



RECONSTRUCTING KNOWLEDGE ABOUT LIVESTOCK MANAGEMENT IN SOUTHERN AFRICA BEFORE COLONIZATION

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ABSTRACT: This paper emanates from a project of the South African Veterinary Association to record the veterinary history of South Africa. Choosing an era where there was no written history, that of 1850 back to prehistory, creates unique challenges. No single methodology can be used. Archaeology, including archaeozoology and rock art provide some clues. Anthropology, describing the peoples of the subcontinent and how they have related to their animals, is another source. The vernacular names of plants provide some clues. Oral history is touched on before proceeding to written and pictorial history. The problems associated with each are described. The first part will provide some findings, and the shortcomings of the discipline and its techniques. To find a way to organise the information for a paper such as this has proved to be difficult. There are many dimensions to consider. We will start with some considerations around the source disciplines and then move over to findings on the animals involved, narrowing it down to aspects such as animal management and treatment. The paper will conclude with problems concerning the availability of resources.

Introduction

This paper emanates from one of the projects of the History Committee of the South African Veterinary Association. The purpose of the overall project is to record the veterinary history of South Africa, and members of the committee chose a topic he or she was interested in. In most cases a disease or group of diseases in which the author specializes, or used to specialize, during his or her career, was chosen. Most of the members are retired and the topics cover a broad range of veterinary disciplines.

The study undertaken by Snijders was different. He preferred an era before 1850, ranging back to pre-history. This project is extremely interesting and challenging. Information sources for this period are different from what Snijders was used to and also different from what veterinary librarians are used to handling.

The study drew from various disciplines. Since some of the peoples / population groups involved had no written history, the reconstruction of their knowledge needs to be done in another way. Archaeology partially comes to the rescue. There are fingerprints (and hoof-marks) from the past; namely the 'hard' evidence from archaeology and the pictorial records of the indigenous peoples of Africa. Southern Africa has a wealth of archaeological data.

It will also be seen that information about animals cannot be separated from the peoples who interacted with them. Thus this paper has a strong anthropological onslaught. Who were the peoples and where did their livestock come from? What diseases did they contract and how were they treated? Snijders attempted to

reconstruct how these people lived and related to their livestock.

The project is still in progress so only some of the findings will be reported here. In fact to try to do so is an immense and ambitious undertaking, and severe difficulties arose. There is no one obvious methodology to use. The paper will, therefore, focus as much on problems as on findings.

The first part will provide some findings and the shortcomings of the discipline and its techniques. To find a way to organise the information for a paper such as this already proved very difficult. There are many dimensions to consider. We will start with some considerations around the source disciplines and then move over to findings on the animals involved, narrowing them down to aspects such as animal management and treatment. The paper will conclude with problems relating to the availability of resources.

Settlements (anthropology) and archaeozoological remains

The original inhabitants of the region were the Khoisan. The Khoikhoi was a mainly pastoralist group and the San or Bushman, a hunter-gatherer group. The "Bantu" nations followed by approximately 500 A.D. The Europeans came some 1000 years later. Most of the information used refers to the Cape and southernmost Africa, simply because it is most relevant to our interest in the animals and their diseases. There are no physical boundaries between southern and the rest of Africa, and there were movements to and fro of people, their cultures and their livestock. As we will show, all domestic livestock in southern Africa came from the north.

One exception to this is Mapungubwe. It appears to be the first city-state in southern Africa and the start of the Zimbabwean Tradition.¹ Mapungubwe represents a combination of pastoral, agrarian, gathering and trading culture. The development of the central city, late first millennium, can be ascribed to trade of ivory and gold with the east coast (Mozambique) for luxury items of Indian, Persian and Chinese origin.



Fig 1. Map showing location of Mapungubwe and Great Zimbabwe²

The settlement, however, was sustained by livestock production as can be seen from the cattle, sheep and goat remains³. The decline after about 200 years can be ascribed *inter alia* to climatic and environmental changes and shifting to the more favourable climate for cattle production of Great Zimbabwe and associated sites. These are positioned on a plateau, and it is suggested that this allowed a transhumant system with the lowveld. Transhumance is a system where livestock are moved around over long distances to more favourable pasture conditions. The lowveld was a tsetse area. The tsetse is the vector of trypanosomiasis and the fly could be avoided by moving to the lowveld during the colder months less favourable for the tsetse fly.

