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# A need for foreign-language policies at tourist destinations in South Africa : Case study: 'Cradle of humankind' World Heritage Site.

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# A need for foreign-language policies at tourist destinations in South Africa

## Case study: 'Cradle of humankind' World Heritage Site

By

Aurélien R. Turcato

A research report submitted to the Faculty of Humanities, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of

MASTER OF ARTS (Translation)

## ABSTRACT

This study examines the availability of translated material into foreign languages, more specifically into French, at tourist destinations in South Africa. The Cradle of Humankind is chosen to carry out a case study and to show the lack of material available in languages other than English and the subsequent need for the development of a foreign-language policy.

This study attempts to show the way forward by translating Maropeng's mini-guidebook into French based on a prior analysis of the original English text following Nord's translation-relevant text analysis model.

Furthermore, this study is not an end in itself but a step toward a better representation of official South African languages as an integral part of language policies throughout the country, as suggested by the Constitution.

## DECLARATION

I declare that this dissertation is my own, unaided work, submitted in partial fulfilment of the requirements for the degree of Master of Arts (Translation) at the University of the Witwatersrand in Johannesburg. It has not been submitted before for any degree or examination at any other university.

.....

Aurélien R. Turcato

Johannesburg ……. day of …….. 2007

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Mr Anthony Paton – Educational Officer (Cradle of Humankind)
Mrs Chrissi Drunk – Former Brand Manager (Maropeng)
Mr Anton Post – General Manager (Maropeng)

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## ABBREVIATIONS

| | | |
|---|---|---|
| SC | : | source culture |
| SL | : | source language |
| SR | : | source recipient |
| ST | : | source text |
| TC | : | target culture |
| TL | : | target language |
| TR | : | target recipient |
| TT | : | target text |
| WHS | : | World Heritage Site |

## CHAPTER ONE

Introduction

### AIMS OF THE RESEARCH

This research has several aims:

- The primary aim of this research was to carry out a case study/action research in order to establish the needs and requirements of Maropeng and the Sterkfontein Caves World Heritage Site in terms of accommodating non English-speaking visitors with information translated into foreign languages. Assessing such parameters led to the translation, into French, of a guidebook for visitors at Sterkfontein and Maropeng. This translation was undertaken in such a way that it meets these requirements and that follows the principles of a translation approach as described in the theoretical framework of this paper. The following parameters were taken into consideration:

  - Prior to making any decisions as to whether this project is relevant and which languages would be involved, a survey was undertaken to assess the number of francophone visitors who visit South Africa yearly. The purpose of this survey was to establish whether the number of foreign visitors is significant enough to justify the translation of the material.

  - A storyline encompassing the majority of the information available on display signs, wall posters and video materials found at Maropeng is available. It has been processed and shortened into an English-version guidebook which will be sold or distributed to visitors.

  - The material contained in this guidebook was subsequently translated into French. The two languages are to appear in a single multilingual book.

    ⇒ Are visitors to this WHS mostly Anglophone or do they comprise a variety of international visitors?

    ⇒ If indeed it is composed of non-Anglophone visitors, what information is available to such visitors? Alternately, what needs to be done in order to accommodate the non-English speaking visitors on site with regard to the availability of information?

⇒ The central concern of this research is as follows: can the translation of a guidebook, following the principles of appropriate translation approaches, with particular regard to tourist text translation, be a solution to foreign visitors' lack of access to information by providing adequately and accurately translated material for their use?

- The secondary aim of this research is to point out that more could be done on the part of the authorities to provide non English-speaking foreigners with access to recreational and scientific information and, therefore, knowledge on cultural, nature conservation and archaeological sites countrywide, based on the case study at the Sterkfontein/Maropeng World Heritage Site (below are sub-aims which will make the achievement of this secondary aim possible).

  - As a means to accomplish this aim, I consulted the South African Tourism (SATOUR) database to obtain information on tourism figures in the country, and I worked in collaboration with SATOUR to better focus my research and efforts on the needs of South African tourism. I also interviewed the Gauteng provincial Department of Agriculture, Conservation and Environment (DACE), a major stakeholder at Maropeng, as well as the government department(s) responsible for tourism and will provide them with a copy of the completed research report.

- Ultimately, an anticipated consequence of this research is to raise awareness of the need to make informative tourist material available in a number of languages, both African and European, and also to raise awareness around the issues of language and tourism, and the need for a fully developed language policy for important tourist sites in the country.

This research aims at helping not so much to understand but to show and render obvious the fact that little material is made available in foreign languages in tourist venues countrywide. By translating a guidebook into French, this case study aims to demonstrate that the experience of a non-Anglophone visitor can be greatly enhanced by means of the availability of informative material in his or her language, providing that the translation of the original material is done following translation approaches which allow for the translated material to be best suited to the needs and expectations of its readership.

Therefore, this case study research focuses on the process of gathering the data required for decision-making, their processing, the management implications in the process and the ways in which the translation is made effective.

## GROUNDS OF THE RESEARCH

### Why translate?

The essence of translation is to transfer information from one language into another. The information expressed and contained in a language is encoded in its socio-cultural framework. Such transfer therefore conveys not only the information itself but the socio-cultural framework of which it forms part, as it is encoded in another language through translation. In broader terms, it can be said that translation makes information available to a new audience, or readership, thereby spreading knowledge by means of a skilful manipulation of an original work to render it accessible to, and understandable by, a target audience. Such manipulation is all the more important in the case of a work of a technical nature. Technical terminology, be it in the field of archaeology, palaeontology or geology, needs to be transferred carefully into the target language so as to retain its original meaning and relevance. Here, equivalence plays a crucial role and should be applied as far as possible.

### Background information: Sterkfontein 'cradle of humankind' World Heritage Site

The Cradle of Humankind is unique in that since 1947, there have been great scientific discoveries, which have been a breakthrough in the search for the origins of humankind. Embedded in the rocks, found in the numerous dolomitic caves in the area, are fossilised remains of hominids, their lithicultural remains and fossils of other plants, animals and pollen giving a complete picture of the hominids and their surroundings dating back over 3,3 million years. The richness and variety of these deposits, their excellent preservation in the caves, and the age of the specimens make this area of world significance. Coupled with this, the area contains archaeological sites dating back to the Early, Middle and Late Stone age, the Early and Late Iron Age, and recent history such as Boer War relics. It also has significant ecological value containing many plant communities, some of which are rare, with associated diverse animal communities.

A World Heritage Site is an area that is deemed to have exceptional universal value. It is protected and preserved against threats of changing social and economic conditions and natural decay. The world Heritage Committee, a body established by UNESCO (United Nations Educational Scientific and Cultural Organisation) is responsible for inscribing the chosen site. Once a site has been selected, it is included on the World Heritage Site list and is protected for future generations against threats of damage caused by natural conditions and human interventions.

To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria. These criteria are explained in the Operational Guidelines for the Implementation of the World Heritage Convention which, besides the text of the Convention, is the main working tool on World Heritage. The criteria are regularly revised by the Committee to reflect the evolution of the World Heritage concept itself. World Heritage sites are selected on the basis of six cultural and four natural criteria. (See http://whc.unesco.org/en/list/915/ for further information and legal documents).

The Sterkfontein Valley landscape comprises a number of fossil-bearing cave deposits which are considered to be of outstanding universal value, because they encapsulate a superbly preserved record of the fauna, including an invaluable record of the stages in the emergence and evolution of humanity, over the past 3.5 million years. This makes it, without doubt, one of the world's most important sites for human evolutionary studies and research.

| | |
|---|---|
| Property | The Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai, and Environs |
| Id. N° | 915 |
| State Party | South Africa |
| Criteria | C (iii) (vi) |

The Committee inscribed this property on the World Heritage List on the basis of *cultural criteria (iii)* and *(vi):*

*iii.* to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;

*iv.* to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

The Sterkfontein area contains an exceptionally large and scientifically significant group of sites which throw light on the earliest ancestors of humankind. They constitute a vast reserve of scientific information, the potential of which is enormous.

Grounds of this research

The reason I chose to conduct research on the availability of translated material for foreign visitors in cultural sites open to the public in South Africa is that as a French visitor, I have come to realise that little is available for non-English speakers in terms of informative material. And the French in which the little that is available is written is usually poor, to say the least. Therefore, I wished to find out the reasons for such a lack of translated material in places where tourists are found daily.

But more importantly, I wish to remedy this situation by proving that the number of foreign visitors is considerable and that such visitors need to have access to the information found in cultural sites, all the more in World Heritage Sites! Although UNESCO makes no mention, in the documents available on its official website, of a language policy or linguistic obligations implemented and enforced at its World Heritage Sites, it goes without saying that the nature of a WHS requires its 'content' to be made available to the whole world for its outstanding value.

I chose this particular site for several reasons:

Firstly, because my current studies in the field of translation and interpreting at the University of the Witwatersrand and my extensive experience in the field of nature conservation and tourism, which I studied for five years at the Tshwane University of Technology, allow me to combine two streams of scholarship. This combination of skills enables me both to assess the needs and expectations of a visitor and to fulfil some of them through translation. In fact, the translation of some terminology related to geology and archaeology, as is the case at the selected site, might be problematic for a person lacking the required background knowledge. Therefore, I see myself as particularly suited to fulfil this task.

Secondly, because Sterkfontein is a UNESCO World Heritage Site and considering the importance, for humanity, of the information it harbours, it more than deserves to see its informative material made available to foreign visitors in their own language.

In broader terms, my intention is to prove that the translation, into French, of the Maropeng guidebook has the potential to answer the needs of foreign visitors and to encourage the management of Maropeng to create a language policy which will provide for foreign and local non-Anglophone visitors – an achievable and necessary aim. It is hoped that the successful outcome of this case study will act as a motivation for other sites to follow suit countrywide.

This would allow for a greater satisfaction of, and understanding by, the foreign visitor, and a potentially increased accommodating ability on the part of the cultural site.

The choice of this particular site and its suitability for the objectives of this research were also confirmed by a statement made by Professor Phillip Tobias of the Department of Palaeontology at the University of the Witwatersrand: "In our quest to get nearer to the truth of how humans evolved, there is no part of the world that has yielded more secrets than the dozen or more fossil-bearing caves in the Cradle of Humankind."

The aims of this research also conform to the current language policy in South Africa: The **National Language Policy Framework** published by the Department of Arts and Culture in 2002.
This section confirms that this research falls within the scope of a national attempt to spread multilingualism in the public and the private sector. It needs to be emphasized that although this research focuses on the availability of a European language, French, for the benefit of tourism in South Africa, and not on that of a South African language, its aim is nonetheless to raise awareness about the need for functional multilingualism in a multilingual society where too little language planning takes place in the field of tourism.
Below are excerpts of Section One (Background and Context) of the National Language Policy Framework which are particularly relevant to this research:

> 1.1.5 To date management of linguistic diversity in post-apartheid South Africa has been made problematic by the lack of a clearly defined language policy, leading to the use of English and Afrikaans as the most dominant languages in the socio-economic and political domains of our society.

> 1.1.7 The Policy Framework […] takes into account the broad acceptance of linguistic diversity, social justice, the principle of equal access to public services and programmes, and respect for language rights.

1.3.1 Section 6 of the Constitution provides the principal legal framework for Multilingualism, […].

⇒ See page 52 for more information on Section 6 of the Constitution.

1.3.6 To promote linguistic diversity further, section 6(5) provides for the establishment of the Pan South African Language Board (PanSALB) to promote multilingualism […].

⇒ See following section on PanSALB for more information.

The aims of the Policy are given in Section 2 (Key Elements of the Policy):

2.1.2 facilitate equitable access to government services, knowledge and information;

Some of the principles on which it is based are as follows:

2.2.2 Recognising that languages are resources to maximise knowledge, expertise and full participation in the political and socio-economic domains;

Some aspects of its approach are as follows:

2.3.2 It will be expedient to engage language specialists to assist the process of developing functional multilingual programmes through research and the dissemination of findings.

Another relevant linguistic body in South Africa is the **Pan South African Language Board (PanSALB)**. I wish to briefly discuss its "Guidelines for Language Planning and Policy Development" (2001) to further demonstrate that the aims of my research conform with current language policy in South Africa.

In the above-mentioned document PanSALB defines 'functional multilingualism' as follows:

> This [functional multilingualism approach] implies that the **choice** of a particular language in a particular situation is determined by the **context** in which it is used, i.e. the *function*, the *audience* and the *message* for which it is employed.

Six underlying principles of language planning are stated as follows:

1. Functional Multilingualism;
2. Social justice and equal access to public services, resources and programmes;
3. Language preference(s), use and proficiency of the target audience. These need to be determined and should form the foundation for the language policy;
4. Broad acceptance of linguistic diversity;

5. Recognition of language rights;
6. Regular evaluation and revision (short, medium and long term).

PanSALB's aim is to develop its approach of Functional Multilingualism, which it refers to as "a realistic and sensible approach to language planning and policy development", in the framework of the norms and limiting factors set by the Constitution.

> "The main criteria of Functional Multilingualism are **language preference, use and proficiency**. In order to establish the language preference, use, and proficiency of a target audience, a language survey needs to be conducted. Functional Multilingualism, therefore, provides an approach in which the demographic, economic and attitudinal factors mentioned in the Constitution become an integral part of language planning and policy development."

Finally, this document mentions a second criterion of Functional Multilingualism:

> […] the selection of a language according to the aim of the communication taking into account the language preferences, use and proficiency of the target audience.

$\Rightarrow$ This approach to language planning by PanSALB shares many traits with the discipline of action research, which makes it a highly relevant source of information and evidence for this research. In effect, PanSALB's Functional Multilingualism approach aims at consulting all stakeholders before making any planning decisions. This criterion is beneficial as it allows for a participatory approach to the process of change.

My action research will have many of its benefits in common with this approach, including the following:

- To enhance effective communication;
- To increase efficiency in business by optimising the use of linguistic resources; and last but not least
- To make education and training opportunities more accessible and equitable.

Lastly, it is a personal belief that making crucial information of this kind available in as many languages as possible through translation will greatly assist in exposing the facts and proofs of the origins of mankind and its evolution process.

As a further illustration of the need for this research, let us look, firstly, at an excerpt of translated material that is currently used orally on the site by an accredited tour guide:

LE GUIDE DE STERKFONTEIN
Bonjour Mesdames et Messieurs. Bienvenue aux Caves de Sterkfontein. Vous etes dans un Site d'Heritage Mondial qu'on appelle le Cradle of Humankind ( Berceau de l'Humanite ), declaree par UNESCO en 1999 pour son statut culturel a l'egard des origines humaines. L'etendue du Cradle est de 47,000 hectares et c'est ici qu'on a trouve plus d'evidence des origines humaines que dans les autres sites de fossiles mondiaux.
Je m'appelle Sam et je vais vous faire faire un tour qui durera a peu pres une heure, divise en trois etapes. La premiere etape est une promenade a travers le temps. A la deuxieme, nous explorerons les caves et la troisieme nous fairons un tour au-dessus des caves.
Je vous prie de ne pas fumer ni de boire ou manger dans les caves. Vous pouvez prendre des photos mais il faut un flash dans les caves.

As can be seen, there are several oddities in the spelling and grammar used in this translation. For instance, some accents (*etes* instead of *êtes; egard* instead of *égard*) and articles (*Le Berceau de l'Humanité*) are missing, the register is not formal enough (*qu'on appelle* instead of *que l'on appelle)* and 'caves' is mistranslated as *caves* (which means 'basements' in French) instead of *grottes*. Such material needs to be edited by a professional translator.

In order to ensure that the translation produced in the framework of this research meets the needs of its target readership and the standards of a tourist text translation proper, the process follows two main approaches to translation discussed in chapter one below. The very adherence to such translation approaches by the translator, in the process of translating a tourist text, acts as a reminder and as a warning that a text, if it is to serve its purpose adequately, namely to have an effect on its readership equivalent to that of the source text on its own readership, while accurately conserving its informative content, needs to follow certain guidelines which are provided by approaches in the field of translation theory.

Further grounds of my research are the following figures, issued by StatsSA, which can be found on the SATOUR website and represent foreign tourist arrivals, in number of individuals, in South Africa between January and August 2005, in order of importance.
They show a comparison of the top four European nationalities recorded as foreign tourist arrivals in South Africa within the above-mentioned period. The choice of this period was dictated simply by the latest information available on this site.
According to the World Trade Organisation (WTO), foreign tourist arrivals are all foreign arrivals less all those who stayed for less than one day and more than 365 days, and exclude travellers who were remunerated from within the place they travelled to. The closest possible approximation to this definition, given the current format of statistics issued by Statssa, is "all foreign arrivals" less "workers" and "contract workers". SATOUR uses this definition.

The sensitivity of the difference between this definition and the closest alternative definition has been tested to be less than 0.5%.

The figures are presented in Table 1 below:

| COUNTRY OF ORIGIN | NUMBER OF INDIVIDUALS |
|---|---|
| United Kingdom | 295,695 |
| Germany | 143,173 |
| France | 65,082 |
| Netherlands | 61,937 |

Table 1: Foreign tourist arrivals, in number of individuals, in South Africa between January and August 2005

By looking at these figures, it can be seen that France (excluding francophone African countries) is ranked as the third country from which most foreign visitors in South Africa originate. The Democratic Republic of the Congo represents 10,183 individuals in the period under study but was not included here due to the bilingual (French and English) nature of its language policy.
For the purpose of this research, the figures show that only Germany comes before France in terms of the number of non-English speaking visitor arrivals in South Africa. This emphasizes the need for a language policy that would include French in its framework.

