THE TREATMENT OF TECHNOLOGICAL AND SCIENTIFIC TERMS IN XITSONGA BILINGUAL DICTIONARIES: A LEXICOGRAPHIC APPROACH

By

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DECLARATION

I**, Mafuyeka Sylvia Sindile** (*Ntukulu wa Vahlave*), declare that, **The Treatment of Technological and Scientific Terms in Xitsonga**: **A Lexicographic approach** is submitted by me, is my own work and that all sources that I have used and quoted have been indicated and duly acknowledged by means of complete references.

_____   _____

Signature   Date

DEDICATION

I dedicate my efforts to my adorable sons, Ntiyiso, Akani and Matimu; my late mother Thembi Ruth (*Lemekiye*) Mabunda; my sisters Phindile and Fikile; my brothers Makungu and Lifa. Moreover, I dedicate it to my lovely uncle, Samuel Thembeni Mabunda.

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ABSTRACT

A critical analysis of The Treatment of Technological and Scientific terms in Xitsonga Bilingual Dictionaries has revealed that the role of equivalence in translation cannot be taken for granted. In the study, various types of translation equivalence problems are examined. Different strategies and procedures for dealing with non-equivalence are also discussed.

The study investigates the problems encountered; the impact of transliteration when dealing with the translation of technological and scientific terms in Xitsonga bilingual dictionaries and how lexical engineering contributes towards language change; language shift; language evolution and sometimes language death. This study also reveals that technological terms should be translated by a descriptive term.

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CHAPTER 1

GENERAL INTRODUCTION

1.1 INTRODUCTION

In this study, an investigation of how lexicographers of Xitsonga bilingual dictionaries treat scientific and technological terminologies will be thoroughly conducted by the researcher. Strategies and recommended lexicographic procedures that bilingual dictionary compilers, terminologists and subject specialists should follow in order to bring about equivalence will be suggested. This will be done through reviewing articles provided in the dictionaries in question. Other authors' works will also be reviewed.

1.2 BACKGROUND OF THE STUDY

The first *Tsonga-English dictionary* was published in 1907 by Chatelain. Its second edition appeared in 1909. The current revised and enlarged sixth edition of this work is the *English-Tsonga/Tsonga- English Pocket Dictionary* published by Sasavona Publishers and Booksellers. An essential feature of the first edition of this work is that the first section of the dictionary contained exposition of the grammar of the language whereas the second section comprised the lemmata and their explanation.

The next dictionary to be published was Cuènod's *Tsonga English Dictionary*, which appeared in 1967. This was a much longer work than Chatelain's (1907) and has since been reprinted five times. A good feature of this dictionary is the introduction in which the lexicographer gave a brief outline of the grammar of the Tsonga language. Another good point was the marking of the tone of the Tsonga entries.

In 1983, Hartshone published the *Dictionary of Basic English* with an appendix containing the Xitsonga equivalents for all English entries in the dictionary. This is a valuable dictionary complied for pupils who study English as a second language. The most recent of these published dictionaries is the *English-Tsonga Bilingual and*

Explanatory Dictionary by Mathumba (2005). This dictionary was published by Phumelela Publishers.

The most common thing about all these mentioned dictionaries is that they all used transliteration of borrowed items from the source language English as the means of providing equivalents to the target language. In many instances, this approach does not assist the user to get the intended meaning.

The English-Tsonga bilingual dictionaries do not treat some technological and scientific words in a way that the dictionary users would be able to understand the meaning of these terms in their own language. This therefore, poses a problem whereby dictionary users are not able to communicate effectively when using the meanings of these technological or scientific words. In some cases, lexicographers of the dictionaries in question resort on borrowing of the source language items as equivalents. That is, they borrow the source language form as a translation equivalent. The problem of equivalence has unfortunately affected Cuènod (1967) as the following examples illustrate:

(1) **English**   **Xitsonga**

   a) **Calendar**   : Khalendare   (1967:16)
   b) **Cabbage**   : Khavichi   (1967:16)
   c) **Coffee**   : Kofi   (1967:19)
   d) **College**   : Kholichi   (1967:20)

The above articles are unacceptable because the lexicographer has merely borrowed the source language forms and this will confuse the user because he may not be able to deduce the required meaning. The following articles are also problematic:

(2) **English**   **Xitsonga**

   a) **Acronym**   : Akhronimi   (2005:94)
   b) **Edition**   : Edixini   (2005:116)

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c)	**Internet**	: Inthanate	(2005:132)
d)	**Zygote**	: Zygote	(2005:167)

Mphahlele (2001) indicates that direct borrowing of a source language lemma as translation equivalent would not assist the dictionary users to communicate successfully because if the lemma is not known to the user, there is no way in which the speaker would have communicative success unless a comprehensive definition is given by the lexicographer. By this, Mphahlele suggests that compilers of these dictionaries have deliberately ignored what Al-Kasimi (1977) recommends.

According to Al-Kasimi (1977:58-60), the major task of a bilingual lexicographer is to find appropriate equivalence. However in some cases, he says, the entries take the form of an explanatory or descriptive equivalence. These explanatory or descriptive equivalences are necessitated by the absence of translation equivalents in the target language.

1.3 AIM AND OBJECTIVES

1.3.1 Aim

The aim of this study is to examine the treatment of technological and scientific terms in Xitsonga bilingual dictionaries. The aim of the study will be achieved by focusing on the following questions;

✓ How are technological and scientific terms treated in Xitsonga bilingual dictionaries?
✓ Which strategies should be used in order to bring about equivalence between the lemmata?
✓ Which lexicographic procedures should lexicographers and subject specialists follow towards the development of technological and scientific language in Xitsonga?

1.3.2 Objectives

The objectives of this study are:

- ✓ To determine the way in which technological and scientific terms are treated by lexicographers of Xitsonga bilingual dictionaries.
- ✓ To identify strategies that can be used in order to bring about equivalence between the lemmata.
- ✓ To recommend lexicographic procedures which lexicographers and subject specialists should follow towards the development of technological and scientific language in Xitsonga?

1.4 RATIONALE

This study is conducted because the current dictionaries are not treating technological and scientific terms in a way that Xitsonga dictionary users are able to get the required meaning. In this case, the researcher would like to suggest possible method of presenting the meanings of Xitsonga technological and scientific terms in a systematic and user-friendly manner.

1.5 RESEARCH METHODOLOGY

This study will be predicated on the qualitative method because it is effective in helping the researcher to describe and explain issues under scrutiny. Thus, through this method, comprehension of the subject matter is enhanced.

1.5.1 Data Collection Method

Dictionaries will be used as a point of departure in data collection. In this case, Xitsonga bilingual dictionaries will be used. In these dictionaries, articles shall be reviewed and evaluated. The researcher will then make necessary proposals on how to improve these dictionaries in terms of the presentations of meanings of technological and scientific terms.