¹ Mitchell, P. 2002. *The archaeology of Southern Africa*. Cambridge: Cambridge University Press. pp 300-343.

² *Mapungubwe* (ca. 1050 - 1270 A.D.) Available online: http://www.metmuseum.org/toah/hd/mapu/hd_mapu.htm

³ Voigt, E.A. 1983. *Mapungubwe : An Archaeozoological Interpretation of an Iron Age Community*. Transvaal Museum Monograph No. 1. Pretoria: Transvaal Museum.
Note: Voigt discusses the merits and problems associated with archaeozoology

Shortcomings

Unfortunately archaeology often cannot say who the people were that lived there or what breed of animal they had. This has to be conjectural based on, for instance, anatomical features. The distinction between sheep and goats, lumped together as caprines is not always possible based on fragments of bone. The wild bovids complicate the identification of domestic species and the jackal that of the domestic dog.

Rock paintings

Interestingly enough it is the rock paintings and engravings which in addition to the species of animal, also indicate large gatherings of people; type of livestock such as fat-tailed sheep, humpless cattle; cattle raids; and shamanistic experiences^{4, 5}. These are commonly ascribed to the San in southern Africa. Game farmers can refer, for example to rock engravings in the Kimberley district to see what game occurred in that region. Thus, the art has both archaeological and anthropological connotations.

Shortcomings

Rock art cannot always be dated. The subject matter provides a time frame for example, mounted men and ox-wagons. This indicates that the artists already were executing their art under early colonial influences.

Deducting information from vernacular names of plant species

Watt and Breyer-Brandwijk⁶, in their compendium of medicinal and poisonous plants of southern and eastern Africa, list numerous plants with San and Khoikhoi names and uses. This includes plants for controlling thirst, with mild narcotic effects and arrow-poisons.

Shortcomings

Present literature sources make very little reference to the use of plants for healing by the San. Further research is still needed.

⁴ Lewis-Williams, D. & Dowson, T. 1989. *Images of Power*. Johannesburg: Southern Book Publishers.

⁵ Iziko Museums of Cape Town. *The Linton rock painting*. Available online: <http://www.museums.org.za/sam/resource/arch/linton.htm>

⁶ Watt, J.M. & Breyer-Brandwijk, G.M. 1962. *Medicinal and Poisonous Plants of Southern and Eastern Africa*. London: E. & S. Livingstone.



Fig 2. The Linton painting shows the experiences of San healers who went into trance to draw on supernatural power for curing illness, preventing danger, attracting game or making rain. The panel contains many images of trance. For example the reclining human figure with cloven hoofs (enlarged in Fig 3) represents a healer who has taken on animal form in order to enter the spirit world. A state of trance was said to be like being under water, which explains the fish and eels surrounding the figure



Fig 3.

Oral history

Oral history as recorded by anthropologists assists in exploring the past.

Sources for this are decreasing and only found amongst the oldest members of a community.

Shortcomings

There are many objections and concerns about the reliability of oral history. Information may be altered each time it is passed on by an individual, leave alone generations.

Oral history is thought to be reliable up to circa 200 years in communities where there is no written language. In Africa cases occur where genealogical

tables can be traced back to 400 years. Latacz⁷ reviewed oral history in the case of Troy and Homer, comparing Homer's Troy to later written versions and recent archaeological findings.

Written history

The availability of cattle and sheep was one of the reasons why the Dutch commercial marine company, the Dutch East India Company (DEIC) selected the Cape for the establishment of a refreshment and recovery station for its fleets to the East. Written information on this era is well preserved. The DEIC instructed all ship and station commanders to keep diaries. The diary of Jan van Riebeeck, the first refreshment station commander, was well preserved

⁷ Latacz, J. 2004. *Troy and Homer*. Oxford: Oxford University Press.

and published in the 20th century. Versions in the original Dutch, handy for linguists, and in modern English, are available. The latter facilitates historical research.

Officers of this company soon resigned to become so-called Vryburgers (“free citizens”) and began a migration towards the east. Later participants in this movement are called the Trekboere (migrating farmers). The movement was halted when they met the southernmost of the Bantu speaking people, the Xhosa.