Finally, the following quote, which is available from the Maropeng "Discover yourself" website, better illustrates the driving force of this research and the reason that it is crucial that more efforts are made towards the development of language policies as a means to spread knowledge : "Ancestors of all humans, wherever they may live today, originally come from Africa. When visiting the Cradle of Humankind, visitors are returning to their place of origin. […] It is an ancestral home to all people, no matter what colour, culture or creed they are. […] About six million years ago in Africa, our hominid ancestors evolved to stand upright, and began walking on two feet, taking their first steps along the path of humanity".

**CHAPTER TWO**

Literature review and theoretical framework

## 1. Literature review

Due to the little work that is available on the topic of foreign-language policies in the field of translation theory, and the nature of this case study/action research, most of the literature consulted concerns procedures for conducting action and case study research. In terms of translation theory, the literature reviewed explores examples of translations of tourism brochures and the underlying methodology used for this text type. Also, literature on relevant approaches to translation is included as a theoretical supportive background. Finally, a brief overview of the dynamics of multilingualism in South Africa and the various language-policy paradigms as introduced by Ruiz (1984) are presented.

### 1.1 Action research and case study research

The participatory and active nature of my research categorises it as action research and, in many aspects, it takes the form of a case study. **Action research** is not a well-known type of research and therefore will be explained here, for clarification, with reference to two authors: Greenwood, D. & Levin, M. in *Introduction to action research: Social research for social change* (1998) and Stringer in *Action research* (1999). Firstly, let us look at how Greenwood & Levin (1998:4) define action research:

> AR [action research] is social research carried out by a team encompassing a professional action researcher and members of an organisation […] seeking to improve their situation

They carry on to explain that the researcher and stakeholders work together in an attempt to define a problem and to 'co-generate' actions as solutions for this particular problem. Action research is, in essence, a research practice with a social-change agenda. It does not solely study and analyse problems in society but also tries to resolve them. Action research contributes to the processes of social change in an active and direct manner, according to Greenwood and Levin (1998:4), and simultaneously, to the creation of valid social knowledge.

Action research can also be perceived as a combination of research, action and participation, as Greenwood and Levin (1998:7) explain, in that it aims at empowering a community, or organisation, through actively participating in the change process.

Stringer, whose approach to action research is less philosophical than Greenwood and Levin's approach, defines the purpose of action research by explaining that it enables a systematic investigation and resolution of problems experienced by practitioners and clients. He continues to say that it allows for the examination of the effectiveness of work practices in an organisation, as well as for methodical actions to be taken in the resolution of problems. In the case of this research, an organisation, Maropeng, was facing a problem in that it only had material available in one language. So the researcher consulted the organisation and a solution was co-generated. Stringer (1999:25) explains that the role of the researcher is "not that of an expert who does research, but that of a resource person". The researcher is a facilitator, a consultant who acts as a catalyst to assist stakeholders in defining and solving problems. Stringer explains further that in action research, 'process' takes precedence over 'result' as the aim is to empower people. He then gives general guidelines for the application of action research (1999:25):

- The project must capture the interest of people if it is to be successful as its driving force is cooperation.
- The problem central to the project must not be perceived solely from the researcher's perspective: the researcher must keep in mind that other matters might have higher priority for the leading stakeholders of the project. So people must also see a benefit in the activities undertaken in the research.
- This way, no authority should be necessary on the part of the researcher for the process to be successful.

Action research entails planning as much as it does research and action. Therefore, a number of preliminary activities must be undertaken by the researcher, which will ensure that the subsequent research process runs smoothly and is successful in the end. Some of these activities are listed below, as explained by Stringer (1999:48-57):

- Establishing contact with stakeholder groups:
  - To inform them of the purpose of the activities;
  - To make them feel that they own the project in some way;
  - Networking with all members to include all of them in the process.

- In this particular research, the stakeholders that are involved are Maropeng, Sterkfontein, SATourism and DACE.
- They all play a different role in the research process and participate, directly or indirectly in the gathering of evidence and the realisation of change in the situation at hand.

- Identifying the stakeholder groups: That is to find out which groups have direct influence on the organisation under study, and which groups can be clustered in a certain category. This is best illustrated by a chart which shows the power relations and roles played by each stakeholder group that is involved in the research process.

  - In this research, the importance of such a classification has proved crucial as the responsibility of the maintenance of the site's WHS status and that of the language policy management, for instance, is in the hands of different groups. If the researcher is to be efficient, he needs to have a thorough knowledge of which group has 'jurisdiction' over what issue.

- Identifying the key people: In other words, the researcher must be aware of the formal structure of the relevant organisation in order to address people in positions of influence and authority.

  - In this research, the key people were identified as Maropeng's general manager, Anton Post, and Maropeng's brand manager, Chrissi Drunk for their positions of influence and authority in the organisation.

- Establishing a role: The researcher must play a role, or at least be perceived as playing a role that is legitimate and non-threatening. Ultimately, the message to be conveyed is that the researcher is not here to judge but to help.

  - In this research, as the aim is to do a *pro bono* translation of a guidebook, the intention is made clear and the role the researcher plays is clearly delineated.

These four activities, if they are taken seriously and applied by the researcher, provide a working environment in which members know what role they play and what authority they have and, in this way, tensions are avoided and the research results optimised.

Furthermore, Stringer (1999:65-134) breaks the action research process down into 3 steps which a researcher should follow:

a) Look:

   What the author means here is that the researcher needs to have a look at the bigger picture, and not only a close look at the problem. A problem does not exist in isolation, but is part of a complex network of perceptions, beliefs and rules. Therefore by looking at the problem in its context, a better understanding can be achieved and a solution found more quickly.

   This broader view of the matter at hand is achieved by interviewing stakeholders in order to gather information and to grasp their point of view and vision of their own world. It can also be achieved by taking a guided tour by the end of which the researcher should have a broad view of the situation and context.

   Once this context has been observed, it must be described in detail to clarify in what context the events relating to the research take place. This can be achieved by temporal mapping, which is a methodical way of looking at events in a sequence, in time.

   - In this research, temporal mapping is used due to the fact that the research process consists of a series of events that will take place throughout this process. This way, the evolution of the situation will be made visible.

b) Think:

   This phase consists in the interpretation of the data gathered and helps construct a report of what was seen, what is currently taking place on site, and how it could be improved.

c) Act:

   This step consists in planning action. So the research facilitator now meets the stakeholders and together they reach a consensus on the actions to be taken, or what course of action to follow.

The research facilitator must ensure that actions and activities are perceived as purposeful and productive by the stakeholders so that they invest more time and energy in them.

⇒ An action that is rushed through to satisfy the desire to show that something is being done decreases the chances of success.

Part of this third step is the crucial implementation of such actions and the carrying out of a reviewing program.

To conclude and summarise this section on action research, let us quote Stringer (1999:167):

> In action research, researchers provide information that enables those responsible for making policy, managing programs and delivering services to make more informed judgments about their activities, thus increasing the possibility that their policies might be more appropriate and effective for the people they serve.

Now, in order to shed some light on the **case-study** orientation of the research undertaken in my paper, let us look at Yin's *Case study research: design and methods* (1994). Yin (1994:1) explains that a case study is the preferred strategy when the investigator has little or no control over the events – although this is not the case here since a participatory approach is adopted. The focus of case study research is typically on a contemporary phenomenon within its real-life context. One of the advantages of case study is that it allows an investigation to retain the holistic and meaningful character of real-life events. The purpose of case study can be exploratory, descriptive and/or explanatory.

A descriptive approach is adopted here, although areas of overlap do exist and tend to be extensive in this kind of research which often requires a combination of sources of evidence. In broader terms, Yin (1994:13) explains that a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and its context are not clearly evident. If a researcher believes that the contextual conditions are highly pertinent to the phenomenon of study, which is the case in this research, then case study research is recommended.

Yin (1994:20-27) explains that the design of case studies should include five components:

- The study's questions;
- The propositions (or the answers to the above questions);
- The units of analysis;
- The linking of data to the propositions; and
- The criteria for interpreting the findings.

The last two elements are the steps followed when undertaking data analysis. They are crucial for the implementation phase of a research process. Too often data and evidences are gathered and the researcher has no benchmark, or yardstick against which to evaluate his findings and, in the end, no valuable meaning can be extracted from such data.

- In this research, for instance, the quantitative data on the number of francophone entries in South Africa are used and applied in comparison with other dominant nationality entries in the country. This allows for the francophone data to be given a scale – they fit into a bigger picture and thereby acquire meaning.

In case study research, Yin (1994:78-102) explains, there are six sources of evidence, of which 3 are relevant to this research:

- Interviews:
  - Advantages: It is targeted on the topic and it is insightful.
  - Disadvantages: There is bias in the questions asked and in the responses, and there can be inaccuracies if the information orally acquired is forgotten.
  - Types: Interviews can be open-ended (ask for facts and opinion of interviewee about an event), focused (shorter open-ended interview following certain set of questions), or take the form of a formal survey (more structured questions, sampling involved).

- Direct observations:
  - Advantages: It reflects reality (real-time observations) and it is contextual.
  - Disadvantages: It is time-consuming and costly.
  - Types: On-site visit.

- Participant-observations:

- Advantages: same as direct observations but also insightful in terms of interpersonal relationships.
- Disadvantages: same as direct observations but also bias due to the investigator's manipulation of events.
- Types: Playing a role, participating

- With regard to this research, interviews were conducted with the key persons, direct observations were made during several tours on site, and participation takes the form of a translation.

Yin (1994:90) emphasises the notion of multiple sources of evidence. He explains that it allows investigators to address a broader range of historical, attitudinal and behavioural issues. In effect, the conclusion of a study is more convincing and accurate if it is based on several different sources of information following a corroboratory mode. It is very important that lines of enquiry converge because there is a difference between corroborated multiple sources of data and multiple sources addressing different facts.

Of interest in this section of the present paper are the four principles of data analysis that Yin (1994:123-124) introduces:

- Data analysis should:
  - Show that it relied on all relevant evidence;
  - Include all major rival interpretations;
  - Address most significant aspects of the case; and
  - The researcher should bring his own expert knowledge to the case.

In conclusion, Yin (1994:127-128) explains that, when composing a research report, a researcher must realise that a case study can be a significant communication device and that care should therefore be given to the development of the compositional structure of a case study report.

1.2 Approaches to translation: functionalist and relevant-theoretic

**Functionalism**, as explained by Nord in *Translation as a purposeful activity – Functionalist approaches explained* (1997), is a function-oriented concept and represents a broad approach within which variants exist. Nord (1997:1-2) explains that:

- A communication is conditioned by the constraints of the situation-in-culture;
- The sender in a communication has a communicative purpose;
- This purpose means there is an intention which gives a text a function to fulfil, which is what ought to be translated.

Further, Nord (1997:16-17) explains that an intercultural communication, or interpersonal interaction, implies action and therefore intentionality. This very interaction shows a willingness, on the part of the translator, to change the state of affairs intentionally, thereby affecting the agents involved in the communication act. Also, this interaction is limited in time and space, which implies that every situation has a historical and cultural dimension. When there are insufficient common grounds in terms of such dimensions as verbal and non-verbal behaviour, expectations, knowledge and perspectives between sender and receiver, the role of the translator is to bridge this cultural gap. According to the functionalist approach, culture is the proportion of verbalized or hidden presupposed text elements, or culture-specific elements, as Nord (1997:25) explains.

Nord (1997:26) continues to explain that the functionalist approach also dethrones the source text as the first and foremost criterion for a translator's decisions. This does not mean that the source text is ignored, but it does not mean either that a functionalist translation is solely target-oriented. The main criterion remains the intended function of the source text nevertheless.
Therefore, in the words of Reiss & Vermeer (1984:76), a translation is a "new offer of information in the target culture about some information offered in the source culture and language."

Nord (1997:27-29) bases her approach on Vermeer's general theory of translation: *skopostheorie*. This theory is based on the *skopos* of a text, i.e. its purpose. The purpose of the overall translation action is the prime principle determining any translation action. Further, *skopos* can be split into two entities: *function*, which is what a text means, or is intended to mean, from the receiver's point of view, and *intention*, which is an aim-oriented plan of action. Nord (1997:28) explains that, since a sender and a receiver belong to different cultural and situational settings, a sender's intention will, ideally, find its aim. If it does, intention and function will be analogous.

To conclude on functionalism, it can be said that a translational action is determined by its *skopos*.

Therefore, the fulfilment of the purpose of a translation may require this translation to be 'free' (target text oriented) or 'faithful' (source text oriented), but a translation should never become an attempt to fully adapt to the target culture's expectations. In the end, the purpose of the translation, as intended by the author in the original text, is what matters most.

It must be clarified that **Relevance theory** is only an account of translation. In other words it tries to explain how translation works, but it does not prescribe a specific way of translating. Relevance theory is based on an inferential model of communication. This model's central claim is that a sender provides evidence of his intention to convey a certain meaning, which is inferred by the receiver on the basis of the evidence provided. The aim of this model is to understand and to explain how the receiver infers the sender's meaning on the basis of the evidence provided by the latter. Further, relevance theory claims that a receiver has expectations, which are closely linked to his socio-cultural situation. A receiver will therefore choose an interpretation of the sender's utterance that best satisfies his expectations, or that is most relevant to him.

Relevance theory is a cognitive psychological theory: it treats utterance interpretation as a cognitive process. It is based on two main claims: the Cognitive Principle of Relevance which claims that "human cognition tends to be geared to the maximisation of relevance" (Sperber & Wilson, 1995: 260) and which forms the basis for inferential communication to take place, and the Communicative Principle of Relevance which claims that "every ostensive stimulus conveys a presumption of its own optimal relevance" (Unger, 2001). Combined, these principles provide for a view of communication as a process of "inferential intention-attribution" (Sperber & Wilson in Ward & Horn, 2004). This view can be explained by the following assumptions as presented by Sperber and Wilson (2002) *Relevance Theory*, and in Ward and Horn (2004) *Handbook of Pragmatics* (607-632).

- Utterances automatically create expectations which guide the hearer towards the speaker's meaning;
- The interpretation a rational hearer should choose is the one that best satisfies those expectations;
- Intuitively, an input (an utterance) is relevant to an individual when it connects with background information he has available to yield conclusions that matter to him;
- In relevance-theoretic terms, an input is relevant to an individual when its processing in a context of available assumptions yields a POSITIVE COGNITIVE EFFECT. A positive cognitive effect is a worthwhile difference to the individual's representation of the world;

- The most important type of cognitive effect achieved by processing an input in a context is a CONTEXTUAL IMPLICATION, a conclusion deducible from the input and the context together, but from neither input nor context alone. According to relevance theory, an input is RELEVANT to an individual when, and only when, its processing yields such positive cognitive effects;
- Intuitively, the greater the effort of perception, memory and inference required, the less rewarding the input will be to process, and hence the less deserving of our attention.
  In relevance-theoretic terms, the greater the PROCESSING EFFORT required, the less relevant the input will be. Thus, RELEVANCE may be assessed in terms of cognitive effects and processing effort.

> As a result of constant selection pressure towards increasing efficiency, the human cognitive system has developed in such a way that our perceptual mechanisms tend automatically to pick out potentially relevant stimuli, our memory retrieval mechanisms tend automatically to activate potentially relevant assumptions, and our inferential mechanisms tend spontaneously to process them in the most productive way.
>
> Sperber & Wilson (2002:254)

In other words, a hearer intuitively and automatically aims at optimal relevance. An input is optimally relevant to an audience if it is relevant enough to be worth the hearer's processing effort and if it is the most relevant one compatible with the hearer's abilities and preferences

1.3 Tourist texts and their translation

In addition to the two main translation theory approaches followed in the framework of this research, the following two approaches to translating tourist information texts are reviewed and considered as complements to the main approaches. Their relevance to this research and its aims is direct in that they help the translator gain knowledge on a specific kind of translation – that of tourist texts. The quality of the translation and, therefore, its fulfilment of the needs of its readership and, consequently, the success of this research project, depend on the skills the translator has gained in this specific area of translation by following expert approaches as described here.

**The relationship between text function and recipient orientation: tourist information texts.**

In *Text analysis in translation*, Nord (1991:219-232) devotes a section of her work to the analysis of the most relevant aspects of a tourist information text.

In line with her translation-oriented text analysis, this section describes the importance of analyzing certain extratextual and intratextual factors for the purpose of translating a tourist text.

Besides the usual extratextual factors such as the medium of communication, which in our case is in written form, the place and time of reception, the name of the author and the text type, which in our case is a guidebook, there are two factors that are particularly important with regard to our text type:

- The function of the text, which in our case is mostly informative; and
- The recipients, which in our case are the francophone tourists.

This is important, according to Nord, because text function has priority over the other factors, which implies that the manner in which the source text is translated must first and foremost take into consideration the purpose for which it is translated.

In the case of intratextual factors, the following must be kept in mind:

- The content of the text must be relevant for the different types of recipients;
- Presuppositions and background knowledge must be analysed and adapted to the target readership;
- Non-verbal elements, such as layout or illustrations, although of lesser importance in the achievement of functional equivalence, play a role in the overall impression of the recipient on the text and may influence the effect of the text on the recipient.
- The vocabulary used also plays a role in the effectiveness in which a message is conveyed and, therefore, a certain effect preserved. For instance, source-culture specific names or proverbs need to be changed into target-culture equivalents.
- Lastly, headings should be clear and should reflect the nature of the subject matter.

**Analysis and comparison of source texts and translation texts: Tourist information booklet**

In *A model for translation quality assessment*, House (1997:114-128) devotes a section of her work to the analysis of a source text and its translation with regard to several aspects that differ from that used by Nord (1991), and to quality.