1.5.2 Secondary Research Method

Secondary research method will also be used in this study. Through this method, textual analysis method will be used as similar studies related to this study have this kind of approach. The researcher will consult bilingual dictionaries, lexicographic textbooks, Journals, etc. this means that Xitsonga-English bilingual dictionaries will be used as sources of reference and the researcher would evaluate them and make possible suggestions on how to improve them in order to achieve the aim of the research.

1.5.3 Random Sampling

Random sampling method will also be in this study. Through this method educator and pupils will be interviewed by means of questionnaires. A statistician will be consulted to calculate statistics at the end of this process to avoid generalization and biasness in the results of the target population.

1.6 DATA ANALYSIS

The researcher will make use of the descriptive and explanatory approaches based on comparative analysis as several dictionaries will receive attention.

1.7 RELIABILITY, VALIDITY AND OBJECTIVITY

In order to be as objective as possible, the researcher will also get the feeling and understanding of other users of the dictionaries in question. This will make the study reliable and valid.

1.8 SIGNIFICANCE OF THE STUDY

The significance of the study will be linked to the background of the problem and the aim of this research. There are quite a limited number of translation dictionaries in Xitsonga in which treatment of technical and scientific terms is excessively transliterated from English to Xitsonga. This research will therefore serve as a

source of reference to other scholars and lexicographers who want to compile user-friendly Xitsonga bilingual dictionaries. It will also make contribution regarding the treatment of terms (technological and scientific) in Xitsonga bilingual dictionaries. Lastly, the study will assist users to retrieve the required meaning of lemmata in Xitsonga dictionaries.

1.9 CONCLUSION

Most scholars have written on the role of equivalence in the translation of source language into a target language. The researcher thus feels the in-depth of the role of equivalence in the formation of technological and scientific terminology in Xitsonga would assist language practitioners, lexicographer, terminologists and other researchers in difficult endeavors of translation.

1.10 ORGANISATION OF THE STUDY

The study is organised as follows:

Chapter One deals with the introduction and background.

Chapter Two presents literature review.

Chapter Three handles the impact of transliteration on the treatment of technological and scientific terms in *Xitsonga Bilingual Dictionaries*.

Chapter Four examines translation strategies that had an impact on translation of technological and scientific terms in *Xitsonga Bilingual Dictionaries.*

Chapter five provides the summary and conclusion.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The work of literature which is related to this study will be reviewed in detail in this chapter. This review will help the readers to understand the argument that is going to be presented in the entire study. The work of different authors will be reviewed separately. Few examples that are given and used by these authors will be included and followed by the researcher's examples in an attempt to assist the reader to understand the argument better.

2.2 SVENSEN (1993)

Svensen (1993:140) indicates that translation equivalence in dictionaries is achieved when a bilingual dictionary is able to provide words and expressions in the source language with counterparts in the target language which are as near as possible semantically and as regards the style level as the register. He also states that in providing translation equivalence one is dealing with meaning equivalence rather than with words equivalence. Svensen (1993) further argues that it is not always easy to find this kind of translation equivalence because every language has a set of concepts which are perceived differently from or even non-existent in another language as a result of historical, geographical, cultural, social and economic differences between countries where these languages are spoken.

In his argument, Svensen mentions that in situations where the target translation equivalent refers to the same item as the source language, one would speak of complete equivalence, on the other hand, when the conceptual relationship between the target and the source language lexical items is not complete or exactly the same, one would refer to such situation as partial equivalence. Let us look at these examples given by Svensen (1993):

    (3) **English**   **Northern Sotho**

    a) **River**   : Noka
    b) **Uncle**   : Malome, ramogolo, rangoane

The above example given by Svensen from **(**Kriel, 1998) shows us that there is a cultural difference between English and Northern Sotho languages. This cultural difference also exists between Xitsonga and English languages. However, speakers of Northern Sotho might be confused by the English word **uncle** because in this language*,* **malome** refers to one's mother's brother; whereas **ramogolo** refers to one's grandfather; and **rangoane** to one's father's younger brother.

The following example from Cuenod's (1967) bilingual dictionary supports Svensen's notion that languages have concepts that are perceived differently or non-existent in other languages:

    (4)   **English**   **Xitsonga**

    a) **Aunt**   : Manana, Hahani   (1967:11)
    b) **Machine**   : Muchini, Njhini   (1967:53)

This example by Cuenod is problematic because it brings uncertainty to the user of the dictionary. The terminologist should have given a brief definition to bring about the difference in the meanings of **manana** meaning **hahani.** The uncertainty is also presented in the translation of the English word **machine** to Xitsonga **muchini** and **njhini.** The Xitsonga translated words **njhini** and **muchini** cannot be used interchangeably under the same context because they convey two different meanings. It is in the light of the above argument presented by Svensen that lexicographers of bilingual dictionaries should provide target language equivalents that are as near as possible to the meanings of the source language words. Let us illustrate the difference in meaning of **manana** and **hahani**; and **muchini** and **njhini**, by using them in the following sentences:

(5) a) Manana u hlayisa n'wana wa yena hi rirhandzu.

b) Hahani u ta amukela xuma xa mina loko ndzi lovoriwa.

c) Ndzi xavile muchini wo rhunga majesi.

d) Movha wa mina wu na njhini leyikulu.

It is evident from the above sentences that **manana** and **hahani**; **muchini** and **njhini** will never be used to replace each other in any context.

2.3 ZIERVOGEL AND MOKGOKONG (1975)

Ziervogel and Mokgokong (1975) state that the lexical items of the source language may not have an appropriate translation equivalent in the target language. According to them, this situation is known as non- equivalence. To overcome this problem, they say, the source language lexical item is either substituted by an explanatory equivalent or phrase, or by a borrowed word, or by another word with a close conceptual meaning, that is, a near equivalent. Ziervogel and Mokgokong clearly state that non- equivalents occur very often with the translation of items related to culture-specific concept.

They give this example from Northern Sotho, **hlatswadirope** which is translated in English as an **ancillary wife.** This translation equivalent is however deficient in a sense that it does not reveal the cultural significance underlying the purpose of having an **ancillary wife.** An ancillary wife is not any second wife but the principal wife's sister who is married with the specific purpose of bearing children for her barren sister. Cuenod (1967) also used this approach in his compilation. Let us observe this example from Cuenod's bilingual dictionary (1967):

(6) a) **Ndzalama**   : the stone swallowed by new chief (1967-158)

b) **Nhlantswa**   : minor wife, usually younger sister or niece of the chief wife (1967:161)

The above article would not assist the user very much because it leaves out the cultural significance of swallowing the stone and marrying the ancillary wife. Therefore, this pattern and tendency of lexicographic presentation is problematic and

does not assist dictionary users to deduce the intended meaning and reach successful communication.

2.4 GOUWS (1999)

Gouws (1999:26) argues that in a case of lack of equivalents, many languages have coined and are still coining target language words from foreign words. In his argument Gouws points out that lack of equivalents entails a lexical gap. According to him, the lexical item that is supposed to be supplied as a translation equivalent is not present. In this case he adds, target language speakers, African lexicographers, terminologists, subject specialists and linguists are tempted to supply a transliteration, a case where there is lack of target language term equivalent.