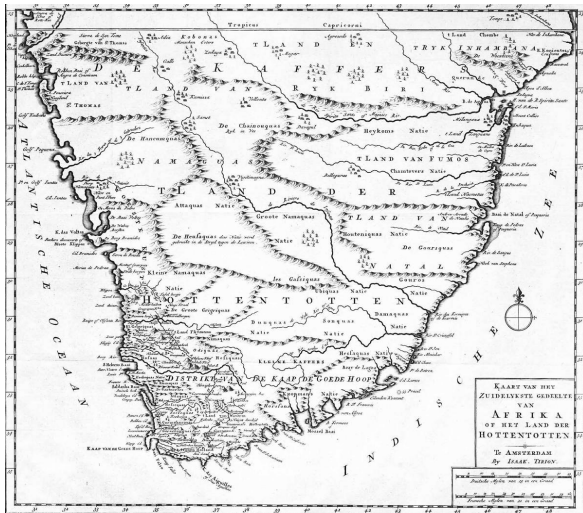


Fig 4. Historical map of southern Africa. Detail available on the WWW. The migration of Dutch farmers started in the south-western corner of the continent (present Cape Town) and continued to the east and the north.⁸

Command of the colony was retained by the DEIC, mainly by the so-called Council of Policy. The “Resolutions” of this body, 1652-1795, is also well preserved. Most records are still available, though in a poor physical condition. The project “Towards a New Age of Partnership in Dutch East India Company Archives and Research” (TANAP) aims to make it available on the Internet.⁹

Resistance to the colonisation of the Cape by Britain in the early 19th century led to another major migration, the Great Trek, between 1837 and 1850. Here they met the other Bantu groups. Political borders were drawn and whilst it cannot be said that there was good political stability, this was the last of the migrations. Recording of knowledge on paper commenced for the northern parts

⁸ Towards a New Age of Partnership in Dutch East India Company Archives and Research. Available online: http://tanap.net/content/activities/documents/resolutions_Cape_of_Good_Hope/landkaart.htm

⁹ Towards a New Age of Partnership in Dutch East India Company Archives and Research. Available online: <http://www.tanap.net/content/archives/introduction.cfm>

of the present country as well. Therefore, this marks the end of our self-imposed limit of the era before pre-colonisation, the most difficult part to research.



Fig 5. Photograph from TANAP website showing the condition of DEIC archives

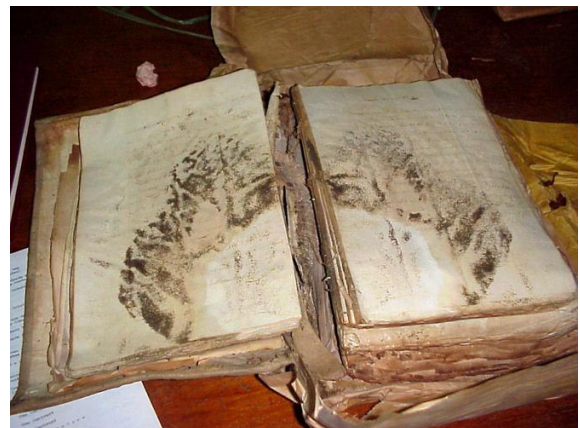


Fig 6. Another photograph showing the condition of DEIC archives, this time from the contents.

Shortcomings

The problem with using the written information of the colonists is that it is their interpretations and their perceptions of the customs of the indigenous people. However, that is not all. The earliest written reports on the Khoikhoi unfortunately indicate that their patterns of stock management had been affected very soon by the DEIC settlement at the Cape, and therefore it is not possible to reconstruct their customs exactly. The Resolutions of the Council of Policy refer to local and inland barter expeditions and their reports of the Khoikhoi. The DEIC was a commercial enterprise and their main concern was the health of their own livestock and the availability of lowest-cost livestock from the indigenous people. Therefore, it is not wrong to report on the interface between colonist and indigenous people, and the period of transition, post 1652. It is unavoidable.

An example of a case researched is the origin of sheep scab. In 1742, Messrs Van Rhenen and Van Roijen complained that they had been falsely accused of selling

sheep with 'schurft' by their fellow contract butcher Johannes Crijwaagen who stated that they were selling "schurft" schaapen. From the context it was clear that this was a well-recognized condition, but no earlier reference could be found. Incidentally while reviewing De Wet & Bath,¹⁰ a reference was found to Simon van der Stel writing to his son in 1693 about measures to be taken for the control of 'skaapbrandsiekte' (sheep scab). When searching the year 1693 two resolutions were found referring to "schurft". (Note the slightly different spelling: 3 variations. The compiler of the electronic version (TANAP), Dr Helena Liebenberg, had warned the user that the spelling of names, words, etc varied according to the period the resolutions were written and the literacy of the recorder.) This example is very disturbing since it would appear that scab had been present in the Khoikhoi sheep before the arrival of the Dutch. Since scab is a winter condition, this may have been another reason for the transhumance.