For instance, the participation aspect of a translation: Is the addressee as involved in the reading of the translation as it is in that of the source text?

Is his participation still required or has the translation rendered the reading of the text passive by providing too much information in an attempt to bridge a cultural gap?

Then, House mentions the social role relationship. Has the form of address, be it personal or impersonal, been changed in the process of translation? Was this change necessary due to the target culture, or has the translated text become neutral for no apparent reasons?

Finally, the province of the text, or its purpose – Can the translated text still fulfil its original function and purpose which, in this case are, respectively, to inform the visitors and to induce them to visit?

It is by asking himself these questions that a translator will be able to compare and evaluate the source text and its translation. A statement of quality, based on the answers to these questions, can then be drawn up.

### 1.4 Multilingualism in South Africa and language-policy paradigms

According to Crystal (1987:360) as quoted by Heugh (in Mesthrie, 2002:449): "[…] less than a quarter of the world's nations give official recognition to two languages…and only six recognise three or more." This places South Africa on the "cutting edge of international language-policy development" with the official status granted to its eleven languages by the new constitution of 1996 and the Pan South African Language Board Act of 1995. However, not all types of multilingualism truly promote the economical status of the languages in a society. Ruiz (in Mesthrie, 2002:451-453) distinguishes between three ways of viewing languages and their positions in a society:

- Language as a problem implies "restricted access to the language of the ruling class", with the effect of rendering other languages and their users inferior. Language is also viewed as a problem when the dominant language group assimilates other languages to eliminate diversity and maintain monolingualism;
- Language as a right implies the consideration of languages on the level of social integration. Although the result of positive intentions, the development of such a language policy based solely on the concept of rights will be difficult to implement;
- Language as resource is the interdependent coexistence of languages and communities: "each language and its community of speakers is validated as part of the whole."

> Furthermore, Heugh (in Mesthrie, 2002:453) adds: "the view that each language is a resource to the nation carries with it the notion of the functional/instrumental uses of languages, or functional multilingualism.

The above emphasises the need for national language-policy formulation and its implementation to be "knitted into the overall plan for national development". Unless the implementation of a language policy is catered for, languages will remain rights and will not fulfil a function. Given that functional multilingualism is the only manner in which a language can acquire a status equal to that of other languages in a society, authorities must ensure the implementation of their language policies.

## 2. Theoretical framework

In this section, I wish to elaborate on the manner in which my approach to this research combines criteria of both action research and case study research. Then I wish to introduce the general approach to translation that I use in this research.

### 2.1 Action research and case study research combined

One of the main reasons action research is the preferred type of research in this instance is that it takes into consideration all stakeholders, in the widest sense of the term, who are involved in the research process. In other words, the action part of the research is based, on the one hand, on how the problem is perceived by the 'community' experiencing it, and, on the other hand, on the context in which both the problem and the stakeholders evolve. Therefore, decisions are not made by a single researcher, or investigator, based only on his own view of the problem and expertise. Contributions and propositions from the stakeholders are not only sought after but form a crucial part of the solution to the problem.

Although this research is less action research than it is a case study, some aspects of the former remain relevant. In effect, the main stakeholders, i.e. individuals in managerial positions at Maropeng, although not directly involved in the process of translation, decide which text should be translated as being most representative of the material on display and as most suited to fulfil the needs of foreign visitors.

Also, this research does not take place in a community and the participation factor, which is a characteristic of action research, cannot include a large number of individuals, in this case, as it would normally in an ethnological study. Having said that, the fact that on-site observations and interviews were carried out, and that the researcher is entitled to produce material which will be used on site as part of the display and informative material, it is believed that this research is not strictly a case study but that it carries parameters of action research.

Complementing this approach, case study research focuses more on the contemporary nature of a phenomenon as it takes place within its real-life context. More specifically, it is a recommended approach when it is believed that the contextual conditions are highly pertinent to the phenomenon, or problem, under study. Therefore, the site chosen being a WHS, and South Africa being such a linguistically active country in which non-Anglophone communities are increasingly present, a case study approach to a situation which needs to be addressed countrywide seems appropriate.

Thus, it would appear, at first sight, that combining these two approaches to research confers on the research an all-encompassing view of the phenomenon of interest and therefore allows for a better understanding of the latter by the investigator and, naturally, leads to solutions that are not only more appropriate to the situation, but which also will have a lasting effect as a result of the involvement of the primary stakeholders in the process of finding such solutions.

Another crucial aspect of action research is that it not only investigates a problematic phenomenon and finds solutions for it, but it also implements these solutions and, while doing so, involves stakeholders, thereby empowering them for future similar problematic situations. This research does not aim at creating a fully fledged foreign-language policy, but by actively pointing out a lack of translated material and producing a translation to be used by foreign visitors, it shows an institution that accommodating its foreign visitors is not only feasible but that it is a necessity that is not out of reach. Therefore, although not setting a precedent in language policy making, this research points in the right direction and aspires to motivate a change.

A further advantage of case study research is its structure – it follows well-defined steps. One that is of particular interest to this research and which is concurrent with an important aspect of action research is the advised multiple sources from which evidence ought to be gathered.

In effect, one of the ways in which evidence, or data, can be gathered is through 'participant observations'. This participation is also required to undertake action research and is, to me, the most important aspect of both approaches for reasons mentioned above.

Participant observations further link the two approaches in that they imply and allow a vision of reality, a real-time observation and evaluation of the problem at hand and its context. An on-site visit is the usual modus operandi. Although time-consuming, this visit is all the more crucial that it allows the investigator to not only make his own observations and opinion, but also to consult stakeholders on site which will eliminate the risk of bias and selectivity.

To conclude this section, it can be said that the combination of action research's involvement of main stakeholders in the problem analysis, decision-making and solution implementation processes with case study research's well-structured research process, consideration of real-time context and multiple sources of evidence leads to a type of research that encompasses all major aspects surrounding a phenomenon which needs to be investigated and remedied. This leads to efficient, long-term solutions to a problem but also empower the community involved the necessary skills. If all this research achieves, by means of its combined approach, is awareness that foreign visitors need to be accommodated and that a translation needs to be undertaken by a professional translator, a significant contribution will have been made.

## 2.2 General approaches to translation

The translation theory on which my approach to translation is based is discussed in greater details in my literature review (p.11). This section gives the reasons for choosing such an approach to translation and how I am adapting it to the needs of a tourist information text type. The guidebook that is translated here is of a technical nature, i.e. it contains terminology from the fields of anthropology and palaeontology. For this reason, there are few cultural gaps that need to be bridged during the translation. Nor is there a large number of colloquialisms that need to be translated.

The approach adopted in this research is a **functionalist** one, as introduced by Nord (1991 & 1997), for the following reasons:

- The function of a translation, or the effect it is to have on its target audience, takes precedence, in my view, over its faithfulness to the original work. In other words, naturalness used at the service of equivalence of effect, or functional equivalence, seems more adapted to serve the purpose of a tourist informative text type than a word-for-word translation of the original.

- This is especially true in the case of a text used for tourism purposes. Indeed, the specialized (technical) terminology requires more faithfulness than naturalness specialised terminology is translated faithfully – but a text translated to be read by tourists needs to feel natural to the reader if it is to fulfil its objective, which is as informative as it is entertaining and marketing-oriented.

- Therefore, it is crucial that the source text be analysed with regard to both its extratextual and intratextual factors. Due to the fact that the guidebook in question would be sold/distributed to tourists, extratextual factors such as the message, the medium, the author and his intention are particularly important in the translation process.

Nord's functionalist approach to translation contributes to my research in that the guidebook to be translated plays two roles. Foremost, it plays an informative role and its content, mostly scientific facts, needs to be translated closely to the original.

In this case, the purpose of the original must be fully respected in the act of translation to produce exactly the same facts in the target text. However, this guidebook also aims at convincing its audience that such facts and their implications are truths. To do so, the author uses means that are culture-specific and relies on presuppositions. Thus, the intention component of *skopos* comes into play. The translator must be acutely aware of which presuppositions may need to be clarified for the target audience and which culture-specific means of expression need to be used to fulfil the original intention of the author.

As we have seen, the importance of the functionalist approach cannot be emphasised enough. In effect, the success of a translation is rated by the acceptance or rejection by its target readership.

In order for this research project to be successful, i.e. to bring about satisfaction in the overall experience of foreign visitors at a site, and consequently motivating a countrywide awareness on the need to accommodate such visitors, a translation needs to fulfil the visitor's need by carefully analysing the original text and reproducing it in the target language with as much naturalness – a parameter on which the readership will be most critical – and faithfulness – to ensure that facts are not distorted in the process of translation – as possible. Nord's functionalist approach allows for such an analysis and provides a means for producing a translation that will preserve its informative function and, most importantly, that will not read as a translation.
However, prior to analysing the original text, a translator needs, where possible, to analyse the target readership in terms of its socio-cultural expectations. This is crucial to render a translation natural but, most importantly, to avoid incongruities with regard to culture-specific elements of the text. For further insight into the manner in which a target reader may interpret the information presented to him, or infer meaning from it, we need to have a look at relevance theory.

The **relevant-theoretic approach** also contributes to the basis of my approach to translation. In effect, the cognitive inferential model of communication proposed by relevance theory helps us to understand a phenomenon that takes place in translation and which for too long was ignored.
The cognitive processes explained by Gutt (1991) help us to analyse the expectations that a tourist may have when reading the guidebook. In turn, understanding such processes helps the communicator (translator) to predict and influence the cognitive processes of others (audience). For instance, an awareness of the tendency to pick out the most relevant stimuli in one's environment and to process them in order to maximise their relevance, I (the translator) may be able to produce a stimulus which is likely to attract the audience's attention, to prompt the retrieval of certain contextual assumptions and to point readers towards an intended conclusion.
Therefore, it is helpful to analyse the probably socio-cultural background of the target audience (francophone tourists) in order to induce the most appropriate connections in their cognitive processes and therefore achieve the intended text function. Naturally, this analysis of the background and past experiences of an audience is an educated guess at best. Yet, it seems worthwhile to carry out such an analysis as it has the potential to prevent unnaturalness and oddities in the translation. For instance, knowing the socio-cultural background of an audience allows the translator to make the right assumptions regarding the distinction between presuppositions that can be left as they are found in the source text and those that need to be explicated. Also, it allows the translator to translate colloquialisms accurately into their target equivalents.

In this research, particular attention needs to be given to the fact that the target audience does not solely comprise French tourists but also African francophone tourists. The French used by these two communities may differ greatly and therefore, the translator needs to ensure that the vocabulary and colloquialisms used in the translation are intelligible to both these language communities. It is believed that by carrying out an analysis of the background of the different types of audiences concerned, the translator can make better-educated decisions leading to the fulfilment of the initial purpose of the original text through the translation.

Moreover, an understanding of the cognitive processes of the audience by the translator contributes to the preservation of the covert nature of the translation which, in the case of a tourist text, is primordial. In effect, in order to supply information adequately to a tourist through the use of a guidebook, and for this information to be processed and materialized into knowledge, the vocabulary, register and phrasing used need to be closely adapted to the reader's expectations, themselves linked to the reader's background, so that reading of the translation feels natural and the flow of information is not interrupted.

Lastly, because a tourist-oriented text aims primarily at informing a tourist, as will be the case of the guidebook translated in this research, it appears that, as explained above, an analysis of the audience's cognitive processes and, more generally, its socio-cultural background will contribute to the quality of the translation in terms of its ability to naturally convey its content to its readers. Therefore, the translation must appear as an original text in its own right.

## CHAPTER THREE

Research methodology

This section presents the three main steps followed in this research. Firstly, I established the nature of the research and its various dimensions. Secondly, I established the elements of the initial investigation carried out to gather data – including the questions asked of interviewees and the direct on-site observations made. Thirdly I carried out a text analysis of Maropeng's original English guidebook, my translation of it and a critical commentary on the translation in the form of annotations. This last step is the subject of chapter four.

### 1. Dimensions of this research

This research is a case study/action research as it is conducted to address a specific concern and to develop a solution for it. It is specific to one situation but it is hoped that the application of the solution can address a wider range of similar concerns. This research is both evaluative and active, as it establishes what is present and acts on it to improve it.

Generally, the progress of a research project flows from exploratory to descriptive to explanatory. This is the case in this research, for instance: exploratory (how many francophone visitors are recorded entering South Africa within a given period); descriptive (what kind of material needs to be translated into French); and explanatory (how the material was translated and how it benefited the situation).

Typically, descriptive research includes the following (Green, J. *Dimensions of research*):

- Presents a topic with specific details of the situation or behaviour;
- Requires a focused research question/topic;
- Often blurs with/follows exploratory research;
- Focuses on "how" and "who" questions;
- Is necessary for good explanatory research.

Explanatory research typically includes the following (Green, J. 2005. *Dimensions of research*):

- Focuses on "why", or the reason a situation or behaviour occurs;
- Builds on exploratory and descriptive research, and other explanatory research;
- Uses theory.

Ideally, research of this kind is longitudinal. That is, data would have to be gathered over a minimum period of 12 months in order to obtain a large enough sample that is representative of the true situation and that can be statistically processed. Practically, however, this research is cross-sectional, based on data gathered over an 8-month period. This is because, at the time of data collection, the data regarding foreign visitor entries in South Africa available on the STATSSA website, are only shown for the period of January to August 2005. These data, which were presented above (p.10), do not so much help to answer the central question of this research as they provide ground for its relevance. In effect, their purpose is to show that a significant number of non-Anglophone visitors enter South Africa and to point out the rank at which Francophone visitors find themselves in numbers of entries.

The following data were needed:

- The number of foreign visitors, specifically francophone visitors, entering South Africa over a eight-month period;
- The amount of available translated material at the site under study;
- The intentions of the Heritage Site regarding a foreign language policy;
- The possibility of creating quality French material (a 20-page guidebook) for foreign visitors;
- Background information on the paleonthropological value of the site.

In the framework of this research, the interviews and questionnaires constituted the initial stage of data gathering. The data they provided facilitated an understanding of the nature of the site's business intentions, marketing strategies, awareness goals, as well as its different partners and the role they each play. Such data also helped identify the key stakeholders are and the nature of the dynamics between them. All these data were used to ensure that the aims of this research coincided with the objectives of Maropeng to ensure more efficient results.

Quantitative data were gathered on the SATourism's website (see page 10). Qualitative data were gathered by means of qualitative research interviews. Such interviews "seek to describe the meanings of central themes in the life world of the subjects" (Kvale, 1996).

The following are relevant aspects of qualitative research interview, according to Valenzuela (2002):

- Interviews are completed by the interviewer based on what the respondent says;
- Interviews are a far more personal form of research than questionnaires;

- In the personal interview, the interviewer works directly with the respondent;
- Unlike with mail surveys, the interviewer has the opportunity to probe or ask follow up questions;
- Interviews are generally easier for respondent, especially if what is sought are opinions or impressions;
- Interviews are time consuming and they are resource intensive;
- The interviewer is considered a part of the measurement instrument.

For the purpose of this research, the interviews were conducted in a 'standardized, open-ended' manner. The same general areas of information were collected from each interviewee, except when specific information could only be gathered from a person in a position to provide such information. However, efforts were made to ensure an overall 'conversational approach' to the interview in order to allow a degree of freedom and adaptability in getting the information from the interviewee.

Adopting this approach means that the data is harder to analyse and compare, but its advantage is that it allows more information to be gathered in this manner. The questions asked and the results of the interviews are presented on page 32 below and in Appendices A and B, respectively.

The interviewees were:

- Mrs Chrissi Drunk
  Brand Manager – Maropeng (Department of Marketing)
  Tel. (011) 668 3200
  e-mail. chrissid@discoveryourself.co.za

- Mr Anthony Paton
  Education officer – Cradle of Humankind World Heritage Site
  Tel. (011) 355 1462
  e-mail. Anthony.Paton@gauteng.gov.za

The quantitative data were then analysed to establish whether there was a need for informative material to be translated. This information provides support for the argument expressed in the research questions, i.e. that the need for a foreign language policy in cultural tourist sites has been largely overlooked. The qualitative data (i.e. the attitude to the project and the perception regarding a potential need for translated material) serves a social and behavioural role in this research as it indicates the general perception that persons in charge of the site have of tourism and the needs of tourists in general.

2. Initial investigation – data gathering

Interviews (questions asked):

a) What is Maropeng's aim in terms of what it has to offer to the public in comparison with Sterkfontein caves?
   ⇒ *The aim of this question was to establish whether Maropeng and Sterkfontein Caves have similar aims and policies in terms of the material presented to their visitors. This facilitates an understanding of the purpose that my translation should serve at Maropeng.*
b) Is there any documentation available in French at either site?
   ⇒ *This question formed part of the initial investigation to find out crucial information regarding the grounds of this research.*
c) In your view, what would be a recommended format for presenting information in French to the public?
   ⇒ *This question helped to ensure that the stakeholders at Maropeng make the important decisions regarding the use of the translation at their site.*
d) Who will compile the guidebook that is to be translated?
e) Who compiled the storyline at each site?
   ⇒ *Questions 'd' and 'e' were meant to ensure that the translator was able to contact the person in question in case of a query with regard to the translation.*
f) Who owns and who is in charge of the management of Sterkfontein caves and Maropeng?
g) Who are the main funders of these two sites?
   ⇒ *Questions 'f' and 'g' were meant to ensure that the researcher understands who the main stakeholders are in the framework of this research and to give an indication of what the aims of such stakeholders may be.*

h) Who answers to UNESCO in terms of WHS criteria?