In most cases, he continues, this terminological procedure has not succeeded in assisting terminology users to retrieve the intended meaning. Gouws's argument is supported by Al-kasimi (1977) where he differentiates between two types of vocabulary that contribute to the problem of lack of equivalents, that is, culture-bound words and scientific and technological terminology. It is clear from this argument that lexicographers of target languages use transliteration as a way of providing equivalent items in bilingual dictionaries. This method however leaves users with uncertainty and cause what Mphahlele (2001) calls communication embarrassment.

2.5 MPHAHLELE (2001)

Mphahlele (2001:) disagrees with Gouws in the foregoing argument by indicating that the fact that a lexicographer cannot find the required equivalent does not mean that borrowing must be utilised. Mphahlele mentions that in a case of lack of equivalents, the lexicographer should bear in mind that direct borrowing from the source language cannot serve any semantic purpose because borrowed words which have not been established in general language use cannot assist the user to communicate successfully. What Mphahlele is arguing about here is that dictionary compilers should not resort to borrowing as their means of supplying target equivalents when they are confronted by lack of equivalents in the translation paradigm. However,

Cuenod (1967) ignores Mphahlele's suggestions. The example below illustrates the point argued by Mphahlele:

(7) **English**   **Xitsonga**

   a) **Planet**   : Pulanete   (1967 -66)
   b) **Pump**   : Pompo   (1967 -71)
   c) **Ticket**   : Thikiti   (1967-91)
   d) **Towel**   : Duku, thawula   (1967-99)

The above articles indicate that there is a linguistic gap that has occurred. This means that source language items are not known by speakers of both English and Xitsonga. In this case, Gouws (1999:27) suggests that a brief description of the source language form must be given to help the target language speaker to understand the lexical item in the source language. However, Cuenod disregards this suggestion in his compilation of target equivalents. The English word **towel** which is translated to Xitsonga as **duku** or **thawula** is misleading because users may conclude that these words can be used interchangeably in any context. The terminologist should have indicated how different the equivalents are for the source term **towel.** The following example would have been better:

(8)   **English**   **Xitsonga**

   Towel   : Duku [boha enhlokweni] ; Thawula [boha
                            xisutini loko u heta ku hlamba]

2.6 ROETS (2001)

With regard to transliteration, Roets (2001) observes that a large number of equivalents are formed through transliteration, particularly in subjects such as economics, medicine and physics. In her argument, Roets states that transliteration should not be regarded as a first solution when supplying target language equivalents because most South African learners do not understand English words. She further mentions that if transliteration is excessively used in terminology, there is

no way in which learners would understand the stem of the English word retained as possible term equivalent. This means that new target language term equivalents would remain foreign even when translated. This procedure therefore fails the terminology users.

What Roets is clearing out in this argument is that a bilingual dictionary should serve its purpose that is, providing clear understanding to the intended users. To illustrate her point, Roets (2001) provides the following examples from Northern Sotho:

(9) **English**   **Northern Sotho**

   a) **Formula**   : Fomula
   b) **Fraction**   : Fraksin
   c) **Equilibrium**   : Ekwilipramo
   d) **Pictogram**   : Piktogramo

Roets (2001) states that if the new Northern Sotho mathematical terminology is designed as in the above manner, the target language users would not be able to understand the source language terms. In the above example, the English term **formula** is supplied with the Northern Sotho transliteration **fomula**. In this case, Roets adds, it will only be when the native speakers of Northern Sotho have ever heard of the English mathematical term **formula** that they will understand it.

However, if the native speakers of Northern Sotho have never heard of it, the transliterated Northern Sotho term would not assist the users in understanding the meaning and contextual use of the source term **formula.** This is also the case with the other English mathematical terms **fraction, equilibrium** and **pictogram.** She further argues that if the users have never heard of these terms before, transliteration could therefore not serve the semantic purpose.

Furthering her argument, Roets points out that transliteration could only be opted for if speakers of the target language know or have heard the source language term. In support of Roets, let us observe the following article from Cuenod (1967):

(10) **English**   **Xitsonga**

    a) **Planet**   : Pulanete / nyeleti   (1967:66)
    b) **Plank**   : Pulangu   (1967:66)

The English word **planet** is translated in Xitsonga as **pulanete** or **nyeleti**. This translation equivalent is problematic. The equivalents provided for the word **planet** show that they can be used interchangeably under the same context, which is quite misleading to the target users of Cuenod's dictionary. What Roets mean in this argument is that speakers of the target language will understand the equivalent term only if they have heard it before, if this is not the case, transliteration will only be a duplication of the source language term. However, if speakers of the target language do not know the foreign concept or referent, terminologist should make sure that the concept is transmitted into the target language by appropriate terminological procedures.

It is in the light of above argument that Roets (2001:1) suggests possible guidelines to the acceptance of terminology. According to her, the new word is acceptable only if it has concept correspondence and adheres to the orthography. Given the fact that transliteration does not adhere to the general guidelines regarding terminology, it could not be regarded as a balanced terminological procedure. Roets believes that it would be better if terminologists and subjects specialists gave a brief meaning definition of the source language term as an equivalent. She insists that a brief meaning definition of a source language term would assist users to retrieve the required information because a meaning definition carries a concept in itself. The following article from Cuenod's bilingual dictionary (1967) illustrates her point:

(11) **English**   **Xitsonga**

    a) **Pie**   : Kukisi leri nga ni mihandzu/nyama endzeni   (1967**:**65)
    b) **Pantry**   : Yindlu yo vekela swakudya ka yona   (1967:63)

This article supports Roets' argument that a brief meaning definition should be provided by terminologists when confronted with the lack of equivalents to avoid the use of transliteration as the first means of providing target equivalents and assists users to retrieve the required information and reach communicative success.

Furthermore, Roets (2001:1) indicates that for a language to develop, the daily growth of human knowledge in the science and technology of developing countries needs to be shared and expressed in mother tongue terminology. This, she adds, is important because the status of a language depends on its possession of technological vocabulary. What Roets (2001) is saying is that technological vocabulary of a particular language develops when technical terms are created in that language. The terminographer's mission is to stay informed of the emerging international developments in all fields of learning and to translate these from a language of transit into mother tongue equivalents for expressing the vast number of new concepts that have been mastered for technological communication. Roets also suggests that these new terms should be a result of technological, scientific and linguistic decisions taken by collaborators. The Northern Sotho examples below can be considered as illustration to support her argument:

(12) **English**   **Northern Sotho**

a) **Formula**   : Mokgwataetso
b) **Fraction**   : Palopalwana
c) **Equilibrium**   : Mokgwatekatekano
d) **Pictogram**   : Tswantshotshupakgopolo

These suggested term equivalents by Roets display a balanced terminological procedure; the terminology user would be able to deduce the intended meaning of source language terms. There is a one-to-one meaning relation between the source language form and the target language equivalents. The supplied term equivalents are independent from the original English terms, that is, the stems of the source language have not been retained or borrowed when creating the term equivalents.