Another example of spelling problems is the following: searches for 'stervte' (meaning death or mortality) provided five dates, while 'sterfte' yielded 122 dates. If the literacy level of the DEIC officials was questionable, the Cape was fortunately visited by a number of scientifically trained visitors. Their travel reports can be used to reconstruct what it may have been like pre-1652. Valentijn¹¹ visited the Cape four times, six months in all, over the period of 1685-1714, and Thunberg¹² visited during 1772-1773. Yet both were reporting on a Cape where the Colony had expanded and there were no peninsular Cape Khoikhoi left. The Khoikhoi population had been literally decimated by smallpox, and there had been a 25% drop in cattle numbers and almost 50% drop in sheep numbers of the colonists for the period 1711 to 1718. This was ascribed to a severe drought and 'diseases', and it must be assumed that at least similar losses would have occurred amongst the Khoikhoi livestock. Therefore, the travel reports written after approximately 1725 would reflect a highly modified Khoikhoi culture in the Cape Colony with changes even in the Great Namaqua across the Gariap. Nevertheless, scientifically trained travel-explorers such as Thunberg left accounts of the people and their customs, game,

¹⁰ De Wet, J.A.L. & Bath, G. F. 1994. *Kleinveesiektes*. Cape Town: Tafelberg.

Note: In 1693 Simon van der Stel was governor and these were resolutions passed by the Council.

¹¹ Valentijn, Francois, 1656-1727, Raidt, E. H. (ed). *Description of the Cape of Good Hope with the matters concerning it = Beschryvinge van de Kaap der Goede Hoop met de zaaken daar toe behoorende*. Cape Town: Van Riebeeck Society, 1973. Part 2, second series.

¹² Thunberg, C.P., Forbes, V. S. (ed). 1986. *Travels at the Cape of Good Hope 1772-1775*, based on the English edition London, 1793-1795. Cape Town: Van Riebeeck Society.

Note: Thunberg was medically-trained and a student of Linné (Linnaeus). His outstanding botanical collection was due to his interest in the medicinal properties of plants and he collected more than 3000 species from the Cape of Good Hope Colony.

botanical collections and animal diseases as seen in the livestock of the colonist.

Meaning can also change in transcription and translation. Copies of the official documents of the Cape were sent to The Hague, Netherlands. These copies were sometimes transcribed again for security reasons, and the copies were not necessarily identical. The published journal of Jan van Riebeeck¹³ was mainly compiled from the Cape copy (as opposed to the so-called The Hague copy). Thom's translation into English is, therefore, also mainly based on the Cape copy.

On 8 November 1659 Van Riebeeck sent 40 pigs to Rijk Overhagen, caretaker on Robbeneiland.

Overhagen wrote on 16 November to Van Riebeeck that he received only 36 pigs. Six of those died. More were expected to die as they have no "stamina". That is the final text Thom as translator preferred to offer. He, however, refers in a footnote that the The Hague copy stated: "hebben geen melck in de Beenen," while the Cape original says "hebben geen mergh in de beenen". Translated this means "to have no milk in the legs" and "to have no marrow in the bones," respectively. Dutch uses the same word, "beenen", for legs and bones. To have no milk in the legs figuratively means to have no stamina while to have no marrow in the bones means something else. Snijders believes that the pigs suffered from malnutrition and were so lean that there was no fat or marrow left in the bones.

Therefore, meaning had been altered in the The Hague copy, and Thom, as translator, chose the wrong version to use as default.

Pictorial history

Most of the travellers and explorers accompanied their written records by drawings, water colours and paintings. Some of the sketches were made on site, while others were completed by artists in Europe.

Sketches of game provide some assurance of the accuracy of the artist and a great deal of information can be gathered e.g. shape and type of hut, colour of sheep, goats and the variety of dogs.

Shortcomings

The sketches of people are not always identifiable and there appears to be some confusion between San and Khoikhoi.

Livestock

Cattle.

The earliest signs of domestication of *cattle* from the wild ox (*Bos primigenius*) in Africa appeared about 9000 BP on the southern Egyptian-Sudan border.

¹³ Thom, H. B. (ed). 1958. *Journal of Jan van Riebeeck. Volume III: 1659 – 1662*. Cape Town: A.A Balkema. pp154-155.