⇒ *This question aimed at establishing whether Unesco's WHS criteria are actively observed on site. This is relevant to this research in that the researcher needs to establish whether one of the criteria deals with language policy.*

i) What is *Maropeng a Africa* and what role does it play?

j) Who is in charge of language policy development at both sites?

⇒ *This question helped to establish whether there is such a person and, if so, called for a need, on the part of the researcher, to communicate and work in tandem with this person.*

Direct observations

On 18 January 2006, Mr Anthony Paton took me on a guided tour of both Maropeng and Sterkfontein caves. This was a good opportunity for me to make my own on-site observations. He introduced me to the 'key' persons in managerial positions who run Maropeng and Sterkfontein caves, i.e. Mrs Chrissi Drunk and Mr Anton Post. He explained why Sterkfontein was a WHS and gave me a brief historical background of the sites.

I observed, at both sites, the absence of any translated (French) material, with the exception of some material translated into French used orally by guides on both sites. I also observed the different kinds of media used to present the information contained in the storyline as well as the way they are laid out in the exhibition area. This helped me understand the logic behind Maropeng's approach to raising awareness on the origins of humankind, and assisted me greatly in my translation of the guidebook. In effect, the intention of the 'author' of a work is a very important clue in the process of translation.

**CHAPTER FOUR**

Text analysis of Maropeng's English guidebook

## 4.1 Text analysis

The question of why a text should be analysed prior to its translation is a fair one. After all, translating a text from one language to another seems rather straightforward and should involve no analysis. In simple terms, the message needs to be conveyed accurately and the style retained as far as is possible.

This view of translation as a communicative process is rather limited. In this regard, Nord (1991:1) notices a shift in the translating practice: it is now agreed that a comprehensive text analysis is the only way to fully grasp the meaning of a source text. She adds that translation-oriented text analysis should ensure a full comprehension and correct interpretation of the text, as well as an understanding of its linguistic and textual structures in relation to the norms of the source language. Then she concludes that this should provide a basis for decision-making by the translator.

Newmark (1988) takes us one step further by emphasising the need to determine the intention of the text and the way it is written for the purpose of selecting a suitable translation method and identifying particular and recurrent problems. Although general in appearance, this sentence summarizes the whole process and purpose of text analysis. It is necessary to ensure the accurate transfer of the author's intention and to best achieve an equivalent effect on the target audience. Here lies the 'duty' of a translator whose most appropriate 'tools' are the analysis of a text and the knowledge of both source and target languages and cultures.

The process of text analysis is a rather complicated one for it involves numerous aspects of both linguistics and context-related, or situational, characteristics of a text. I have adhered to Reiss's 'functional approach' to translation in which the function of the target text (TT), or 'target function', will determine the translation methods and strategies, also referred to as the *skopos* rule by Vermeer (1996).

Nord, whose concept of translation is also a functional one, provides one of the most comprehensive translation-relevant models of text analysis.
The analysis of the chosen text is carried out according to her model. This model recognizes all the essential constituents of the process of intercultural communication and analyses them one by one as factors of the source text. Nord emphasises the dual nature of a text by splitting its analysis into extratextual factors (context), and the text itself, or intratextual factors (linguistics). The extratextual factors are: the sender, sender's intention, recipient, medium, place of communication, time of communication, motive for communication and text function. The intratextual factors are: the subject matter, content, presuppositions, text composition, non-verbal elements, lexis, sentence structure and suprasegmental features. Although inter-related, in the following analysis of the source text, each factor is dealt with separately in detail and is illustrated by examples drawn from the text itself. The text itself is found in Appendix C.

In order to analyse the 'content' of the source text, we also need to make reference to Baker's work on cohesion and coherence (1992:180-216). In her chapter on cohesion, Baker explains that "cohesion is the network of lexical, grammatical, and other relations which provide links between various parts of the text" and she continues to say that "cohesion […] connects together the actual words and expressions that we can see or hear." The main cohesive devices in English are reference, substitution, ellipsis, conjunction and lexical cohesion. Some of these devices are applied to the ST where applicable (p.45-46).
While cohesion, explains Baker (1992:218), is a "network of surface relations […], coherence is is the network of conceptual relations which underlie the surface text." In other words, cohesion is objective and coherence is subjective and depends on the perceptions of the readers.

I begin by examining the extratextual factors and then move on to the intratextual factors:

- **Sender**

The author of this text is not known. However, we can infer from the content that the author has scientific knowledge in the field of paleonthropology. The mention of species names such as "*Australopithecus africanus*" (line 179), that of prehistoric tool-use periods such as "*Oldowan Industry"* and "*Acheulean Industry*" (lines 247-250) and finally the use of scientific abbreviations such as "*cc"* (line 236), which stands for *"cranial capacity"* , are a clear sign of this fact.
What is important for this analysis, although we are not aware of the name of the author, is the knowledge that this text was produced by Maropeng.

Keeping in mind the kind of institution that Maropeng is, together with its aims, gives the translator sufficient information on the sender. In our case, the translator is also the translation initiator.

- **Sender's intention**

Nord (1991:47) distinguishes between the terms intention, function and effect.
She explains that *intention* is the will to fulfil a purpose with the text, that *function* is how it is viewed by the recipient and that *effect* is the result (success or failure of the purpose).

Intention, as the origin of the need to write a text, has a great influence on all its other aspects. It dictates the nature of the structure of the text with regard to content and form, as phrased by Nord (1991:48). It is therefore fundamental that a translator be loyal to the sender's intention for it is the essence of a text. In the case of this text, the intention of the author is to guide tourists while visiting Maropeng's exhibition centre and to inform them of the displays in the exhibition. To this effect, the author makes use of directional headings to allow tourists to find a relevant section easily: "*entrance lobby*" (line 31), "*ramp descent*" (line 52), "*downstairs orientation*" (line 95), etc. The dominant language function in this text is mainly *informative* – according to Newmark (1988:§4) the informative language function delivers the facts of a topic, the reality outside language. In tourism books or leaflets, the use of a neutral, informal style with defined technical terms indicates that the mere conveying of a message and the publication of information is the function of this text. In effect, tourists come to the site to learn about the origins of mankind.

Based on the above, and considering the subject matter (discussed on p.41) of this text, we can expect a semantic field which is both technical, hence restricted and specific, for the scientific parts of the text, and broad when the author explains the meaning of the scientific facts given.

- **Recipient**

In the context of the functional approach to translation adopted here, the recipient is certainly the most important factor. In effect, without a recipient, a text would have no purpose. Therefore it can be said that the recipient plays a crucial communicative role (Wilss in Nord 1991:51). Several authors have given reasons to illustrate this fact. Nord (1991:51) summarizes these pertinent observations by various authors as follows:

The success of the communicative process depends fundamentally on the recipient's communicative background, or 'knowledge presuppositions' (Thiel in Nord 1991:51), his sociological environment (Cartellieri in Nord 1991:51), his position with regard to the subject matter in the text (Cartellieri in Nord 1991:51) and the linguistic signs used in the text (Reiss in Nord 1991:51).

The recipient of a text, whether ST recipient or TT recipient, is determined mainly by the text type and the subject matter. Neubert 1968/1981 (in Nord 1991:51) describes four types of texts with regard to the recipient: a text that is *"specifically SL-oriented", "SL-oriented but not only SL-oriented", "not specifically SL-oriented" and "TL-oriented"*. From this, it is possible to conclude that ST recipients and TT recipients are very different. This is usually due to a difference in cultural environment/background and presupposed knowledge, which makes a SL text, if translated literally, potentially incomprehensible to a TT recipient. As a translator, one needs to be aware of the characteristics of the recipient of the TT so as to make the necessary adaptive modifications to the ST. Such characteristics include age, sex, education, social background and status.

Nord (1991:54) emphasises that the most important consideration with regard to the recipient is how much knowledge can be presupposed. Here, both source and target recipients are mainly tourists. Therefore, the audience of this text, source or target, is broad and no generalisations can be made about its social status, knowledge level, age class or origin. The ST recipients are anglophone and the TT recipients are francophone. But both recipients are considered as laymen in terms of the scientifically-oriented subject matter of the text. Therefore, no assumptions are made regarding presupposed knowledge. The informative function of this text calls for explanations to be made in layman's terms if the purpose of the text is to be achieved and its desired effect guaranteed. Therefore, we can expect scientific information to be made available to this wide audience by means of simple explanations: "*The first life forms, which were like the black algae you sometimes see in swimming pools today, […]*" (lines 78-79). The subject matter is universal; therefore it is not culture-bound and will not require particular attention from the translator to bridge the culture gap between two different audiences. The culture-specific use of language present in this text, to which a translator must pay great attention, is dealt with below at word level in the intratextual factors of this analysis.

- **Medium of transmission**

The medium of transmission is defined by Nord (1991:56) as the means which conveys the text to the reader.

She specifies that issues pertinent to the translator are those of perceptibility and presupposition of communicative interaction.
In other words, it is presupposed that the text, or the information conveyed, will be clearly perceptible and that the recipient will be able or willing to interact in the communication process, i.e. to react.

To this end, the most appropriate medium will be allocated to the kind of information to be conveyed so as to create the desired effect on the recipient.

Typically, the medium provides clues as to the size and identity of the group of addressees (price and level of technicality of publication) and the intention of the sender (expectation of the recipient from the publication). The text discussed here is a written communication transmitted by Maropeng in the form of a guidebook. Therefore, it is aimed specifically at visitors to the site.

- **Place of communication**

According to Nord (1991:60), space is one of two basic categories of the historical situation of the text. Place is relevant to translation in that it can act as a 'pre-signal' to what can be expected in the text. It can also affect the communicative interaction of the recipient in terms of his expectations based on knowledge and social background. In other words, Nord (1991:61) explains that the translator has to take into account the significance of other places in relation to the geographical centre where the text was produced, for such significance will be quite different from the standpoint of the target and source text audiences. When analyzing a text, the translator must also be aware of the political and cultural aspects of the place of production of the text. For instance a text could have the desired effect on a SL recipient who is aware of the political background of the message being conveyed, but have no effect at all on a TL recipient who has no idea why the message is relevant to him, due to a lack of background understanding. Again, the translator will have to adjust the ST so as to render the TT comprehensible to the TL recipient.

Here, the subject matter, or story told, takes place at various locations mainly in Africa. Again, no culture-specific geographical information is given in this text, except for the mention of a South African language: "*Setswana"* (line 27), which is described, in the text, as being "*the main indigenous language in this area*." (line 27). The only relevant piece of information that the reader will be required to know is the fact that the site of Maropeng is the cradle of humankind –

a fact that is largely explained in the text: "*Welcome to Maropeng and the Cradle of Humankind World Heritage Site*" (line 26).

- **Time of communication**

The dimension of time, as expressed by Nord (1991:63), is a pre-signal of the historical state of linguistic development the text represents. This is so because every language is subject to constant change in its use and norms. Nord (1991:63) adds that this not only applies "to language use as such (from the sender's point of view) but also to the historical comprehension of linguistic units (from the recipient's point of view) which is itself bound to a certain period […], since linguistic changes are usually determined by socio-cultural changes."

A text is a frozen sample, and therefore a representation, of a specific socio-cultural epoch and should, unless advised otherwise, never be altered in translation if the recipient is to fully capture the essence of the text and the context in which it was composed. This instance of obligate temporal connection between the text and its meaning is referred to by Nord (1991:64) as *temporal deixis.* For instance, a text from an earlier time period would have to be dealt with by the translator by preserving language use of the time in question and finding equivalents of the same time period in the TC and TL for the sake of the TR's full and accurate comprehension of the information and its context conveyed by the text. Another relevant point about the time dimension of a text is that it influences all other extratextual and intratextual factors.

Here, considering that Maropeng opened its doors to the public in late 2005, the text is contemporary. No specific date of production appears in this text, although it is expected that such a date would appear in the printed version of the guidebook. But as far as the translator is concerned, no particular attention to the time factor should be paid here since most of the information is scientific and does not reflect any socio-historical event which would require a careful transposition of socio-historical markers (terminology, reference to events and locations, etc.) from the ST to the TT.

- **Motive of communication**

Nord (1991:67) associates *motive* with the question: For what reason (why) was the text written? This also involves the question: what occasion prompted the writing of the text? Here, the occasion is quite obviously the opening of a new exhibition centre at the Cradle of Humankind: Maropeng.

The connection between the motive and the medium of communication of this text tells us that it was written to serve as a guide for tourists visiting a site which is home to evidence on the origins of mankind. A secondary motive is an awareness 'campaign' on the information available on the origins of mankind.

- **Function and type of text**

Text function, according to Nord (1991:70), represents the communicative function which a text fulfils in its concrete situation of production/reception. It is derived from a specific configuration of extratextual factors. When certain configurations occur frequently, they are referred to as text types. Therefore, text type and text function must not be used interchangeably. Nord (1991:70) explains that the notion of text function is related to the situational/cultural aspects of communication, whereas the notion of text type is related to the structural aspect of the text.

Here, we are dealing with a tourist-type text (see section 1.3 on tourist texts and their translation pp. 20-22 of this report). Its function is clearly informative. This can be seen in the use of 'did you know?' quizzes: "*Did you know: humans share 99.9% of their DNA with other humans!"* (line 66), as well as in the plain structure of sentences simply stating facts: "*Fossils are the remains of plants or animals which have been turned into stone […]"* (line 88). The author does not use irony or sarcasm as might be the case in a journalistic text for example – here, facts are simply stated. However, this text also shows signs of narration. The author gives the impression of telling the story of our ancestors and guiding the reader through this story. In turn, this gives an otherwise dull description of 'reality' a little feel of fictitiousness as if to make the reader feel part of this history (which is his after all): "*Long, long ago, millions of moons back…"* (line 3), "*Our path to humanity was a slow and dangerous one […]"* (line 7).

Now that the situational background of the text has been analyzed by means of its extratextual factors which, as we have seen, are interconnected and interdependent to a certain degree, it is time to have a closer look at the intratextual factors of the text used by the author to better convey his message. We will analyse the semantic field, lexical use and sentence structure of the text among other things and use this information to provide an insight into the impact these can have on the readers of a text and their influence on the message conveyed.

Nord (1991:84) explains that intratextual factors, and style, more specifically, need to be analysed because they refer to the formal characteristics of a text.

The style of the text provides information about the sender and his attitude and sends certain pre-signals to the recipient as to how the text should be received.

- **Subject matter**

The subject matter of a text is of fundamental importance Firstly, a text can have more than one subject matter, in which case the coherence of the text must be analysed by the translator. Secondly, the subject matter can be embedded in a particular cultural concept, in which case there may be presuppositions and their relevance must also be analysed by the translator. Further, the crucial concept in the analysis of the subject matter at the level of lexical items is that of *isotopy*. Isotopic features are semes shared by various lexical items in a text. Finally, the comprehension of a subject matter requires the coordination of the new information verbalised in the text with some form of reality – Nord (1991:84).

According to Scherner (in Nord 1991:88), there are four fundamental factors which enable the reader to understand a text: the horizon of the sender and recipient (the horizon of a person is made of his individual idiosyncrasies and culture-specific influences), the linguistic competence of the recipient, the communicative situation perceived by sender and recipient alike and the context (produced by means of cohesion and coherence).

This text has a single subject matter – mankind's origins: *"Our ancestors have lived in this area for more than 3 million years and today we are going to meet some of them"* (lines 27-29) – which is divided into several subsections. For clarity, the author has used headings to introduce each subsection. Example: main heading - *"What it means to be human"* (line 199) followed by the subsections – *"Bipedalism"* (line 202), *"Development of the jaw and diet"* (line 224), etc. Therefore, information flow throughout the text is achieved by means of a succession of topics all pertaining to the general subject matter. For this reason, isotopic chains are only found in the text with the recurring mention of the "*Cradle of Humankind*" and "*Maropeng*" (lines 9, 26, 31, 33, 41, 44, 50, 107, 111, 139, 173, 176, 267 and 349), acting as a reminder for the reader, throughout the text, of where it finds itself and of the uniqueness of this site.

It is also important to note that interspersed between these information sections are orientation interludes which introduce the visitor to a new area of the exhibition (See example in 'Sender's intention' p.36).

It is likely that the four orientation markers (headings), namely *"Entrance lobby"* (line 31), *"Ramp descent"* (line 52), *"Downstairs orientation"* (line 95) and *"Maropeng architecture"* (line 349) are, in fact, the main headings under which the information sections fall since this guidebook takes visitors on a tour of the exhibition. The information on display in each of the physical sections of the exhibition is briefly explained in this guidebook.

- **Content**

The analysis of the content of a text is limited more or less to the level of the lexical items (Thiel and Reiss in Nord 1991:90).

By "content", explains Nord (1991:90), "we usually mean the reference of the text to objects and phenomena in an extralinguistic reality". This reference is expressed mainly by the semantic information contained in the lexical and grammatical structures used in the text. These structures complement each other, reduce each other's ambiguity, and together form a coherent context.