However, compilers of Xitsonga bilingual dictionaries disregarded this terminological procedure, that is, target items are provided in a way in which do not assist users. To support Roets' argument let us observe the example below from Cuenod's bilingual dictionary (1967):

(13) **English**   **Xitsonga**

      a) **Telegram**   : Riqinghu, telegram   (1967:95)

      b) **Telescope**   : Theleskopu   (1967:95)

      c) **Compass**   : Khomphasi   (Mathumba, 2005:19)

      d) **Commission**   : Khomixini   (Mathumba, 2005:19)

The above articles are unacceptable. The target language referents provided for the source items do not assist the user to acquire the correct meanings. Users of these dictionaries who have never heard of **telegram** and **telescope** would never understand these words, and would find it extremely hard to deduce the intended meaning. In a case like this, as Roets has stated, the dictionary compiler should have given a brief definition of the target items. In separating the equivalent items **riqinghu** and **telegram** with a comma, the lexicographer has implied that both these referents can be synonymously used in the same context. This kind of article is not user friendly because users would not be able to retrieve the intended meaning and conclude what **riqinghu** means*.* The compilers should have used contextual guidance to show that these equivalents may never replace each other in all contexts. The terminologist should have clearly shown the difference in meaning as follows:

(14) **English**   **Xitsonga**

      Telegram   : Riqinghu [fonela ekule]; Telegram [tsalela ekule]

Culver (1978:91) argues that a technical dictionary is a bi- or multilingual dictionary that includes the standardised terms of a particular subject field. That is, when supplying term equivalents, terminologists and their collaborators should read the supplied definitions so that their term equivalents could be accurate. Instead of adopting the translation principle as a lexicographical procedure, lexicographers, terminologists and their collaborators should try to create new term equivalents having meaning   relation with the source language terms. This would help developing the technical vocabulary of a language. The following examples from Alberts (2001:2) display a better terminological procedure:

(15)

English	Afrikaans	Northern Sotho
a) Common law	Gemenereg	molaowo o sego wangwalwa
b) Common (general)law	gemenereg	molaowabohlenageng
c) Common law	gemenereg	molaowasetlwaedi
d) Common law marriage	gemeenregtelikehuwelik	lenyalo la molaotlwaedi
e) Common law wife	gemeenregtelikevrou	mosadiwasemolao

In legal terminology, the above presentation of term equivalents by Alberts, could enable users of Afrikaans and Northern Sotho to retrieve the required information. Xitsonga language is faced with the challenge of excessive use transliteration as term equivalents to scientific and technological terminologies. This challenge has also affected Mathumba (2005). Let us look at the following articles.

(16) **English**   **Xitsonga**

a) **Journal**   : Jenali   (2005:132)
b) **Photocopy**   : Fotokhopa   (2005:144)
c) **Satellite**   : Satelayiti, sathelayiti   (2005:151)

In the above articles, transliteration has been applied. The stem of the source language items has been retained in all the above translated items. This procedure of transliteration does not assist the target language users of this dictionary. Taking into account Roets' point of view that most South African students do not understand English, this does not assist the users of the dictionary to deduce the intended meanings of the source items because English words have been retained in the translation equivalents. This method of borrowing, contradicts with Roets' argument that transliteration must not be utilised when providing equivalents, however, that is not the case in Mathumba's bilingual dictionary (2005) : Let us observe the following example from Mathumba's dictionary:

(17)   **English**   **Xitsonga**

a) **Veranda**   : Vhurandi, vhulandi   (2005: 162)
b) **Socialism**   : Soxalizimi   (2005 : 15)

This kind of translation equivalent will confuse the dictionary users. It could only be when the native speakers of Xitsonga have heard about **socialism** or **veranda** that they would understand their meanings. This procedure will however confuse users. They may not be able to understand the intended meaning and contextual use. This kind of translation procedure does not allow the users to communicate successfully. The lexicographer should have given a brief definition of **socialism** and **veranda** to help the users retrieve the intended meaning. In clearing this point, let us observe the following definition of socialism from *Collins Cobuild English Dictionary (*2006):

> Socialism is the left-wing political principle
> whose general aim is to create a system in
> which everyone has an equal opportunity
> to benefit from a country's wealth.

Cobuild's (2006) definition states that socialism is the opposing political party that fights the ruling party by creating systems which allow everyone to benefit from the wealth of the country. Such definitions can assist the users of this dictionary to retrieve the intended meaning and communicate successfully. The Xitsonga

terminologist failed to follow this procedure. Let us also observe how *The South African Oxford School Dictionary* (2004) defines socialism:

> …a political system where wealth is
> shared equally to people, and the main
> industries and trades etc. are controlled
> by the government.

The definition above supports Cobuild (2006) in stating that a country's wealth is shared systematically and equally amongst citizens. It is clear that the target referents of source items should be briefly defined or described when lexicographers are confronted with the challenge of lack of equivalents in providing new terminology. This was not the case with the Xitsonga lexicographers. That is, the new terminology should coincide with corresponding concepts so that speakers of the developing language could benefit from using international technical language in their mother tongue.

Exact communication is possible if there is a one-to-one relation between terminographers and their collaborators to supply appropriate term equivalents. Nonetheless, with transliteration, definitions supplied for standardisation are ignored. To illustrate this point, let us observe the following articles from Cuenoid's bilingual dictionary (1967).

(18) **English**   **Xitsonga**

   a) **Gallon**   : Galoni   (1967:38)
   b) **Garter**   : Gatara   (1967:38)
   c) **Zinc**   : Zinki   (1967:112)

The above articles will not help the speakers of Xitsonga to develop and achieve exact communication. Mphahlele (2001:27) disagrees with the above borrowing of source language term as translation equivalents by stating that when the stems of the of the source language terms have been retained as target language equivalents, there is no way in which a user could be assisted to comprehend the source language term unless it has been established in the target language.

The English terms **gallon, garter** and **zinc** which are translated in Xitsonga as **galoni, gatara** and **zinki** have not been established in Xitsonga therefore users of Cuenoid's bilingual dictionary would find it difficult to understand the intended meaning. Mphahele's point of view is seconded by Roets (2001:10) in confirming that excessive use of the transliteration may result in heavy borrowing because all speakers of a target language would use the new transliterated terminology. The articles from Cunoid's (1967) dictionary illustrate this point:

(19) **English**   **Xitsonga**

   a) **Stamp**   : Xitempe   (1967:89)
   b) **Machine**   : Muchini, njhini   (1967:53)
   c) **Chimney**   : Chimele   (1967:18)

The above borrowed source language terms have been established and in Xitsonga as translation equivalents and have since been used by users of the language. However, this kind of adoption deprives the African languages an opportunity to evolve (Roets 2001:10). To help understand this point, let us again observe how *The Concise Oxford dictionary of Current English* (1990) defines the English word **veranda** as portico or external gallery, with a roof alongside a house or a pavement in front a shop.

