but not its magnitude and its full territorial coverage.

Iron ore, which exists in many parts of Southern Africa, was obtained from surface exposures or from shallow pits. Archeological evidence indicates that it was smelted in tall, cylindrical furnaces fired by natural draught, capable of attaining temperatures in excess of 1110°C. It also appears that the later taboo forbidding contact between smelters and women may not have existed at that time, as not infrequently smelting took place in villages.

The occurrence of copper is far more restricted than that of iron ore deposits, and apart from the Shaba–Zambia Copperbelt it is limited to only a few areas. Prehistoric copper mining sites had been largely damaged by modern mining operations; however, many objects made of