Here, we will use the notions of cohesion and coherence (Baker, 1992:180-260) in order to analyse the information carried by the text elements and the way they are linked by means of linking devices. In terms of the cohesive devices which ensure the cohesion and subsequent coherence of the text, the following are examples drawn from the text:

Textual reference in the form of anaphora:

- Recurrence to emphasize the repeated word: *"**long**, **long** ago […]"* (line 3).
- Pronominal reference: *"**Our ancestors*** (line 7) *[…]. **They** were smaller than us* (line 9) *[…]. **They** walked upright* (line 10) *[…] protecting **their** young* (line 11)*."*
- Use of demonstrative as references: *"[…] **fossils** of hominids* (line 46) *[…] as well as **those** of plants* (line 46) *[…]."*
- Use of pronouns as references: *"[…] There are **15 major fossil sites*** (line 44) *[…], of **which*** (line 44) *[…]"*
- Use of indefinite pronouns as references: *"[…] portraits of **diverse South Africans*** (line 57) *[…]. They are **all** real people* (line 58)*"*.
- Use of general words as references: *"[…] the material […] built up to form **talus cones*** (line 132) *[…]. These **deposits*** (line 133) *[…]".*

Textual reference in the form of substitutions:

- *"[…] **Homo ergaster, Homo erectus, Homo heidelbergensis*** (line 188) *[…].**These species** lived* (line 189) *[…]".*

Textual cohesion in the form of conjunction:

- Temporal: "***Often*** *they failed* (line 13) *[…]".*
- Additive: "*They started to grow taller […]* ***and*** *adapted better to* (line 19) *[…]".*
- Adversative: "***Although*** *diverse in skin colour* (line 54) *[…]".*
- Continuative: *"Slowly,* ***over millennia,*** *our ancestors learnt* (line 17) *[…]".*

Lexical cohesion:

This dimension of cohesion has been dealt with in terms of isotopy (lexical chains) under subject matter (p.41).

The presence of connotations *per se* in this text is not obvious. Most of what is said is to be understood in its primary meaning.

Also, it is important to mention, with regard to the 'internal situation', that the information in the text is factual; in other words it is based on the facts of what is conventionally regarded as 'reality' by both sender and recipient.

- **Presuppositions**

A 'situational presupposition' is defined by Schmidt (in Nord 1991:96) as being implicitly assumed by the author, who takes it for granted that this will also be the case for the recipient. The communication will be successful only if both author and recipient assume the same presupposition implicitly. Nord (1991:96) adds that in everyday communication it is usually the factors of the communicative situation which are assumed to be known to the participants and which are therefore not mentioned explicitly. Presuppositions often refer to objects and phenomena belonging to the sender's culture. It is therefore appropriate that the information presupposed by the author should be made known to the reader of the translation. At the same time the translator must be aware that the explication of implicit information will cause serious changes in the effect that the text will have on the recipient. In our case, due to the informative function of the text, the level of explicitness is quite high and little is left to the imagination of the reader. Most of the information is explicated and possible grey areas and risks of misunderstanding or misinterpretation are hereby eliminated. The subject matter is, in itself, explicit and simple and is not culturally bound to a SC recipient.

- **Text composition**

According to Thiel (in Nord 1991:100), "the text has an informational macrostructure (the composition and order of information units) consisting of a number of microstructures.

[…] The text segments forming the macrostructure are marked primarily by the continuity or discontinuity of tenses."

Text ranks

This text does not form a part of a larger collection of texts. It is self-sufficient and is therefore translated by a single translator.

Macrostructure:

- Metacommunicative sentences (eg. "A says to B"), footnotes, quotations

and examples = embedded texts in this text can be found in the form of 'did you know' quizzes (lines 66, 142 and 151).

- Macrostructural units (chapters and paragraphs) – formal structure.

Title page

Contents page

From line 1 to line 22: *"Our […] today…."* : Historical introduction of subject matter.

From line 23 to line 29: *"Welcome […] home!"* : Welcoming note to the visitor.

From line 30 to line 92: *"Entrance […] environments."* : Facts directly related to the subject matter – Chapter one.

From line 93 to line 157: *"Downstairs […] diversity."* : Facts directly related to the subject matter – Chapter two.

From line 158 to line 346: *"The path […] we do."* : Facts directly related to the subject matter – Chapter three.

From line 347 to line 364: *"Maropeng […] the future."* : Closing chapter on the meaning of the architecture of the site.

Microstructure:

- Tense change in sentences – 'Diachrony' (Stempel in Nord 1991:105)

Throughout the text, tenses continually change so as to give 'rhythm' to the text and avoid a monotonous flow of information. For instance, in the first three paragraphs, the past tense is used to tell a story: *"[…] Africa **gave** birth […]"* (line 3).

Then it changes to the future tense in the fourth paragraph when the author is welcoming the readers and starting to guide them: *"[…] today we **are going to** meet […]"* (line 28).

Tenses in this text are used to differentiate history and relating of facts (past tense) from orientation and fact quizzes (present and future tenses).

Thematic organization of sentence: Rheme and theme.

Nord (1991:106) explains that the writer uses thematic progression to link the information units.
The theme refers to that part of the information presented in a sentence which can be inferred from the context (given information) whereas the rheme is the non-inferable part of the information (new information).
There are two kinds of structures in communicative dynamics: one continuous theme with several rhemes (quiet) or a linear thematic progression where the rheme of one sentence constitutes the theme of the next sentence (active).
An example of a continuous theme with several rhemes would be: *"**Our ancestors** were australopithecines […]. **They** were smaller […]. **They** walked upright […]. Often **they** failed […]."* (Line 7 to 15).
An example of a linear thematic progression would be: *"**We** know about species which have populated our Earth before us by studying **fossils**. **Fossils** are the remains […]."* (lines 87 to 89). The rheme of the first sentence is *"fossils"*, and it becomes the theme of the next one.

- **Non-verbal elements**

These elements are "signs taken from other, non-linguistic codes which are used to supplement, illustrate […] or intensify the message of the text", explains Nord (1991:108). For example, these may include pictures, tables, or any kind of illustrations.
There are none in this text. However, in its final edition, the guidebook is likely to contain illustrations such as photos of the site on its front and back cover, drawings of landscapes and animals, as well as sketches of stone tools and skeletons. Therefore, it can be said that such illustrations will explicate some of the meaning contained in the text, which can be quite scientific.

- **Lexis**

Intratextual determinants:
These determinants refer to the morphological aspects of the text and are determined by the subject matter and content.

Examples of such aspects are the semantic field relating to the subject matter present in the form of an isotopic chain (as explained above), suffixes, prefixes, acronyms, collocations and idioms. Metaphors and metonymy can also be signs of figurative use of the lexis.
We have seen that the isotopic chain exists throughout the text. However, within this chain it is possible to observe prefixes: "***in****accessible* (line 286), ***un****usually* (line 335), ***inter****breed* (line 317)*"*, collocations: *"**steamy jungles*** (line 3), **pristine coastlines** (line 4)" and acronyms: "**mtDNA** (line 146), **GAPP** (line 351), **MMA** (line 351)". The absence of any metaphor, metonymy and idiom is a clear indicator of a lack of figurative use of lexis in this text.

Extratextual determinants:
These determinants set the frame of reference for the selection of words and are themselves mentioned in the text. They are as follows:

**Author**: There are clear signs that the author is speaking directly to the reader in the form of singular 'I' and plural 'we, you'. This is to ensure the direct involvement of the reader in the story being told: *"**You** and **I**, and all our ancestors […]"* (line 4); *"**Our** path to humanity […]*' (line 7); *"And today **we** are going to […]"* (line 28).

**Intention**: Throughout the text, the author rarely makes use of synonyms and often repeats the words he uses: "species", "fossils", "ancestors", etc. The reason for this is that, although aimed at a wide audience, the nature of the content of this text is scientific and the accuracy of the information outweighs any sort of style that could have been used by the author to render this content more pleasurable to read or to achieve a certain aim such as originality or amusement. Here, the author plainly delivers scientific facts. However, in the first three paragraphs of the text, where the author is laying out the background of the story, he makes use of more descriptive, 'decorative' adjectives such as "*steamy*", "*great*", "*pristine*" and nouns such as "*beauty*".
The degree of originality of the lexis, as seen above, is not particularly high and rather standardized, which confirms the informative intention of the author or 'semantic intentionality'.

- **Sentence structure**

The features Nord (1991) considers to be relevant to translation-related text analysis are the construction and complexity of sentences, the distribution of main clauses and subordinate clauses in the text, the length of sentences, the use of functional sentence perspective and the cohesive linking devices on the text surface.

In the text, sentences can be both long: ***"They walked upright but were better at climbing than us, and lived in the forest, protecting their young as best they could from powerful predators like giant saber-toothed cats and long-legged hunting hyenas, and the elements, with little more shelter than tree canopies."*** (lines 10 to 13);
and short: ***"These species lived in different parts of the world. Not all Homo species were direct ancestors of humans."*** (line 189).
These sentences are very plain in structure. Although this specific example displays a present participle structure, the author does not make use of infinitives, imperatives, typical past participle structures or even gerunds. Therefore it can be said that the sentences allow for easy reading and understanding, which, again, serves the purpose of the informative function of the text.

Sentences in the text tend to be freestanding, or self-sufficient. This is due to the fact that the author does not hesitate to repeat the subject of each sentence, for the sake of clarity: "***Mrs Ples***, *the famous […].* ***Mrs Ples*** *is about […]."* (lines 178-180). The author also follows a strict structure of theme and rheme, where rhemes becomes themes in a clear and understandable manner. Little attention is given to style in this text where the passing on of the information comes first: "*After* ***Homo abilis*** *came […] and* ***Homo sapiens*** *- us.* ***These species*** *[…]."* (lines 187-190). Also, a rhetorical question puts the subject matter into perspective towards the end of the text as if it were to involve the reader further: ***"Now that we can do anything, what will we do?"*** (line 347).

Short subordinate sentences are also used by the author to create a contradictory argument situation that is however quite pertinent: ***"While we can propel ourselves into space, millions of people starve to death each year, are illiterate and have no access to basic healthcare or clean water, for example."*** (line 344).

- **Suprasegmental features**

Nord (1991:120) explains that "the suprasegmental features of a text are all those features of text organisation which overlap the boundaries of any lexical or syntactical segments, sentences and paragraphs, framing […] the specific 'tone' of the text."
Register is also determined by suprasegmental features to a certain extent and will be discussed here. What is relevant to the translator here is that a certain intonation, marked by punctuation, and which, for instance, helps distinguish between ironic and didactic sentence forms, must be carefully reproduced in the TT.

Hatim & Mason (1990:46) explain that register, as a user-related language variation (Halliday et al. in Hatim & Mason 1990:46), refers to the relationship between a given situation and the language used in it.
Halliday et al. (in Hatim & Mason 1990:46), accurately observe that "the category of register is postulated to account for what people do with their language. When we observe language activity in the various contexts in which it takes place, we find differences in the type of language selected as appropriate to different types of situations." Registers are defined by the differences in grammar and vocabulary between two samples of language activity. Register can therefore be referred to as conventions on 'situational appropriateness'.

In term of the **field** of discourse or 'field of activity' of the text, Hatim & Mason (1990:48) explain that the "kind of language use […] reflects […] the social function of the text".
In our case, the field of activity revolves around the informative function of the text. Therefore, we have seen that the vocabulary used is not formal in order to reach an audience as wide as possible, but also not completely informal, so as to respect the style level of the medium.

In terms of the **mode** of discourse, which is the "medium of language activity" (Hatim & Mason 1990:49), it is important that the translator does not change from informal to formal. For instance, an innocent remark becomes a stated opinion once translated. The register must be respected in translation.

The **tenor** of translation refers to the level of register in terms of "basic distinctions such as polite – colloquial – intimate on a scale of categories ranging from formal to informal." (Hatim & Mason 1990:50) It is also referred to as the level of formality.

There is an inherent fuzziness to registers for it is "difficult to discern precise boundaries of any given registers." (Hatim & Mason 1990:51) Adding to this fuzziness is the fact that there can be register shifts occurring in one person's speech.

In conclusion, it is clear that there is a need for translation-oriented text analysis and the numerous activities it comprises. Although time-consuming, it is vitally important that a translator analyses the text prior to starting a translation. We have also seen how both extra and intratextual factors are overlapping, which illustrate the fact that the translator needs to be aware of all factors in order to remain accurate in the production of a suitable TT.

4.2 Translation difficulties and solutions

The first difficulty I encountered was in the first paragraph of the text: "Long, long ago, millions of moons back". The problem comes from the repetition of reference to the past. This repetition is elegantly avoided in English, where several ways of expressing reference to the past are available, but French only offers one option in this context: '*Il y a',* hence the obligate yet cumbersome repetition in: *"Il y a fort longtemps – il y a de ça des millions de lunes* –". The only way to solve this problem partially was to use dashes so as to isolate this repetition.

Another difficulty was the translation of names, either of fossils ('little foot' and 'Mrs Ples' on line 8), places ('Cradle of Humankind' on line 111), or historical events ('Out of Africa I & II' on lines 302 and 311). Following several searches on the internet on French websites, I realised that these two fossils names were not translated and I concluded that they had no French equivalent. The name 'Cradle of Humankind' can be translated literally into French as *Berceau de l'humanité* but because it is the name given to a place, I could not use the French equivalent throughout the text. Therefore, I chose to include its translation in brackets the first time it appeared in the text, and to keep the capitalised English version in the rest of the text. As for 'Out of Africa I & II', I made many searches on the internet but found no close French equivalents. Noticing that the meaning of these headings was given in the text directly below, I chose to keep the italicised English version. All these choices were motivated by the fact that a person wanting to make further searches on these topics, either on the internet or in books, would need the English keywords to do so. Therefore, I chose to retain such keywords in the translation.

A particularly problematic word to translate was the recurring 'exhibition' (lines 34, 98 and 99). A direct translation of this word into French would be *exposition.* Unfortunately, this French word refers specifically to an art exhibition and cannot be used here. I could have used the word *attraction* here, but 'exhibition' is used further in the text on lines 98 and 99, where it no longer refers to the whole of Maropeng but to specific parts of it. Therefore, I chose the word *musée* ('museum') to translate the primary intended meaning of the word, and *attraction* for its secondary meaning.

The word 'depths' (line 50) is typically translated into French as *profondeurs*. Again, here it does not seem appropriate to use *profondeurs* as 'depths' is not referring to any deepness but rather to the inside of something. Therefore, a closer French equivalent would be *entrailles* (literally entrails, bowels) used in its metaphoric form (for instance: the bowels of the earth).

The original English text (lines 70 and 71) offers measurements in meters and then in feet between brackets. Because the metric system is in use in francophone countries, I chose to remove the measurements in feet, which are of no use to the francophone reader.

The word 'sustainability' (line 327) has two French equivalents: *durabilité* and *pérennité*. The former is used in a general context, the latter in a more scientific context. 'Sustainable development' being commonly translated into French as *développement durable*, I chose to translate 'sustainability' as *durabilité,* in this general context.

Finally, the medical term HIV/AIDS (line 339). A French equivalent exists: *VIH/SIDA*. However, it is rarely used. French media often refer to both terms as *SIDA* only. In an attempt to ensure understanding by the readership, I chose to translate it as *SIDA*.

## CONCLUSIONS AND RECOMMENDATIONS

This research is atypical in that it does not so much aim at adding to the existing body of theoretical knowledge in the field of translation as it uses the latter in an attempt to solve a practical problem in the practice of translation in a multilingual society that is South Africa. In effect, this research focuses on the availability of translated material at tourist destinations in South Africa, with particular attention to a case study: the Cradle of Humankind World Heritage Site, and more specifically to their newly opened exhibition centre: Maropeng.

Based on statistics issued by Stats SA (Statistics South Africa) and published by SATOUR, it was discovered that French-speaking visitors in South Africa came third directly behind English-speaking and German-speaking visitors. Therefore, it was the researcher's aim to make the information displayed at Maropeng available in an additional language. Subsequently, Maropeng's mini-guidebook was translated into French. The researcher is well aware that the completion of this task would not solve the problem of the lack of available information in several languages at tourist destinations in South Africa, agreeing that South African languages need to be given priority. However, it is hoped that by making this information available in French, the researcher's native language, a trend would be set by showing that it is not only possible but necessary to broaden the linguistic groups targeted by such information.

The translation of this guidebook was preceded by background on-site and off-site research. The methodology used by the researcher was typical of that used in action research and case study research. Adequate literature was consulted in both these fields and a unique 'blend' was used by the researcher to approach this research. Background information was gathered on the institution itself, Maropeng, its shareholders and members at managerial positions. This was done both by means of interviews and internet research. In the case of interviews, both Maropeng's brand manager, Chrissi Drunk, and education officer, Anthony Paton, were consulted. These interviews enabled the researcher to gain knowledge regarding the aims of Maropeng, whether business-oriented or awareness-oriented. They also helped the researcher to grasp Maropeng's vision, which would, in turn, prove to be valuable information for the translator. In addition, internet research was conducted to find more general facts and statistics on tourism in South Africa.

The result of this research is the translation of Maropeng's mini-guidebook, which is to be sold to visitors as a bilingual guide. The actual process of translation was preceded by an analysis of the source text. This analysis was carried out based on Nord's translation-relevant text analysis model. Nord's functionalist approach, as explained earlier in this paper, has the advantage of being target-text oriented. In other words, it focuses on the effect a text is to achieve on its target audience as well as the function it is to play in the target readership medium. Reference was also made to Gutt's relevant theoretic approach to translation in an attempt to further understand the expectations of the target audience in question. The combination of these two approaches made for a target-oriented translation which took into consideration the expectations, presupposed knowledge and socio-cultural idiosyncrasies of the target audience, hereby ensuring that the intended function of the source text on the source audience is accurately replicated on the target audience.

The ultimate aim of this research is to encourage the translation of information offered to the public into more than one language. By translating into French a body of information initially available only in English, it is believed that this research is showing the way forward in language policy making. Although not in a South African official language, this case study of translation practice follows the provisions made by the constitution of South Africa regarding language policy:

- The Constitution of the Republic South Africa – 1996 – as adopted on 8 May 1996 and amended on 11 October 1996 by the Constitutional Assembly – Act 108 of 1996.