This definition of the English word veranda can be interpreted as a protruding roof over a paved area. Instead of transliterated words **vhulandhi** or **vhurandi,** the lexicographer could have given a brief description of the word veranda in order to assist users understand the intended meaning and contribute in the development and growth of the target language. This means that if lexicographers disregard the fact that transliteration should not be used as the first resort in providing source term equivalents, African languages cannot grow in terms of technical terminology.

The technical terminology for African languages should be developed so that speakers of these developing languages could use their own technical source language when communicating. To illustrate the point, let us observe these articles from Mathumba's (2005) bilingual dictionary:

(20)   **English**   **Xitsonga**

    a) **Physics**   : Fizika   (2005:114)
    b) **Sporangium**   : Siporenjiyamu   (2005:154)
    c) **Interview**   : Inthavhyu   (2005:17)
    d) **Gene**   : Jini   (2005:17)

The stems of the source terms have been borrowed in providing the target equivalents terms. Mathumba has deprived the target language an opportunity to develop in scientific terminology by using transliteration in the form **fizika**, **siporenjiyamu, inthavhyu and jini**.

2.7 CONCLUSION

The literature reviewed in this chapter forms the basis of this research. It is evident from the above discussion that the Xitsonga and Northern Sotho lexicographers have used transliteration as the immediate strategy to provide target equivalents for the source terms in the Xitsonga bilingual dictionaries. However, this method does not serve the intended semantic purpose. In following the recommended procedure that adheres to the balanced terminology procedures; the researcher has suggested strategies that lexicographers may follow in providing target equivalents that are going to assist users to retrieve the intended meaning. Not only will the suggested procedures assist users to acquire exact communication, but will also help to develop the technical and scientific vocabulary of the developing African languages.

CHAPTER 3

THE IMPACT OF TRANSLITERATION ON THE TREATMENT OF TECHNOLOGICAL AND SCIENTIFIC TERMS

3.1 INTRODUCTION

This chapter will highlight the impact of transliteration experienced by lexicographers when dealing with the translation of technological and scientific words in the presence of lack of equivalents. It will also emphasise the challenges encountered by lexicographers and how these challenges could be overcome. The effect of transliteration in time will also be evaluated and investigated and the manner in which this has affected the African languages particularly Xitsonga. To validate this research, the researcher will use examples inside and outside Xitsonga bilingual dictionaries. To do all this, the researcher will first explain what transliteration is.

3.2 WHAT IS TRANSLITERATION?

Transliteration is the coinage of target language terms from the source language. It occurs when there is a low level of translability of source terms or zero-equivalents. Arbabi et al (1994) defines transliteration as follows:

> The process of representing words from one
> language using the approximate phonetic
> or spelling equivalents of another language.

Nelswender (1962) regards transliteration as the spelling of words from one language with characters from the alphabets of another. Ideally, it is a one-for-one character-by-character replacement.

The above definitions above state that transliteration involves the borrowing of letters from one language to another. In this situation lexicographers resort to coinage of target referents where by the stem of the source word is retained.

This means that the replacement of words is done per alphabet where the source items still remain foreign. Mphahlele (2001) defines transliteration as the use of foreign language stems to coin target language equivalents. What Mphahlele is saying in the definition above is that the stem of a foreign language is retained and used in the formation of a target equivalent. This approach of coinage affects most African bilingual users because they cannot understand English clearly. To support Mphahlele's argument, let us observe the following examples from Mathumba's (2005) *Bilingual and Explanatory Dictionary:*

(21) **English**   **Xitsonga**

a) **Satellite**   : Satelayiti, sathelayiti   (2005:151)
b) **Socialism**   : Soxalizimi, xisoxalisi   (2005:153)
c) **Socialist**   : Musoxalisi   (2005:153)
d) **Sporangium**   : Siporenjiyamu   (2005:154)

The above articles, the lexicographer has literally retained the stem of the source language items. This will not serve the users of the dictionary purposefully. It is only when users have heard about the terms before in order to understand their meanings.

3.3   HOW TRANSLITERATION OF TECHNOLOGICAL AND SCIENTIFIC WORDS AFFECT XITSONGA LANGUAGE

English has since enjoyed worldwide recognition as a language of international scientific and technical communication. Many scientific and technical texts are published in this language. It is often encountered as the source language in terminology. This implies that African terminographers, subject specialists and linguists have to create new term equivalents in their mother tongue.

In the process of trying to cope with these challenges they apply transliteration as a lexicographic principle. They opt for transliteration because they think it is the quickest lexicographic and terminological procedure without considering the demands of the target users. This, therefore, denies the users an opportunity to

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retrieve semantic information in the target language. The articles below illustrate some of the problematic words which are used on daily basis because of the difficult in understanding their meanings:

(22) **English**   **Xitsonga**

    a) **Symposium**   : Simpoziyamu
    b) **Itinerary**   : Ayithenerari
    c) **Condone**   : Khondhona
    d) **Compass**   : Khompasi

This approach is unacceptable in a sense that the prescriptive nature of the terminologists and their collaborators supply the term equivalents that do not have meaning relation and conceptual equivalence with the source term. In the process, lexicographers apply the transference procedure where the stem of the source language term is transferred from English to an African language as it is to suit the morphological and phonological structure of that language. To support this argument, let us observe the following articles:

(23) **English**   **Xitsonga**

    a) **School**   :Xikolo
    b) **Half**   : Hafu
    c) **Temple**   :Tempele

The English words **school, half**, and **temple** have been transliterated to Xitsonga words **xikolo, hafu** and **tempele.** The stems of the words **school, half** and **temple** has been retained and transferred to suit the morphology of the Xitsonga language of consonant- vowel consonant- vowel. This kind of transference led to the adoption of the word to become undisputable part of the Xitsonga lexicon. This procedure has affected Cuenoid (1967) bilingual dictionary as evident in the following articles.

(24) **English**   **Xitsonga**

   a) **Coffee**   : Kofi   (1967:19)
   b) **Clinic**   : Kliniki   (1967:20)
   c) **Telescope**   : Theleskopu   (1967:95)
   d) **Ticket**   : Thikithi   (1967:97)

In providing equivalents for the above articles, Cunoid has used transliteration of the English source terms. The transliteration has been done in a manner that suits the morphological procedure of Xitsonga language which is; consonant -vowel consonant-vowel. More examples from Cunoid (1967) bilingual dictionary are as follows:

(25) **English**   **Xitsonga**

   a) **Fork**   : Foroko   (1967: 37
   b) **Garage**   : Garaji   (1967:38)
   c) **Chimney**   : Chimela   (1967:18)
   d) **Gas**   : Gasi   (1967:38)
   e) **Sump**   : Xitampu   (1967:80)
   f) **jersey**   : Jesi   (1967:49)
   g) **Jam**   : Jamu   (1967:49)

There is not much change in the translated items of the above words. Their formation is only twisted to suit the morphology of the Xitsonga language. The structure of the source words has been retained excessively. This procedure would impede the users to retrieve the intended meaning of the words. For example, if Xitsonga users have never heard of chimney and fork before, they may not understand what the terms mean. This may course what Mphahlele regards as communication embarrassment.