Die onafhanklike Khoikhoi van die Kaap met hul ry-osse, beeste, skape, bokke en honde, soos uitgebeeld deur 'n onbekende Nederlandse besoeker aan die Kaap omstreeks 1700. (Nasionale Biblioteek, Kaapstad)

Fig 7. An example of drawings from books by European travelers and settlers, both from the period and later centuries. The caption in Afrikaans, means: "The independent Khoikhoi of the Cape with their oxen for riding, cattle, sheep, goats and dogs, as presented by an unknown Dutch visitor to the Cape around 1700. Acknowledgement to the National Library, Cape Town is given as source of the drawings."¹⁴

This is the earliest example of an agro-pastoralist transhumance system. Domestic cattle have been in West Africa for more than 4000 years and more than 2000 years in southern Africa. The earliest signs of cattle in South Africa are dated about 1500 BP.

Two types of cattle evolved in southern Africa. The western type was a large, rangy and mobile animal represented by the Khoikhoi cattle and a progenitor of the modern Afrikaner cattle. This animal was adapted to semi-arid conditions e.g the Karoo, and also found in the fynbos region. Some of the west African cattle developed a tolerance for trypanosomosis. Adaptation to these environmental conditions take the form of late breeding and producing not much more milk than required for the calf.

¹⁴ Schoeman, Karel. 2002. *Die Suidhoek van Afrika : geskryfte oor Suid-Afrika uit die Nederlandse tyd, 1652-1806*. [The southern corner of Africa: writings on South Africa from the Dutch period, 1652-1806.] Pretoria: Protea Boekhuis.



1. Ox loaded ready to trek.
2. Head of a Kaffir ox with worked horns.

Fig 8. Top: 1. Ox loaded ready to Trek. Note matjieshuis and assegays. Bottom: 2. Head of a Kaffir ox with worked horns. This was for ornamental and identification purposes.¹⁵

The modern Nguni is an example of the eastern type. A somewhat smaller, more compact animal adapted to mixed woodland savannah and grassland regions of southern Africa. It is an earlier breeder and has a higher milk yield than the western type.

The cattle described above belong to the 'Sanga' group of cattle and are genetically distinct from the European (taurine) and the Asian (indicine) type.

The approximately 7500 years delay before their appearance in southern Africa may be due to diseases carried by game e.g. trypanosomosis, wildebeest Malignant Catarrhal Fever, buffalo-adapted Foot and Mouth Disease and Theileriosis.

Sanga cattle in southern Africa exhibit varying degrees of tick-tolerance and tick-borne diseases, e.g. heartwater (*Ehrlichia ruminantium*).

The western type was the form of cattle found in the

¹⁵ De Valiant F. 1781-1784. 1973. *Francois le Vaillant, traveller in South Africa, and his collection of 165 water-colour paintings 1781-1784*. Cape Town: Library of Parliament. Plate 63.

Note: "Kaffir" and also "Hottentot and Bushman" are presently considered derogatory words, but this was not always the case.

Cape before 1650. This animal provided transport, riding, meat, hides and some milk for the Khoikhoi. The oxen were even used for fighting between tribes.

Sheep

The oldest remains (current) of sheep are about 2000 years old and were found on the west coast of Namaqualand.

The sheep found at the Cape were of the hairy, fat-tailed type. This animal was well-adapted to south-western Africa. The sheep provided milk, meat, hides and, very importantly - fat. This fat was used cosmetically, provided the fat element in the diet and was used as butter.

The Khoikhoi sheep had some degree of tolerance to bluetongue and the hairy coat, a degree of tolerance for scab. These sheep formed the basis of modern breeds, e.g. Ronderib Afrikaner, and were used as foundation stock for the Merino and Karakul.

Goats

At the time of the arrival of the Dutch, there were no goats on the Cape Peninsula. Goats were present further inland and later travellers were impressed by the quality of these goats. This animal provided the mobility required for mountainous areas, and its browsing habits were well-suited to the shrubs of the Karoo. It formed the base for the Boergoat and was used in the propagation of the Angora.

Thus the indigenous livestock exhibited adaptation to the local environment and diseases.

Livestock Management

Indications of successful management are found in the reports of the mariners passing the Cape and the observations by Van Riebeeck, barter-expeditions and travellers.