  In chapter 1 (Founding Provisions) Section 6 (Languages), the following points are of importance for the purpose of this research:

  > [Section 6 (1)] The official languages of the Republic are Sepedi, Sesotho, Setswana, siSwati, Tshivenda, Xitsonga, Afrikaans, English, isiNdebele, isiXhosa and isiZulu.

  The use of all 11 South African languages in official language functions, thereby promoting multilingualism;

  > [Section 6 (3) (a)] The national government and provincial governments may use any particular official languages for the purposes of government, taking into account usage, practicality, expense, regional circumstances and the balance of the needs and preferences of the population as a whole or in the province concerned; but the national government and each provincial government must use at least two official languages.

State departments, on a national and provincial level, must use at least two languages, thereby 'enforcing' multilingualism through the obligate use of more then one official language. Furthermore, the choice of languages is directed by demographic, economic and attitudinal factors;

[section 6 (3) (b)] Municipalities must take into account the language usage and preferences of their residents.

Thereby adapting this 'enforcement' of multilingualism on the language needs of a specific region.

Of interest to this research is the fact that the Constitution provides for an adaptation of the implementation of multilingualism to the needs of the population of the province concerned. In other words, the language the most used in a province should be used by State Departments and municipalities as a means of communication.

By extrapolating this rule and applying it to the research at hand, it can be seen that choosing to translate information into French for tourists follows a similar pattern as that dictated by the Constitution as the second most frequent non-English speaking visitor at the site under study is French.

Furthermore, based on the provisions mentioned above, the researcher wishes to encourage and recommend language policies which provide for the use of English as a primary medium for the transfer of information in South African tourist destinations, as well as the South African language most spoken in the area concerned.

In addition to the above, and with particular regard to the case study at hand, it needs to be emphasised that, based on a functional approach to multilingualism and whether in the context of the rehabilitation of the functional status of African languages or that of foreign languages at tourist destinations in Africa, the key to successful multilingualism is the realisation of the economic advantages of the use of such languages.
Therefore, in our case study, Maropeng ought to be made aware, by means of a presentation for example, that the functional use of French as a medium in their exhibitions could be financially viable for their business and would grant access to the information they harbor to many more francophone Africans, among others.

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## APPENDICES

### APPENDIX A

### Interview with Anthony Paton – Education officer (Cradle of Humankind WHS)

a) What is Maropeng's aim in terms of what it has to offer to the public in comparison with Sterkfontein caves?

The word Maropeng is ambiguous because it could be referring to the company formerly know as Furneaux Stewart Gapp (FSG) which is now known completely as Maropeng a'Afrika Leisure (MAL), or it could refer to one of the sites run by this company at Mohale's Gate. Further confusion owes to the fact that this building is often alternately (but erroneously) referred to as the Interpretation Centre Complex, whereas this phrase should correctly refer to both Maropeng and Sterkfontein. In continuing to answer this question, I am using the second meaning (ie. The Mohale's Gate Site, as opposed to Sterkfontein).

Sterkfontein Caves is World renowned in palaeo-anthropological (and subsequently heritage) circles for being the site of some very important finds such as "Mrs. Ples" and more recently "Little Foot". Sterkfontein and the other twelve fossil sites are all located on dolomite. Dolomite is a rock type both prone to forming caves and sinkholes, and fragile to touch, carbon dioxide and other human impacts. It is also the environment in which fossils form, so is the ultimate agent of the accumulation of remarkable evidence of early humans, their relatives and the environment in which these hominids lived. Sterkfontein was developed for scholars and the purpose of Maropeng was to offer the public a world class interpretation centre and to be accessible to and be able to tolerate high visitor numbers, without a danger or significant impacts on the environment (or visitors) due to sinkholes, subsidence, wear, carbondioxide damage or any other stress related impact. It built away from the dolomite, so does not subject the sensitive dolomite karst system to stress. (Although it was assessed as being located at a place where there was a relatively low chance of any palaeoanthropological or archeological artifacts being encountered, it has ironically yielded a source of stone tools which appears to be rich, or even very rich.)

b) Is there any documentation available in French at either site?

Available French documentation can reasonably be called non-existent (if I am wrong it is certainly extremely scant and not significant or useful).

You may be interested to know that research shows demand for French far below German for example, but it is by no means insignificant.

c) In your view, what would be a recommended format for presenting information in French to the public?

I think a format which presents several European languages to tourists including French and German would be ideal. It would have to be accessible to the novice, but of interest to the specialist or expert and include good clear illustrations and photographs and at the same time be concise and affordable. It should be aimed to deal directly with the displays, so aim to engage the foreign language tourist with displays which are primarily or exclusively in English- and make such links through illustrations in the display or any other practical means.

d) Who (name/profession) is compiling the guidebook that is to be translated?

This question is best asked to Chrissi Drunk, who is responsible for such a compilation.

e) Who compiled the storyline at both sites?

The storyline was a collaboration between Wits University, the Cradle of Humankind World Heritage Site Management Authority and FSG (now MAL).

f) Who owns and who is in charge of the management of Sterkfontein caves and Maropeng?

Sterkfontein Caves was bequeathed by the Stegman family to Wits University. The land on which Maropeng was built was donated by the Standard Bank to the Gauteng Provincial Government.
Both facilities are run by MAL under a 10-year concession contract with the Gauteng Provincial Government, which gives authority to the Cradle of Humankind World Heritage Site Management Authority. The Management Authority are a Blue-IQ project under the umbrella of the Gauteng Department of Finance and Economic Affairs.

g) Who are the main fund providers of these two sites?

The majority of funds came from government, with additional funds coming from the concessionaire (MAL), which in accordance with its contract takes on management of these sites and all associated risk, and pay a concession fee to the government, which is allocated to a variety of trusts, including a Scientific Trust and a Community Benefits Trust.

h) Who answers to UNESCO in terms of WHS criteria?

The Management Authority as described above.

i) What is *Maropeng a Africa* and what role does it play?

It is the concessionaire for the first (renewable) 10 year contract, as described above.

j) Who is in charge of language policy development at both sites?

The Management Authority follows the language policy of the South African Government. MAL are welcome to their own language strategy, which as you can see consists of a primary focus on English, but as you are no doubt aware in your dealings with them, they are aware of the need to develop materials in other languages.

**APPENDIX B**

**Interview with Chrissi Drunk – Brand manager (Maropeng)**

a) What is Maropeng's aim in terms of what it has to offer to the public in comparison with Sterkfontein caves?

Maropeng is a logical extension of Sterkfontein and its more commercial approach aims at presenting the information in a more modern manner, making use of written, visual and audio media. Visitors come to Sterkfontein to see the caves. Those looking for an experience involving more senses will come to Maropeng. Notwithstanding its commercial aim, in the near future, Maropeng will offer visitors a chance to see the original skulls and other human remains found on site – a unique opportunity.

b) Is there any documentation available in French at either site?

No. we decided that, considering the large number of official languages in South Africa, we could not satisfy everyone, so we opted for the most widely used language in the country that is English.

c) In your view, what would be a recommended format for presenting information in French to the public?

Maropeng had planned to produce a guidebook that tourists could buy and take home to gain a more thorough scientific knowledge of the site. This guidebook will be ready by the end of March 2006 and so it would be ideal for the inclusion of a French version.

d) Who (name/profession) is compiling the guidebook that is to be translated?

This guidebook is being compiled by a journalist.

e) Who compiled the storyline at both sites?

The storyline committee is formed by scientists from the University of the Witwatersrand. They have compiled the storyline with 4 different levels of 'scientificness' to accommodate the different age groups.

f) Who owns and who is in charge of the management of Sterkfontein caves and Maropeng?

The government owns the site. It leases it to organizations that run it. The University of the Witwatersrand provides the scientists.

g) Who are the main fund providers of these two sites?

DACE (Gauteng Provincial Government – Department of Agriculture, Conservation and Environment) and Blue IQ are the two main fund providers.

h) Who answers to UNESCO in terms of WHS criteria?

DACE is the government body that is responsible of the maintenance of the UNESCO WHS criteria, and that responds to UNESCO in case of problems.

i) What is *Maropeng a Africa* and what role does it play?

*Maropeng a Africa* is a business company in charge of running both Maropeng and Sterkfontein caves. It is like a temporary 'tenant' of the site on a 10-year contract with the government.

j) Who is in charge of language policy development at both sites?

As a manager of both sites, *Maropeng a Africa* is also responsible of the language policy used at those sites.

**APPENDIX C**

**MAROPENG'S ENGLISH GUIDEBOOK**




# Mini guidebook

**Contents**

Title page
Contents
Welcome (home)
Entrance lobby
Ramp descent
The beginning of the world
Tumulus orientation
Sustainability
The path to humanity
What it means to be human
Maropeng architecture

*Our Story*

*Long, long ago, millions of moons back… Africa gave birth in her steamy jungles and great rift valleys and along her pristine coastlines to humankind. You and I, and all our ancestors can trace back our bloodlines to our common ancestry in the heat, dust and beauty of this great continent.*

*Our Path to Humanity was a slow and dangerous one, spanning more than 6-million years. Our ancestors were australopithecines such as Little Foot and Mrs. Ples who lived in the area around the Cradle of Humankind between 4-million and 2-millions years ago. They were smaller than us and covered in hair. They walked upright but were better at climbing than us, and lived in the forest, protecting their young as best they could from powerful predators like giant sabre-toothed cats and long-legged hunting hyenas, and the elements, with little more for shelter than tree canopies. Often they failed, and predators would catch them and their young, chewing their bones and leaving fragments which washed down into caverns, later to provide clues about where we came from.*

*Slowly, over millennia, our ancestors learnt to harness and control fire, then to make it, and to craft tools from stone, which helped them to survive their hazardous times.*
*They started to grow taller and live longer, and adapted better to walking upright, on two feet. They learnt to communicate, to help one another to hunt and to tell one another the stories of their world. If they hadn't triumphed against the elements and predators with their meagre defences millions of years ago, we wouldn't be here today….*

## Welcome (Home)

Welcome to Maropeng and the Cradle of Humankind World Heritage Site. Maropeng means "returning to the place of origin" in Setswana, the main indigenous language in this area. Our ancestors have lived in this area for more than 3-million years, and today we are going to meet some of them. By coming here, you are coming to the birthplace of humanity. Welcome home!

## Entrance Lobby (Maropeng orientation)

Welcome inside the Maropeng visitors' centre. Around you, you will see an introduction to the major themes of the exhibition. The four entrance signifier columns symbolise the four elements which are essential to support life on Earth: the air that we breathe; the fire that warms us; the earth that sustains us; the water for life.

High above us hang giant banners introducing the four elements again; the development of life on earth and evolution; and 100 questions to start you thinking about these things.

On the wall is a map of the Cradle of Humankind. The Cradle of Humankind was declared a World Heritage Site in 1999 because of the area's exceptional contribution to our understanding of humankind's history and development, over more than 3-million years. All together, there are 15 major fossil sites in the Cradle of Humankind, of which the Sterkfontein Caves is the most famous.

The fossils Mrs Ples and Little Foot were both discovered here, as well as thousands more fossils of hominids, which are human ancestors, as well as those of plants and animals. If you wish to discover more about these exceptional finds, the Sterkfontein Caves, which are very close nearby, are well worth a visit.

Let us move towards the ramp, leading us down into the depths of the Maropeng building, sometimes known as the "Tumulus", which means burial mound.

## Ramp Descent

Although diverse in terms of skin colour, height, hair and other physical ways, we are all one species. We speak more than 6800 languages, but we all share our humanity.

On the way down the ramp to the ride through the elements below, enjoy looking at the portraits of diverse South Africans. Young, old, black, white and other colours, they are all real people. Listen, too, to the famous speeches on the way down. Can you tell the voices of Nelson Mandela, Winston Churchill, Adolf Hitler, Mao Tse Tung and Thabo Mbeki among the others? How many can you identify?

As you reach the bottom, prepare to embark a boat that will take you through the elements that kickstarted our planet many moons ago…

**Did you know? Humans share 99.9% of their DNA with other humans!**

**Did you know? The tallest and shortest populations in the world both live in central Africa. Tutsi males in Central Africa, who live mainly in Rwanda, average about 1.83m (6ft) in height. The shortest population is pygmy Mbutsi from Zaire, whose men average about 137cm (4'6'') and women 135 cm (4'5'')**

## The Beginning of the World

Our world was born in a ball of burning gas 4.6-billion years ago, in a universe that is about 14-billion years old. Over time it cooled, the early atmosphere formed, and the first land masses appeared. The first life forms, which were like the black algae you sometimes see in swimming pools today, emerged about 3.8-billion years ago.

The history of life on Earth has been rocked by five major extinctions. The last great extinction was 65-million years ago, when the dinosaurs were wiped out, probably after a giant meteor slammed into the Earth off the coast of Mexico, and set off volcanic eruptions all over the world, changing the global climate. Today, some scientists say we are in the midst of the sixth major extinction – and its cause is us.

We know about species which have populated our Earth before us by studying fossils. Fossils are the remains of plants or animals which have been turned into stone over a long period of time in a process known as "mineralisation".

Charles Darwin, an English naturalist, was one of the first people to express a theory of evolution – the idea that species change over time, as they adapt to changing environments.

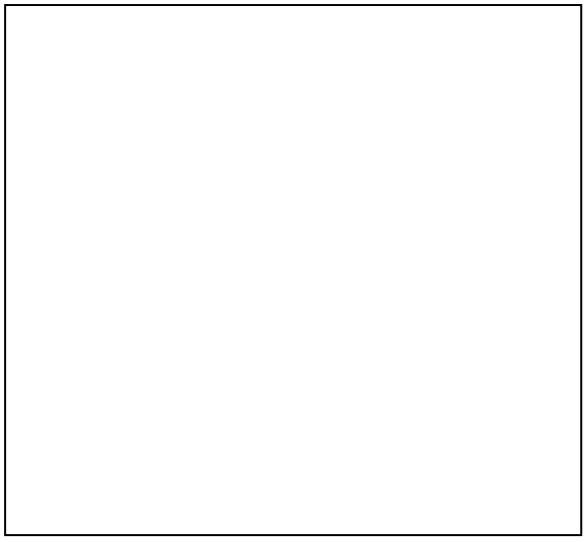
## Downstairs Orientation

We are now in the Tumulus, a long, underground chamber in which the main exhibition is housed. Before us, lie our past and our future. On our left, is the main body of the exhibition, and on our right the large "signifier columns" which provide headlines for the more in-depth content in the information panels. On the extreme right hand side is the Sustainability Wall, which deals with issues relating to humans' impact on the environment and how resources are divided between rich and poor across the world.

## The Birth of the Cradle

Cave Formation:

Caves at the Cradle of Humankind were formed in porous limestone. Over millions of years, acidic groundwater dissolved away the limestone, leaving cavities which grew over time.



Solution and roof collapse created entrances to the caves in the form of vertical shafts. Soil, rocks, bones and vegetation fell in from the surface. (The animals and plants from which fossils formed did not actually live in the caves.)

The bones that found their way into these shafts were often just fragments left by the activities of predators and scavengers around the shaft entrances. But sometimes – far less often – a whole animal would fall down a cavity and be fossilised in the infill. The famous *Australopithecus* skeleton, "Little Foot", which was found deep inside a Sterkfontein grotto, is an example of this.

Over time, the material that fell into the cave shafts built up to form talus cones, which look like giant, inverted ice-cream cones, on the cave floor. These deposits were cemented by lime-charged water to form concrete-like breccia, a type of rock.

Bones within these talus cones were mineralised by calcium carbonate and stained with manganese and iron from the dolomitic soil.

Today, palaeoanthropologists slowly and carefully chip away at the breccia in the Cradle of Humankind, mining for clues of our ancient past.

**Did You Know?**

**DNA contains important information about the evolution of humans. By studying a particular type of DNA called 'mitochondrial DNA' (mtDNA) scientists can trace all modern humans to a single common female ancestor who lived about 200,000 years ago – and she's from Africa!**

**Did you know?**

**Many scientists claim that currently we are experiencing a sixth mass extinction!**

**The Sustainability Wall that runs along the right hands side explores the challenges humans face in meeting the needs of the present without endangering the Earth's rich natural diversity.**

## The Path to Humanity

We humans are relatively recent arrivals on Earth. But our ancestors have been here for millions of years.

Our ancestors are called "hominids". The oldest hominid discovered so far is *Sahelanthropus tchadensis*, from Chad, which is about 7-million years old. This fossil has been nicknamed "Toumai" in the local Goran language. There are also several very old species that have been discovered in Kenya and Ethiopia.

While the exact shape of the human family tree is something scientists are still debating, the one thing that they mostly agree on is that humankind was born here in Africa.

In the Cradle of Humankind, about 1000 hominid fossils have been discovered, spanning several million years.

The oldest hominid fossils from the Cradle are more than 3-million years old and belong to the genus *Australopithecus*. There were many species or types of *Australopithecus,* which lived in Eastern and Southern Africa. Mrs Ples, the famous fossil of a skull of an *Australopithecus africanus*, was discovered at the Sterkfontein Caves by palaeontologists Dr Robert Broom and John Robinson in 1947. Mrs Ples is about 2.1-million years old. In 1997, palaeontologist Professor Ron Clarke and his assistants Stephen Motsumi and Nkwane Molefe, discovered the full skeleton of an *Australopithecus* inside the Sterkfontein Caves, encased in breccia, a type of rock. This skeleton is still being excavated.

After *Australopithecus* came the genus *Homo*, to which we humans, *Homo sapiens,* belong. The earliest named *Homo* species is *Homo habilis* or "handy man", which researchers believe made the first stone tools. *Homo habilis* emerged about 2-million years ago. After *Homo habilis* came, among others, *Homo ergaster*, *Homo erectus, Homo heidelbergensis, Homo neanderthalensis, Homo floresiensis* and *Homo Sapiens* – us. These species lived in different parts of the world. Not all *Homo* species were direct ancestors of humans. The human family tree has many branches, several of which broke off as species became extinct.