The lexicographer of this dictionary has literally ignored Mphahlele (2001:27) who advises that if lexicographers cannot find the required equivalent it does not mean that borrowing must be utilised.

Although English emerged as a lingua-franca and a language of choice among African speakers, its prestige has influenced the African language speakers to adopt foreign languages, especially English, by means of borrowing, neologism and transliteration. This has brought semantic shift in African language formation of technological and scientific words. This semantic shift resulted in the change of the language over a period of time.

3.4 LANGUAGE CHANGE

Languages do come into contact with each other. Actually, It is the speakers of languages who come into contact with each other; where their attitudes towards each other would influence the way in which they speak. In some cases, only a few words are borrowed, in others a whole new language may be formed. The results of such contact differ according to social, economic, and political relationships between the speakers. In order to understand clearly how language contact contributes towards language change, let us first understand how language is defined. *Collins Concise English Dictionary* (1985) defines language as:

> A system for the expression of thought, feelings, etc
> by the use of spoken sounds or conventional symbols
> the language of a particular nation or people.

Chambers Dictionary (1993) defines language as human speech, a variety of speech or body of words and idioms, especially that of a nation. These definitions point out that language is the way in which a particular nation choose to express itself by using a particular kind of diction.

It is in the light of the above definitions that Boeree (2003) observes that language change could happen very slowly or sometimes very rapidly, depending on the circumstances. He points out that one of the reasons that may influence language change is interaction. According to him, if one tribe of people trades with another, may pick up specific words or phrases for trade. However, if the powerful tribe subdues the other we could find that the language of the elite shows influence of constant interaction with the majority, while the majority imports vocabulary and

speaking styles from the elite language. This could cause the other language to disappear.

In his argument, Boeree (2003) emphasises that the slower mechanism of language change seem to include the battle between simplicity and expressiveness. According to Boeree, this means that speakers want their languages to communicate as much information as possible, and yet do so economically. These speakers want the language to be rich yet concise. Let us observe how the following examples in the table below support this argument:

(26) **English words that have economic expressions**:

English words	**Background meaning**
a) **Sale**	− an exchange of commodities for goods − an act of selling − reduced price for a period of time
b) **Bargain**	− Something offered cheaply
c) **Price**	− value or worth − an amount of money for which a thing is bought or sold
d) **Discount**	− deduction from the amount of a bill of exchange by a person who gives value for money.

In the world of trade, the above English words have been recommended for use because they are found to communicate as much information, and yet economically. The Xitsonga speakers were influenced to adopt these words due to contact with business people who regularly use the terms. These words are transliterated to Xitsonga as follows:

(27) **English**   **Xitsonga**

a) **Sale**   : Seli
b) **Bargain**   : Bageni
c) **Price**   : Purayisi
d) **Discount**   : Disikhawunti

The use of this approach puts African languages' development at risk. These languages do not develop their technical vocabulary by so doing. Another trade English word **instalment** has been transliterated to Xitsonga **xitoromente** and became an undisputable word in the Xitsonga lexicon. In the word **xitoromente,** a prefix **xi-** has been used to replace the English in- to suit the phonology of Xitsonga language. Let us use the words instalment and **xitoromente** in sentences to illustrate the change:

(28) (a) **English**   I pay my instalment every month.

(b) **Xitsonga**   Ndzi hakela xitoromente xa mina n'hweti yin'wana na yin'wana.

The Xitsonga language has some concepts which are no longer used by the Xitsonga speakers. These concepts have simple disappeared because they are neglected and ridiculed by speakers of the language. The borrowing of concepts from English to Xitsonga has influenced the negligence of some of the Xitsonga concepts. In support of this argument, let us observe the following article from Mathumba (2005) *Bilingual and Explanatory Dictionary*:

(29) **English**   **Xitsonga**

a) **Television**   : Thelevhishini (2002:156)
b) **Helicopter**   : Xihapfhuka-phatsa
c) **Radio**   : Xiyanimoya
d) **Bicycle**   : Xikanyakanya

The English word **television** has been borrowed and transliterated to Xitsonga **thelevhixini.** In this instance, the lexicographer should have at least given a brief description of the item when providing the term equivalent. The Xitsonga speakers have used the word **mavonakule** to refer to the English television. Because of interaction between the English speakers and the Xitsonga speakers, the Xitsonga speakers found themselves gradually neglecting the term **mavonakule** and used the transliterated word **thelevhixini** which is no longer regarded as a translation now

because the Xitsonga speakers have adopted it as their own. Let us also observe the following examples:

(30) **English**   **Xitsonga**

    a) **Radio**   : Radiyo
    b) **Aeroplane**   : Aaeroplane
    c) **Calcium**   : Khalisiyamu
    d) **Quorum**   : Khoramu

The above English words **radio** and **aeroplane** have been transliterated to Xitsonga words **radiyo** and **aeroplane**. In the 1920s, the English word radio was known as **xiyanimoya** and aeroplane as **xihahampfhuka** by the generation of the time. These terms were given according to their functions. However, **xihahampfhuka** and **xiyanimoya** are neither used nor known by the generation of Xitsonga speakers today. These speakers now use the transliterated terms **radiyo** and **aeroplane** as their own; **xihahampfhuka** and **xiyanimoya** are even ridiculed by these speakers. Speakers who had received formal education would be in a position to know these concepts rather than ordinary laymen. This procedure has impacted the change in the Xitsonga language.

The above argument implies that language speakers form new words by using letters from another language. This borrowing of letters of alphabet from one language to another show that the terminologist did not find a word from the target language that has the same meaning as the source language term. The following example illustrates the point:

(31) **English**   **Afrikaans**   **Xitsonga**
Book   Boek   Buku

In the formation of the terms above, letters of alphabet have been borrowed from English, Afrikaans and Xitsonga. There is evidence of language contact between these languages. The contact between English and Afrikaans speakers has influenced the speakers of Xitsonga to borrow the alphabets of the words **book** and

boek to form **buku** following Xitsonga morphological procedure of consonant-vowel consonant-vowel.

Most African languages have been influenced at one time or another by contact causing different degrees of transference of features from one language to another. The transference of language features do not always require speakers of different languages to have actual contact, but can be done through book learning; by teachers who then pass on new vocabulary to other speakers via literature and dictionaries. The example given in article 29 above illustrates the similarities that exist between the English word **book** and Afrikaans word **boek**. These words have been introduced to the speakers of Xitsonga through language contact and influence the speakers to adopt it and use as their own.