Transhumance provided seasonal grazing, trace minerals and reduced disease exposure. The problems that the DEIC had with scab may be ascribed to the fact that their sheep were kept on the Cape Peninsula during the wet and cold winter.

There are archaeologists¹⁶ contesting the above-mentioned progression of pastoralism in southernmost Africa. The argument is based on questioning the assumption that sheep bones prove pastoralism. They cite the lack of continuity at the archaeological sites. According to this postulate, some Khoikhoi adopted pastoralism towards the end of the first millennium.

Disease management.

The diseases present and how they were managed have to be extrapolated from what was observed by the colonists and others. The indigenous diseases at the Cape were anthrax, bluetongue and probably Foot-and-Mouth disease. The latter two were less apparent in the indigenous livestock than in exotic breeds of cattle and sheep.

The main defence against livestock diseases was avoidance. In the case of anthrax the kraal and settlement were vacated.

The transhumant system assisted in avoiding areas suitable for insect-borne diseases such as bluetongue. This system was later used by the colonists to evade African horsesickness. It can be postulated that this was based on Khoikhoi knowledge.

Avoidance and hygiene were also practiced by the Dutch. The Council resolved September 7, 1693 that, since there had been heavy scab mortalities under the Company-owned sheep, shepherds must report cases to the livestock manager and the affected sheep must be slaughtered and the premises cleaned.

Treatment

Anthropological information indicates the belief that diseases were caused by evil spirits. Treatment was therefore aimed at propitiating the evil and vacating the cursed premises. Treatment by herbal smoke, burning and incising affected body areas were carried out by special people and assigned individuals.¹⁶

Under the heading "religious beliefs", Klinghardt discusses an internal energy (n/um) which was accessed through the medium of a religious specialist to effect, for example, healing of diseases. Curing rituals for individuals were also performed by a healer but with less formality.

Conclusions on the findings

The domestic livestock at the Cape were well adapted to the environment. The indigenous people followed a transhumant system cycle that allowed them to exploit the natural resources to their best advantage and without obvious signs of environmental degradation. Their livestock would provide foundation stock for modern breeds of sheep, goats and cattle. Their knowledge of medicinal and toxic plants is evident in the modern literature and is being investigated.

Specific problems around resources and information retrieval

Snijders experienced considerable problems in retrieving information mainly due to a lack of funding. At the time of compiling this paper he resided in a small town in a predominantly rural province, far from the large cities where the sources he needed are located. Sources contained in archive repositories are, of course, only available for use on the premises. One such source is the National Archives of South Africa located in Pretoria. He visited the archives and libraries when in Pretoria for other business, staying with friends and family. He also had to undertake archive research in Cape Town. He funded the travelling costs himself. The Veterinary Foundation, a body associated with the South African Veterinary Association, funded his subsistence for the days he conducted research, but grants from this body are limited.

He needed to research out-of print Africana works. These include books by the Van Riebeeck Society, a

¹⁶ Sadr, K. 1998. *The first herders of the Cape*. African Archaeological Review. 15(2) pp 102-132.

publisher of history books. He also needed to study travel accounts and sources on botany and indigenous knowledge. In the latter category one out of eleven sources he needed are in print.

Many of his requests are forwarded to the OVI (Onderstepoort Veterinary Institute) library. We had to borrow most of his needed material for this study, but we are unable to obtain rare Africana on loan. Where he visited libraries directly, he was faced with entry fees and the cost of copies. Fortunately, the University of Pretoria has exempted him from entry fees, after special arrangements were made. All costs regarding interlibrary loans and local copies, as well as postage, are carried by the ARC-OVI library. This library is also faced with a limited budget.

Correspondence with authors and obtaining reprints directly from them was a great help, and he reported that he had excellent cooperation from some libraries and authors.

The Internet is also a handy source and initiatives such as TANAP are especially useful. However, to download information via a slow Internet connection is frustrating, and once again, for his own account.

Swanepoel enquired with Sabinet, the national bibliographic network, about the possibility of giving him direct access to the reference module of their database. They generously granted him a free login code. This he used, but along with the problems mentioned above, often had difficulties in retrieving information. Individual online articles can be extremely expensive.

Final conclusion

This paper provides some insight into the problems involved in reconstructing knowledge. The study is, after all, not just for the sake of historical interest. Western / European thought dominated the scene for a long time and a study like this can provide fresh insights into African traditional knowledge, along with contemporary studies on the project. Objectivity should not be jeopardized by subjective and modernistic interpretations.

Acknowledgements

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