Modern humans, *Homo sapiens*, emerged only about 200,000 years ago. While older species of *Homo*, such as *Homo erectus* and *Homo neanderthalensis* lived in Asia and Europe mostly,

scientists believe that modern humans, like our most distant ancestors such as Toumai and the australopithecines, evolved here in Africa. The oldest fossil evidence for modern humans discovered so far comes from Ethiopia and South Africa.

## What it Means to be Human

### Bipedalism

About 7-million years ago, early hominids began to adapt to a climate that was cooling globally. Before this, Africa had been mostly covered in rainforest. But as the temperature cooled and dried, savannah replaced the forest. This meant tree-climbing apes had to become more adept at walking on land.

Our ancestors who ventured out into the savannah were rewarded with roots, shrubs and occasional animal carcasses, ensuring that those who walked on two legs were more likely to survive.

Bipedalism allowed hominids to free their arms, enabling them to make and use tools well, stretch for fruit in trees and use their hands to communicate. They could also see further over the savannah grass.

But even with these advantages, our ancestors probably spent time in trees as well, which we can tell by studying fossils of hands and feet, and how they were adapted to climbing.

Although there is a popular idea that our ancestors slouched and stooped forward, the study of fossil hips, spines and feet suggest they always walked fairly upright.

### Development of the Jaw and Diet

Our ancestors' diet changed over time. From eating mostly plants, they began to eat a mixture of meat and protein, along with plant matter. This helped their brains to develop, and in turn altered the shapes of their jaws. Over time, their jaws became less heavy or "robust" and more slender or "gracile". The jaws of *Australopithecus*, for example, projected far more forward than ours, but as *Homo* developed, the jaw moved further back, under the growing braincase. Our teeth also became smaller as we developed the capacity to cut and grind food.

### Development and Growth of the Brain

One of the defining characteristics of becoming human has been the growth and development of our brains. *Australopithecus* had an average cranial (brain) capacity of about 450 cc, about the size of an orange. Today, our brains are on average more than three times as big as that, at around 1400 cc.

But bigger brains don't necessarily mean a species will survive. Neanderthals had brains on average between about 5% and 10% bigger than ours, and they became extinct about 20,000 years ago.

### Stone Tools

The oldest stone tools so far dated come from Ethiopia and are about 2.6-million years old. The first technology that our ancestors developed was the **Oldowan Industry**. These tools were primitive and were mostly just pebbles or broken pebbles.

Next, came the **Acheulean Industry** (pronounced "Eish-oo-lean"). Acheulean tools included large, rough hand-axes and cleavers, probably for chopping and mashing meat. Dozens of Acheulean tools, including hand-axes, have been found right here at Maropeng in an ongoing excavation.

The Acheulean was followed by the **Middle Stone Age** and **Later Stone Age**, during which tools became much smaller and more refined and were developed for specific tasks, such as skinning an animal, or hafting onto a wooden handle to make a spear. The Later Stone Age in South Africa lasted right up till about 200,000 years ago, and the San people knew how to make these tools right into historical times.

**Control and Use of Fire**

The ability to harness and use fire was a major technological step in human development. Our ancestors probably learnt to capture fire from wildfires and keep it burning before they learned to make it.

At Swartkrans in the Cradle of Humankind, scientists have found a collection of about 300 bones which have been burnt at a consistent temperature, which is higher than the temperature of the average bushfire. These have been dated to more than 1-million years old. This is the oldest evidence for controlled use of fire in Southern Africa so far, though there is even slightly older evidence of it in East Africa. So we can say South Africa's first braai happened right here in the Cradle!

The ability to control and use fire helped our ancestors to warm themselves and to cook food, thus helping to expand their diets.

**Development of Language**

Scientists don't really know much about this, as our voice-boxes are made of soft tissue, and there is no fossil evidence of how they may have developed over time. Some scientists say we may have acquired the ability to speak at the time of *Homo habilis*, 2-million years ago, while others say it is only modern *Homo sapiens* that have been able to speak, within the past 200,000 years ago.

Our sophisticated ability to communicate across time and space sets us apart from other animals, and has helped us to populate the Earth and travel to its most inaccessible regions. It has allowed us to gather food better, to live in groups better, and to express ourselves better.

**Living with Others**

Most primates, the family to which we belong, live in groups. Group living provides better defence – a group can be more vigilant and challenging to predators than individuals can on their own.

Groups can also be more efficient than individuals at discovering, gathering and defending sources of food; and at caring for young.

### Peopling the World

Our ancestors left Africa in two waves, known as "Out of Africa I" and "Out of Africa II"

#### Out of Africa 1

Most palaeoanthropologists believe that our ancestors first left Africa about 2-million years ago and moved into Asia and Europe. This theory is known as "Out of Africa I" and is strongly supported by fossil evidence.

They probably left Africa in a gradual expansion, following food in small groups, rather than in a "mass migration".

#### Out of Africa II

"Out of Africa II" refers to the movement of modern humans out of Africa within the past 100,000 years.

They out-competed and replaced populations of other hominids outside Africa, such as the Neanderthals, with whom they could probably not interbreed. This theory is supported by fossil and genetic evidence.

Studies of DNA in modern human populations suggest that we all share common ancestors who lived in Africa some 200,000 years ago.

### Creative Explosion

Finally, we are creative beings. Our creativity is the ultimate expression of our humanity.

## Sustainability

200,000 years ago, when *Homo sapiens* first emerged, there were probably at first only a few hundred of us. Now, in the 21st century, the global population is fast approaching 10-billion people.

At first, we humans barely made an impact on the environment. But this has changed, as our technological abilities have progressed. Now our activities are causing serious implications for our planet, including the unusually fast extinction of species and global warming.

And we humans have developed very unequally. While the northern hemisphere is generally rich, the southern hemisphere is generally poor. Wealth is unevenly spread. A person who has HIV/AIDS in Africa is more likely to die quickly from the disease because they do not have access to drugs than a person in the USA, for example, where it has become a manageable disease. As our population grows, there is ever-more competition for precious resources for our sustainability as a species such as water and land.

While we can propel ourselves into space, millions of people starve to death each year, are illiterate and have no access to basic healthcare or clean water, for example.

Now that we can do anything, what will we do?

## Maropeng Architecture

The development of Maropeng, designed by GAPP Architects and a local firm called MMA, was based on the theme of discovery. When you approached the site, you saw seven concrete fingers or 14 m high concrete columns, signifying the centre, which moves in and out of sight along its approach. The marketplace where you came in and an amphitheatre are sunken into the ground, and this building itself is buried. There is a learner centre and a hotel inside the development, which are mostly hidden in the rolling hills.

As you walked through the exhibition itself, you moved in a journey of discovery from the beginnings of the world, through the history of humankind, right into the future. As you emerged, you discovered one of the best views in Gauteng.

When you entered the tumulus, it looked like a giant burial mound. Now, when you turn and see it, it's totally transformed – it's silver, grey and glass, hi-tech and futuristic. You get this feeling that you're not at the end of history, but at the beginning of the future.

**APPENDIX D**

**ANNOTATED TRANSLATION INTO FRENCH OF MAROPENG'S GUIDEBOOK**




# Le mini-guide

## Table des matières


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*Notre Histoire*

*Il y a fort longtemps – il y a de ça des millions de lunes – l'Afrique donna*[1] *naissance à l'humanité dans ses jungles humides, dans ses vastes vallées du Rift et le long de ses côtes sauvages. Vous et moi, ainsi que tous nos ancêtres, pouvons retracer notre origine jusqu'à notre ancêtre commun dans la chaleur, la poussière et la beauté de ce grand continent.*

*Le chemin qui mena à la naissance de l'humanité fut long et périlleux. En effet, il s'étendit sur plus de 6 millions d'années. Nos ancêtres furent des australopithèques, tels que « Little Foot » et « Mrs Ples »*[2]*, qui vécurent dans la région du 'Cradle of Humankind' (le berceau de l'humanité)*[3] *il y a 4 à 2 millions d'années. Ils étaient plus petits que nous et étaient recouverts de poils. Ils se tenaient debout mais étaient meilleurs grimpeurs que nous. Ils vivaient dans des forêts et protégeaient leurs petits du mieux qu'ils pouvaient face à des prédateurs puissants tels que les félins géants à dents de sabre et les hyènes chasseuses à longues pattes, ainsi que contre les éléments avec bien souvent pour seul abri la canopée des arbres. Ils échouaient souvent et les prédateurs s'emparaient d'eux et de leurs petits puis mâchaient leurs os en laissant des débris qui furent ensuite emportés dans des cavernes par la pluie, laissant ainsi des indices sur notre origine.*

*Petit à petit, au travers des millénaires, nos ancêtres apprirent à exploiter et à maîtriser le feu, ainsi qu'à créer des outils en pierre, ce qui les aida à survivre dans une ère si périlleuse. Ils commencèrent à grandir et à vivre plus vieux, ainsi qu'à mieux s'adapter à marcher debout, sur leurs deux pieds. Ils apprirent à communiquer, à s'entraider pour chasser et à se raconter les histoires de leur monde. S'ils n'avaient pas triomphé des éléments et des prédateurs avec leurs maigres moyens de défense il y a des millions d'années, nous n'existerions pas à l'heure qu'il est…*

## Bienvenus (chez vous)

Nous vous souhaitons la bienvenue à Maropeng ainsi qu'au Site du Patrimoine Mondial '*Cradle of Humankind'*. 'Maropeng' signifie 'revenir au lieu d'origine' en SeTswana, la langue autochtone la plus répandue dans la région. Nos ancêtres ont vécus dans cette région pendant plus de 3 millions d'années et, aujourd'hui, nous allons en rencontrer quelques uns. En venant ici, vous entrez dans le lieu de naissance de l'humanité. Soyez donc les bienvenus chez vous !

[1] In the first section (italicised) of this text, the author uses a narrative style of writing to tell a story to the reader. Where the author uses the past tense, I choose to use the *passé simple* in French instead of the *imparfait* or *passé composé* in order to give this narrated section of the text a more literary feel. In the rest of the text, however, I use the *imparfait* or *passé composé* where the author uses the past tense as the style of writing is no longer narrative.

[2] The names given to fossils were originally given in English and have not been officially translated in French. Therefore, I choose to retain the English version, as using a literal translation for such names would lead to confusion when the reader refers to the information displayed in the exhibition.

[3] I choose to give a translation of 'cradle of humankind' the first time it appears in the text and to retain the English version throughout the rest of the text as, again, no official French translation was given for the name of this site and since this is how it is referred to by the UNESCO.

## Le hall d'entrée (guide de Maropeng)

Bienvenus à l'intérieur du centre d'accueil pour les visiteurs de Maropeng. Vous trouverez autour de vous une introduction à tous les thèmes abordés dans ce musée[4]. Les quatre colonnes de l'entrée symbolisent les quatre éléments essentiels à l'existence de la vie sur terre : l'air que nous respirons ; le feu qui nous chauffe ; la terre qui subvient à nos besoins ; et l'eau, source de vie.

Au-dessus de vous pendent des affiches géantes qui représentent, encore une fois, les quatre éléments ; le développement de la vie sur terre et son évolution ; puis 100 questions pour stimuler votre réflexion sur ces thèmes.
Sur le mur se trouve une carte du '*Cradle of Humankind'*, lequel fut déclaré Site du Patrimoine Mondial en 1999 du fait de la contribution exceptionnelle de ce site envers notre compréhension de l'histoire et du développement de l'humanité sur une période de plus de 3 millions d'années.
Le '*Cradle of Humankind'* abrite un total de 15 sites fossilifères majeurs, le plus connu étant celui des '*Sterkfontein Caves'* (les grottes de Sterkfontein)[5]. Les fossiles de « *Mrs Ples* » et de « *Little foot* » y ont d'ailleurs été tout deux découverts, ainsi que des milliers d'autres fossiles d'hominidés, les ancêtres de l'homme, de plantes et d'animaux. Si vous souhaitez en savoir plus sur ces découvertes extraordinaires, sachez que les '*Sterkfontein Caves',* qui se trouvent tout près d'ici, valent largement le détour.

Rapprochons-nous maintenant de la rampe d'accès qui nous amène dans les entrailles[6] du bâtiment de Maropeng, aussi appelées le « tumulus », lequel représente un lieu de sépulture[7].

## Descente par la rampe d'accès

Bien que nous soyons tous différents en ce qui concerne la couleur de notre peau, notre taille, nos cheveux et d'autres aspects physiques, nous faisons tous partie d'une seule et même espèce. Nous parlons plus de 6800 langues, mais nous partageons tous notre humanité.

Alors que vous descendez la rampe qui vous emmène, plus bas, dans un périple à travers les éléments, regardez donc les portraits de différentes personnes sud-africaines. Jeunes, âgées, noires, blanches et d'autres couleurs : toutes sont de vraies personnes. Alors que vous descendez, écoutez aussi de célèbres élocutions.

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[4] The translation of the word 'exhibition' is not easy as the French equivalent '*exposition'* has a different meaning which refers more to an art exhibition (e.g. *exposition d'oeuvres d'art*). Therefore, I choose to use the word *'musée'*, or 'museum', to give a better description of what this exhibition truly is.
[5] See footnote 3
[6] To translate the word 'depths', I choose not to use the direct French equivalent *'profondeurs'* as it refers more to the marine environment. Using *'entrailles'*, however, confers a more accurate meaning of being within something, in the inner part of something, which is what is meant here by 'depths' rather than simply referring to something that is deep.
[7] The GDT (www.granddictionnaire.com) gives the following definition of *'tumulus': « grand amas artificiel de terre ou de pierres que l'on élevait au-dessus d'une sépulture »*. Therefore, I choose to translate 'burial mound' with *'lieu de sépulture'*, which literally means 'place of burial'.

Reconnaissez-vous les voix de Nelson Mandela, de Winston Churchill, d'Adolph Hitler, de Mao Tse Tung et de Thabo Mbeki parmi d'autres ? Combien en reconnaissez-vous ?

En arrivant en bas, préparez-vous à embarquer dans un bateau qui va vous emmenez à travers les éléments qui ont donné naissance à notre planète il y a de ça bien des lunes.

**Le saviez-vous ? Les humains ont 99.9% de leur ADN en commun !**

**Le saviez-vous ? Les populations dont les individus sont les plus grands et les plus petits au monde se trouvent toutes les deux en Afrique centrale. Les hommes Tutsi, qui vivent principalement au Rwanda, mesurent en moyenne 1.83m[8] de hauteur. La population dont les individus sont les plus petits au monde est celle des pygmées Mbutsi de la République Démocratique du Congo[9]. Les hommes y mesurent en moyenne 137cm et les femmes 135cm.**

## La naissance du monde

Notre monde est né dans un boule de gaz brulante il y a 4.6 milliards d'années, dans un univers âgé de 14 milliards d'années. Au cours des années, il s'est refroidi, une atmosphère primitive s'est créée et les premières masses continentales sont apparues. Les premières formes de vie, qui ressemblaient aux algues noires que vous trouvez dans vos piscines aujourd'hui, sont apparues il y a environ 3.8 milliards d'années.

L'histoire de la vie sur terre a connu cinq vagues d'extinction majeures. La dernière grande vague d'extinction date d'il y a 65 millions d'années, lorsque les dinosaures ont disparu de la surface de la terre, probablement suite à l'impact d'un météore géant, au large des cotes du Mexique, lequel a provoqué des éruptions volcaniques sur toute la terre et, de ce fait, en a changea le climat de manière globale. Aujourd'hui, certains scientifiques affirment que nous sommes sur le point de traverser la sixième grande vague d'extinction – et nous en sommes la cause.

Nous savons que des espèces ont vécu sur terre avant nous grâce à l'étude des fossiles. Les fossiles sont des restes de plantes et d'animaux qui se sont transformés en pierre sur une longue période au cours d'un processus que l'on appelle la « minéralisation ».

La naturaliste anglais Charles Darwin fut un des premiers à émettre l'hypothèse de l'évolution – l'idée que les espèces changent au fil du temps en s'adaptant à leur environnement changeant.

## Guide du tumulus[10]

[8] In a majority of countries where French is the official language, the metric system is in use. Therefore, I choose not to include the measurements in feet.

[9] Since the DRC is no longer referred to as Zaire, I choose to use *'République Démocratique du Congo'*.

[10] As you may have noticed, the French title is quite far from the original English one. This is the case because there is no elegant and concise way to say 'downstairs' in French. Therefore, I chose a more explicative title which indicates the area concerned: the tumulus, instead of simply 'downstairs'.

Nous voici maintenant au cœur du Tumulus : une longue chambre souterraine qui abrite la principale attraction[11] de ce musée. Devant nous se trouve notre passé et notre futur. Sur votre gauche se trouve la principale attraction, et vous pouvez apercevoir sur votre droite les grandes colonnes qui annoncent les thèmes du contenu plus détaillé des panneaux d'informations. Tout à fait à droite se trouve le Mur de la « Durabilité », lequel traite de l'impact de l'homme sur son environnement et de la manière dont les ressources sont distribuées entre les riches et les pauvres à travers le monde.

## La naissance du '*Cradle of humankind*'[12]

La formation des grottes :

Les grottes du '*Cradle of Humankind'* se sont formées dans de une roche calcaire poreuse. Pendant des millions d'années, l'eau souterraine acide a dissout le calcaire, laissant ainsi des cavités qui se sont agrandies au fil du temps.