Language change can also result from people going through a certain crisis in history. New vocabulary is coined to describe the existing phenomenon. Carter and McCarthy (1998:19) state that the vocabulary of a language is in constant flux where old items drop out and new terms come in. As the new words replace the old ones, the lexicographer is caught in the dilemma where words are coming in the language whereas others are dropping out. The following English words have changed their meanings through time.

(32) **Words that have undergone semantic shift**

English Word	Background
a) **Business**	During the 1920s this word referred to trade, in the 1950s referred to work place or source of income. However, in the 1990s was used to refer to issues
b) **Cold drink**	In the 1940s this word referred only to a drink which is cold, in the 1980s was used to refer to bribery or money.
c) **Bread**	In the 1920s and 1930s this word was used to refer to food. However in the 1980 was used to also mean being able to support your family.
d) **Chair**	This word was used previously to refer to furniture for sitting on. As time went by it was also used to mean leadership

For example, if a driver has been found violating the traffic rules by the traffic officer, the traffic officer may ask the driver to buy him a cold drink so that he would not issue a fine ticket. The cold drink would suggest that the officer is asking for bribery (that is the money). This language shift is making an impact when is excessively used and may result in language evolution or even language death. During the apartheid period and the struggle to freedom in South Africa, most English and isiZulu words were lent to Xitsonga to refer to some of the concepts which never existed in Xitsonga before. Let us observe the examples below.

(33)

English source words	Xitsonga words	isiZulu words
a) Sell-out	*impimpi*	*impimpi*
b) AK 47 rifle	*AK*	*U -akha*
c) War camp	*kampa*	*ikhempu*
d) Guerrilla soldiers	*magorila*	*amagorila*

This lexical engineering through coinage and borrowing is viewed by Singleton (2000:152) as a discipline that involves not only the coining of new expressions but also the modification or in some cases the suppression – or attempted suppression

of existing expressions. In Xitsonga, there are words which have been coined while some have been supressed, especially due to the influence of Christianity. The examples below show some of the words which came to the Xitsonga vocabulary through the advent of Christianity:

(34) **Mufundisi** (reverend and teacher)

Education was introduced to the Tsonga people by the missionaries who did the preaching as well as the teaching in their newly established schools. The preacher was also a school teacher. **Mufundisi** is derived from the Zulu verb -**fundisa** (to teach). When the colonial government began to build schools for Africans in the 1960s, teachers who were not necessarily preachers were hired. In South Africa today, there is no more obvious link that exist between education and the Church and the teachers are seen independently from religious duties:

(35) **English**   **Xitsonga**

    a) **Evangelist**   : Muvhangheli
    b) **Evangelism**   : Vhangeli

The influence of the Christianity has led to the transliteration of the English word **evangelism** to Xitsonga **vhangeli**, as well the formation of **muvhangeli** (evangelist) and **vhangela** (evangelize). These common words now appear as if they are indigenous to Xitsonga. Let us observe the following article below:

(36)   **English**   **Xitsonga**

    a) **Baptize**   : Babhatisa
    b) **Baptism**   : Mbhabatiso
    c) **Baptist**   : Mubabatisi

These above words are now extensively used in Xitsonga. They are an indisputable part of the Xitsonga vocabulary although it is known that they are transliterated from English. Another word that has now become dominant in the Xitsonga vocabulary is **savata** which is a transliterated English word **Sabbath** (Mathumba, 2005:63)

3.5   LEXICAL   ENGINEERING   THROUGH   TRANSLITERATION   WITH REFERENCE TO LOANWORDS

Hadebe (2002) observes that there was a period in the 1970s where loan words from English to African Languages were being avoided. This period of purism resulted in the substitution of loan words from English by words which were believed to be indigenous as they were taken from the language in contact with. The Zulu speakers have been in contact with the Afrikaaners which was the reason of loaning and adopting the Afrikaans words as their own. In this process, Xitsonga speakers also found themselves influenced to take and use these words as their own. Let us observe the following examples:

(37)   **Adopted words from Afrikaans in Xitsonga**

English source word	Afrikaans words	Xitsonga Equivalent
a) **Window***	*Venster*	*Fasitere*
b) **Table***	*Tafel*	*Tafula*
c) **Farm***	*Plaas*	*Purasi*
d) **Chair**	*Stoel*	*Xitulu*
e) **Jacket**	*Baadjie*	*Bajhi*
f) **Coat**	*Jas*	*Jhazi*

The English equivalents marked by an asterisk were discouraged from use while the Xitsonga forms originating from Afrikaans were promoted. It is not only Xitsonga that bears evidence of language shift through language contact. Most African languages, like isiNdebele, have also been influenced at one time or another by language contact. When the Khumalo clan left Zululand between 1822 and1837, the Ndebele went to settle in the present Gauteng. One phenomenon that associated with their stay in the former Transvaal region was the contact with the missionaries. In the

process some Tswana words found their way to isiNdebele language. The following are some examples from Khumalo (2004)

(38)

English name	Ndebele Adoptive	Sotho Equivalent
(a) God	*uMlimu*	*Modimo*
(b) A person	*umntu*	*motho*

Khumalo (2004) clarifies that this new Ndebele word does not refer to **God's greatness** which is captured by **uNkulunkulu** in Ndebele.

(39)

Sotho Name	Ndebele Adoptive Name
a) **Motlokwa**	*Mdlongwa*
b) **Tau**	*Dawu*
c) **Mokgatla**	*Mnkandla*
d) **Nare**	*Nyathi*

The examples given by Khumalo (2004) above indicate how the Tswana language influenced the isiNdebele speakers to adopt some of their concepts into the language. However the Tswana people who were incorporated into the fast growing Ndebele Empire abandoned their language in preference of isiNdebele. Even their tribal names were changed to sound more like Ndebele Names, as demonstrated in the second part of example (37). Change was inevitable, and it favoured the dominating tribe which was Ndebele.

Trade was also said to intensify in the Transvaal and coins were introduced and named as follows:

(40)

English Word	Ndebele Word	Xitsonga words
a) **Two shilings**	*isikhwitshimana*	*thucheleni*
b) **Two shillings and six pence**	*ingogo*	*Nghoga*
c) **One shilling**	*iloso*	*Cheleni*
d) **penny**	*indibilitshi*	*Fadeni*

Khumalo (2003) also mentions that the greatest change to the Ndebele language occurred when the group moved to Zimbabwe. Here the Ndebele came to contact with the Nyubi, Kalanga, Nanzwa, Nambya, Tonga and Shona tribes. The following changes were observed by Khumalo when the Ndebele came to contact with Shona and Kalanga.