L'effondrement du plafond a crée des entrées vers la grotte en forme de tunnels verticaux. De la terre, des roches, des os et de la végétation sont tombés à l'intérieur depuis la surface. (Les animaux et les plantes fossilisés n'ont en fait pas habités dans ces grottes.)

Les os qui se sont glissés dans ces tunnels n'étaient souvent que des fragments, les restes d'activités de prédateurs et de charognards autour de l'entrée des tunnels. Mais parfois – bien moins souvent cependant – il arrivait qu'un animal entier tombe dans une cavité et soit fossilisé. Le célèbre squelette australopithèque de « *Little Foot »,* qui a été trouvé au plus profond d'une grotte de Sterkfontein, en est un exemple.

**Qu'est-ce qu'un fossile? (mini-guide)**

Un fossile consiste des restes d'une plante ou d'un animal qui ont été préservés dans la roche sédimentaire.

Les fossiles sont assez rares. Pour chaque animal qui meurt, ses chances de devenir un fossile sont estimées à moins d'une sur un million.

Mais au *Cradle of Humankind*, les chances sont plus grandes puisque la région bénéficie de conditions favorables à la fossilisation.

Avec le temps, les matériaux qui étaient tombés dans les tunnels de la grotte se sont accumulés pour former des talus en forme de cône qui ressemblent à des cornets de glace géants posés à l'envers sur le sol de la grotte. Ces dépôts ont ensuite été cimentés par une eau riche en chaux puis ont formé un genre de brèche à la consistance du béton, une sorte de roche.

[11] The word 'exhibition' can be used quite loosely in English to mean several things with slight nuances as can be seen in this text. However, in French, such loose use of words is less easy. Therefore, and although I used the word *'musée'* previously when 'exhibition' was used in its broader sense (see footnote 4), here I use *'attraction'* to define a section of the *'musée'*.

[12] Here, I choose to repeat the full name 'cradle of humankind' instead of simply 'cradle' as it may be unclear to the francophone reader, since only the full name was initially translated into French.

Les os contenus dans ces talus ont été minéralisés par le carbonate de calcium et taché par le manganèse et le fer présents dans ce sol dolomitique.

Aujourd'hui, les paléoanthropologues brisent lentement et délicatement la brèche du '*Cradle of Humankind',* couche par couche, dans l'espoir d'y trouver des indices sur notre passé lointain.

**Le saviez-vous ?**

**L'ADN contient des informations importantes sur l'évolution de l'espèce humaine. En étudiant un certain type d'ADN qui s'appelle 'l'ADN mitochondrial' (ADNmt), les scientifiques parviennent à retracer l'origine de tous les êtres humains modernes jusqu'à une seule ancêtre femelle qui a vécu il y a 200,000 ans – et elle est originaire d'Afrique !**

**Le saviez-vous ?**

**Bon nombre de scientifiques affirment que nous sommes actuellement en train de connaître une sixième vague d'extinction de masse !**

**Le Mur de la « Durabilité[13] » qui se trouve sur votre droite explore les défis auxquels les humains font face en essayant de subvenir à leurs besoins présents sans mettre en danger la riche diversité naturelle de la planète.**

## Le chemin vers l'humanité

L'arrivée des humains sur terre – notre arrivée – est relativement récente. Mais nos ancêtres ont foulé son sol pendant des millions d'années déjà.

Nos ancêtres sont les « hominidés ». L'hominidé le plus ancien à avoir été découvert à ce jour se nomme *Sahelanthropus tchadensis*. Il est originaire du Tchad et date d'il y a 7 millions d'années. Ce fossile a été surnommé « Toumai » dans la langue autochtone, le Goran. Il y a aussi plusieurs très vieilles espèces qui ont été découvertes au Kenya et en Ethiopie.

Bien que le débat continu parmi les scientifiques quant à la forme exacte de l'arbre généalogique humain, ils s'accordent presque tous sur le fait que l'humanité est née ici, en Afrique.

[13] 'Sustainability' has two direct translations in French: *durabilité* and *pérennité.* After comparing a collocation in both languages – 'sustainable development' and *développement durable*, I have chosen to use *durabilité*. The term *pérennité* refers to a more biological meaning of this word and may not be understood by everyone.

Près de 1000 fossiles d'hominidés ont été découverts au '*Cradle of Humankind'* et leur origine s'étend sur plusieurs millions d'années.

Les plus vieux fossiles d'hominidés découverts au *Cradle* sont âgés de plus de 3 millions d'années et appartiennent au genre *Australopithecus*. Plusieurs espèces ou types d'*Australopithecus* ont vécu en Afrique de l'est et en Afrique sub-saharienne. « *Mrs Ples* », le célèbre fossile du crane d'un *Australopithecus africanus,* fut découverte dans les grottes de Sterkfontein par les paléontologues Dr Robert Broom et John Robinson en 1947. « *Mrs Ples* » est âgée de près de 2.1 millions d'années.

En 1997, le paléontologue Professeur Ron Clarke et ses assistants, Stephen Motsumi et Nkwane Molefe, ont découvert le squelette complet d'un *Australopithecus* dans les grottes de Sterkfontein, enfermé dans une brèche, un type de roche. La fouille de se squelette est encore en cours actuellement.

Suite à *Australopithecus,* est apparu le genre *Homo* auquel nous, humains – *Homo sapiens* – appartenons. L'espèce du genre *Homo* la première à avoir été nommée est l'*Homo abilis*, ou « homme habile ». Les chercheurs pensent que cette espèce est à l'origine des premiers outils en pierre. L'*Homos habilis* a fait son apparition il y a environ 2 millions d'années. Après *Homos habilis* sont apparus, entre autre, *Homo ergaster, Homo erectus, Homo heidelbergensis, Homo neanderthalensis, Homo floresiensis* et *Homo sapiens* – nous-mêmes. Ces espèces ont vécu dans différentes parties du monde. Toutes les espèces du genre *Homo* ne sont pas des ancêtres directs des humains. L'arbre généalogique humain compte bien des branches, bon nombre desquelles se sont cassées lorsqu'une espèce disparaissait.

L'homme moderne, *Homo sapiens,* n'est apparu qu'il y a 200,000 ans environ. Bien que des espèces plus vieilles du genre *Homo*, telles que *Homo erectus et Homo neanderthalensis,* vivaient principalement en Asie et en Europe, les scientifiques pensent que les hommes modernes, tels que nos ancêtres les plus distants, comme « Toumai » et les australopithèques, ont évolué ici en Afrique. La preuve fossile d'hommes modernes la plus ancienne à cette date vient d'Éthiopie et d'Afrique du Sud.

## Être humain – que cela signifie-t-il ?

### Être un bipède

Il y a de ça 7 millions d'années, les premiers hominidés commençaient à s'adapter à un climat qui se refroidissait de manière globale. Avant cela, l'Afrique avait été principalement recouverte d'une forêt vierge. Mais au fur et à mesure que le climat se rafraichissait et devenait davantage sec, la savane a remplacé la forêt. Cela signifie que les grands singes arboricoles ont été forcés de s'habituer à marcher sur le sol.

Nos ancêtres, qui se sont aventurés dans la savane, ont été récompensés par des racines, des buissons et parfois par des carcasses d'animaux, ce qui signifie qu'être bipède garantissait une survie plus certaine.

Le fait d'être bipède permettait aux hominidés de libérer leurs bras et, de ce fait, de pouvoir fabriquer des outils et de s'en servir adroitement, ainsi que de tendre les bras pour cueillir des fruits dans les arbres et de se servir de leurs mains pour communiquer. Ils pouvaient également mieux y voir au-dessus des herbes de la savane.

Mais malgré ces avantages, nos ancêtres passaient tout de même probablement du temps dans les arbres. Nous pouvons affirmer cela grâce à l'étude des fossiles de mains et de pieds ainsi que de la manière dont nos ancêtres se sont adaptés pour grimper aux arbres.

Malgré l'idée reçue qui veux que nos ancêtres aient eu une allure avachie et penchée vers l'avant, l'étude de fossiles de hanches, de colonnes vertébrales et de pieds suggère qu'ils ont toujours marché en se tenant relativement droit.

**L'évolution de la mâchoire et de l'alimentation**

L'alimentation de nos ancêtres a changé au fil du temps. Composée essentiellement de plantes au début, elle a évolué en un mélange de viande et de protéine ainsi que de matières végétales. Ceci a aidé leur cerveau à se développer, et a ainsi modifié la forme de leur mâchoire. Au cours des années, leur mâchoire est devenue moins lourde, ou « robuste », et davantage fine et « délicate ». La mâchoire d'*Australopithecus*, par exemple, était bien plus projetée vers l'avant que la notre, mais alors que *Homo* a évolué, sa mâchoire a reculé vers l'arrière pour se placer en-dessous d'une boite crânienne grandissante. Notre dentition est aussi devenue plus petite alors que nous devenions capables de couper et de broyer notre nourriture.

**Le développement et la croissance du cerveau**

L'une des caractéristiques singulières de notre évolution vers l'être humain est la croissance et le développement de notre cerveau. *Australopithecus* avait une capacité crânienne (cérébrale) moyenne d'environ 450cc (centimètre carré), la taille d'une orange. Aujourd'hui, notre cerveau fait en moyenne trois fois cette taille et mesure 1400cc.

Mais un cerveau plus grand ne garantie pas forcement la survie d'une espèce. L'homme de Neandertal avait un cerveau d'environ 5 à 10% plus grand que le notre en moyenne, et il a disparu il y a 20,000 ans.

**Les outils en pierre**

Les outils en pierre datés les plus vieux proviennent d'Éthiopie et datent de 2.6 millions d'années. La première technique que nos ancêtres ont utilisée est issue de l'**Industrie Oldowayenne**. Ces outils étaient primitifs et ne comprenaient que des galets ou des galets brisés.

Ce fut ensuite le tour de l'**Industrie Acheuléenne**. Les outils issus de cette industrie comprenaient de grandes haches emmanchées et fendoirs grossiers, probablement utilisés pour couper et broyer la viande. Des douzaines d'outils Acheuléens, notamment des haches emmanchées, ont été trouvés ici même à Maropeng dans une fouille qui continue à ce jour.

La période Acheuléenne fut suivie des périodes du **Mésolithique** et du **Néolithique**[14], pendant lesquelles les outils sont devenus plus petits, plus affinés et servaient à des taches précises, par exemple à dépouiller un animal ou bien montés sur un manche en bois pour en faire une lance.
Le Néolithique en Afrique du Sud a duré jusqu'à il y a environ 200,000 ans et les San ont su confectionner ces outils jusque dans des périodes récentes de notre histoire.

**La maîtrise et l'utilisation du feu**

La maîtrise et l'utilisation du feu ont marqué un grand pas dans le développement de l'humain. Nos ancêtres ont probablement appris à 'capturer' le feu depuis des feux de brousse et à le préserver avant d'apprendre à le faire.

À Swartkrans, dans le '*Cradle of Humankind',* des scientifiques ont trouvé un amas d'environ 300 os qui ont été brulés à une température plus haute que celle d'un feu de brousse. Ces os datent d'il y a plus d'1 million d'années. C'est pour l'instant la preuve la plus ancienne de la maîtrise du feu en Afrique du Sud, bien qu'il en existe de plus anciennes en Afrique de l'Est. Nous pouvons donc affirmer que le premier barbecue sud-africain a eu lieu ici dans le '*Cradle'* !

La maîtrise et l'utilisation du feu ont aidé nos ancêtres à se chauffer et à faire cuire leur nourriture, leur permettant ainsi de diversifier leur alimentation.

**Le développement du langage**

Les scientifiques n'en savent que très peu à ce sujet, dans la mesure où notre boite vocale est faite de tissus mous et qu'il n'existe donc pas de traces fossiles sur la manière dont elle aurait pu évoluer au fil du temps. Certains scientifiques affirment que nous aurions acquit la capacité de parler à l'époque de l'*Homo habilis*, soit il y a 2 millions d'années, tandis que d'autres scientifiques affirment que seul l'*Homo sapiens* moderne a pu commencer à parler dans les 200,000 ans passés.

Notre aptitude à communiquer de manière sophistiquée à travers le temps et l'espace nous sépare des autres animaux, et nous a permis de peupler la planète et d'en explorer les régions les plus inaccessibles. Cela nous a aussi permis de mieux nous procurer notre nourriture, de mieux vivre en groupe et de mieux nous exprimer.

**Vivre en groupe**

[14] A direct translation of 'stone age' in French, which would come first to any francophone's mind, is *age de pierre*. However, here it is not possible to use this translation because we are talking about the Middle and Later Stone Age, which both have specific translations in French, namely *Mésolithique* and *Néolithique.*

La plupart des primates, famille dont nous faisons partie, vivent en groupe. Cette cohabitation offre une meilleure défense – un groupe peut être plus vigilant et plus imposant qu'un individu ne pourrait l'être tout seul.

Un groupe est aussi plus efficace qu'un individu lorsqu'il s'agit de découvrir, d'exploiter et de défendre des sources de nourriture ; et de s'occuper de sa progéniture.

**Peupler la planète**

Nos ancêtres ont quitté l'Afrique en deux vagues connues sous le nom de « *Out of Africa I* » et « *Out of Africa II* »[15].

***'Out of Africa I'***

La plupart des paléoanthropologues pensent que nos ancêtres ont initialement quitté l'Afrique il y a environ 2 millions d'années pour se diriger vers l'Asie et l'Europe. Cette théorie est connue sous le nom de « *Out of Africa I* » et elle est fortement appuyée par des preuves fossiles.

Ces ancêtres ont probablement quitté l'Afrique progressivement en suivant leurs sources de nourriture en petits groupes plutôt que sous la forme d'une « migration de masse ».

***'Out of Africa II'***

« *Out of Africa II* » fait référence à la migration des humains modernes qui ont quitté l'Afrique au cours des 100,000 dernières années.

Ces humains modernes ont dominé et remplacé les populations d'autres hominidés en dehors de l'Afrique tels que les néanderthaliens, avec lesquels ils ne pouvaient probablement pas procréer. Cette théorie est appuyée par des preuves fossiles et génétiques.

Des études sur l'ADN des populations d'hommes modernes suggèrent que nous avons tous des ancêtres en commun qui ont vécu en Afrique il y a 200,000 ans.

**Une explosion de créativité**

Pour finir, nous sommes des êtres dotés de créativité. Notre créativité est l'ultime expression de notre humanité.

## Durabilité

Lorsque *Homos sapiens* est apparu, il y a 200,000 ans, nous n'étions probablement que quelque centaines sur terre au tout début. Aujourd'hui, au 21ème siècle, la population mondiale se rapproche des 10 milliards d'habitants.

[15] No direct translation into French seems to exist for these two terms 'out of Africa I/II'. Therefore, I choose to retain the English and to italicise it. I choose not to paraphrase it either as the meaning is contained in the sentence that introduces these terms: *'quittés […] en deux vagues'*.

Au début, nous – les humains – n'avions qu'un impact très réduit sur l'environnement. Mais cela a bien changé depuis les progrès accomplis en technologie. Aujourd'hui, nos activités ont de sérieuses conséquences sur notre planète, comme par exemple la vitesse inhabituelle à laquelle certaines espèces disparaissent ainsi que le réchauffement de la planète.

Aussi, nous – les humains – nous sommes développés de façon très inégale. Alors que l'hémisphère nord est considérée comme riche, l'hémisphère sud est plutôt pauvre. La richesse mondiale est distribuée de façon inégale. Une personne qui vit avec le SIDA[16] en Afrique a plus de chances de mourir rapidement de cette maladie à cause du manque d'accès au traitement qu'une personne qui vit aux Etats-Unis, par exemple, où les traitements sont plus disponibles.
Au fur et à mesure que notre population grandit, la concurrence s'intensifie en ce qui concerne les ressources indispensables à la vie telles que l'eau et la terre.

Alors que nous avons les moyens de voyager dans l'espace, des millions de personnes meurent de faim chaque année, d'autres sont illettrées et n'ont accès à aucuns soins médicaux de base ni à de l'eau potable, entre autre.

Maintenant que nous savons tout faire, qu'allons-nous faire ?

## L'architecture de Maropeng

Le développement du site de Maropeng, qui a été conçue par les architectes de la GAPP et par MMA, une société locale, s'est inspiré du thème de la découverte. Lorsque vous approchez le site, vous voyez comme sept doigts en béton, ou bien des colonnes en béton hautes de 14m qui représentent le centre qui apparaît et disparaît au fur et à mesure que l'on s'en approche. La petite place du marché par laquelle vous êtes passés en entrant, ainsi que l'amphithéâtre, sont situés comme dans un renfoncement dans le sol, et le bâtiment lui-même est enterré. Il existe un centre d'éducation et un hôtel sur ce site qui sont presque entièrement dissimulés dans les collines.

En marchant à travers le musée en lui-même, vous faites un voyage de découverte depuis les origines du monde, en passant à travers l'histoire de l'humanité, et jusque dans le futur. En sortant, vous découvrez l'une des plus belles vues du Gauteng.

Lorsque vous étiez entrés dans le « tumulus », il ressemblait à un monument de sépulture en forme de mont. Maintenant, si vous vous retournez pour le regarder, il est totalement transformé – il apparaît argenté, gris et comporte du verre, hi-tech et futuriste. Vous avez ce sentiment de ne pas vous trouver à la fin de l'histoire, mais au début du futur.

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[16] The purposeful omission of 'HIV' in 'HIV/AIDS' is due to the fact that the French refer more commonly to *'SIDA'* than to *'VIH/SIDA'*. The term *'SIDA'* in French has evolved to encompass the meaning of both terms.