(41)

English words	Shona	Ndebele
a) **A person is standing**	*Munhuamire*	*Umuntu u mile** *Umuntuumi*
b) **welcome**	*Tigashire/Tigamuchire*	*Samukele** *Sethule*
c) **Hurry**	*Fambisa*	*Hambisa** *Tshitsha*

Hadebe (2002) highlights that the words marked with an asterisk represent an influence by Shona. Another example of Shona influence by Hadebe in the use of honorific plural or pronouns of power of the Ndebele are as follows:

(42)

Ndebele	Shona
a) *Salibonani** *sakubona*	*Mhoroi*
b) *Linjhani** *Kunjhani*	*Makadii*

The Xitsonga language, like isiNdebele, has not all the time been permissive to foreign influence as is shown by deliberate suppression of English vocabulary given in example 40 above. In an attempt to use indigenous words as opposed to loanwords, a number of words were coined in Xitsonga to replace the loanwords. Some of these words include the following:

(43)   **English**   **Xitsonga**

   a)   **Bicycle**   : Xikanyakanya
   b)   **Teacher**   : Mudyondzisi

The words **xikanyakanya** and **mudyondzisi** were an attempt to maintain indigenous equivalents for the English words **bicycle** and **teacher** and replace the loanwords **basikiri** and **thicara.** However, these loanwords have been adopted by the speakers and used as their own. Another loanword, English **motorcar** has been transliterated to Xitsonga **movha.** The stem of the source word is excessively retained in the formation of the word **movha**. **Movha** is used today by Xitsonga speakers as part of their lexicon.

The impact of this procedure limits the growth and development of African technological and scientific vocabulary. Xitsonga lexicographers have been affected by this procedure. Mathumba (2005) bilingual dictionary illustrates the point further:

(44)   **English**   **Xitsonga**

   a) **Chimney**   **:** Chimele, Chimela   (2005:108)
   b) **Camera**   **:** Khamera   (2005:106)

There is no telling whether **chimele** and **khamera** are coined from English because every speaker of Xitsonga uses it as his or her own. Lexical engineering is a phenomenon not exclusive to Xitsonga language only but common to languages in general. It is an attempt by a particular society or sections of society to control vocabulary change. However, it does not prevent language shift and language change, and when it is excessively used it may result in language evolution or

language death. Let us observe the following from Cuenoid's (1967) bilingual dictionary:

(45)   **English**   **Xitsonga**

a)   Silver   : Silivere   (1967:183)
b)   Vaseline   : Vhaselina   (1967:196)
c)   Wheel   : Vhilwa, Vhili   (1967:196)

The transliterated **silivere, vhaselina** and **vhilwa** are adopted and accepted in the Xitsonga vocabulary. Thus, the terminologists failed to provide target equivalence for **silver, vaseline** and **wheel** in their mother tongue.

Another surprising aspect of language change argued by Boeree (2003) is the influence of fashion and even of idiosyncrasies. Most African nations have acquired vocabulary from English language. The word **mini** is used in English to refer to a dress or skirt that is exceptionally short. **Skinnywear** refers to clothing that is very tight to one's body. These fashion terms are adopted and used by African speakers as their indigenous vocabulary. There are other fashion English words like **capri** and **ballbottom** which have become undisputable indigenous words through contact with English. These fashion terms are used not by Xitsonga speakers only, but by African speakers as part of their lexicon.

3.6   LANGUAGE EVOLUTION AND LANGUAGE DEATH AS A RESULT OF TRANSLITERATION

Crystal (1941) mentions that a language dies when nobody speaks it anymore. Languages are internally variable; they do not evolve in uniform ways. The changes may proceed faster or even differently in one segment of a population of its speakers than in another. Language death is a protracted change used to describe a community's loss of competence in a language. It denotes a process that does not affect all speakers at the same time nor to the same extent.

Hagege (2000) clarifies the point by mentioning that the most critical criterion to identifying language death is the predication on the presence of the native speakers

and on its transmission from one generation of speakers to another. The speakers of Xitsonga have shown evidence of loss of transmission of Xitsonga vocabulary from its generation to generation. To illustrate the point, let us observe the following:

(46) **English**   **Xitsonga**
     Banana   : Miyobva

The Xitsonga word **miyobva** was known and used by the speakers of the language who lived between the 1910s and 1930s. This word has since been replaced by the English word **banana**. The generation of the 1960s have not used the word **miyobva,** and today's generation does not know that such a word does exist because they have never heard of it at all. Let us again look at the following examples:

(47) **English**   **Xitsonga**

     a) **Bus**   : Xiboma
     b) **Address**   : Kherefu
     c) **Destroy in anger** : Rutla

The Xitsonga **xiboma, kherefu**, and **rutla** were long neglected and are criticized and ridiculed. They are said to be out-dated by the new generation of the speakers of the language. This procedure would result in language evolution or even language death if it is excessively used.

Thomson (2001) correctly notes that history provides several instances of language death. The vitality of languages cannot be dissociated from socio-economic interest and activities of their speakers. It is not true that the native speakers of a language shift from their native vernaculars to those of colonist because they have lost pride in their traditions. Globalization is one factor that cannot be ruled out as a course.

Chatelain's compilation of (1907) bilingual dictionary includes some of the concepts which are no longer known and used by the new generation of Xitsonga speakers. Let us observe the following examples below:

(48) **English**   **Xitsonga**

    a) **Respect**   : Mafundza   (1907:90)
    b) **Village where the leader died**   : Machiyiweni   (1907:89)
    c) **Back of hut, outside**   : Mahosi   (1907:91)

The Xitsonga words **mafundza, machiyiweni** and **mahosi** are hardly known by the Xitsonga speakers of the new generation. These words are no longer approved and are criticized by these speakers or users of this dictionary. They have become archaic. Instead, the Xitsonga speakers prefer to use **nhlonipho** instead of **mafundza**. However, the word **nhlonipho** has been borrowed from isZulu through language contact. **Mahosi** and **machiyiweni** are replaced by the descriptive **endzhaku ka yindlu** and **muti lowu vatswari va loveke hinkwavo.**

Cuenoid (1967) has also included in his compilation certain terms that are hardly known by the users of this dictionary. Let us observe the following:

(49) **English**   **Xitsonga**
    Medicine   : Xusungusungu (1967:21)

Xusungusungu is not known by the users of the dictionary. The users have come to use the word **murhi,** which is a transliteration of English word **medicine.** The negligence and abandonment of particular words in the African languages is a result of the socio-economic factors that serve as an indication of how the African languages are undervalued leading the speakers with no option but to use the transliterated term.

Several factors have contributed to the negligence and abandonment of most of the Xitsonga vocabulary. The high rate of illiteracy is another factor. The past generation of speakers of Xitsonga were illiterate. However, time changed and the new generation of Xitsonga speakers got educated. To secure jobs, English became a requirement, and the fact that an inspiring urban culture is also expressed in English. Therefore, the Xitsonga vocabulary has been neglected and became meaningless. Let us observe the following examples from Mathumba's (2005) bilingual dictionary:

(50) **English**   **Xitsonga**

    a)   **Channel**   : Mpfutla   (2005:34)
    b)   **Concept**   : Nongoti   (2005:50)
    c)   **Earthquake**   : N'wari   (2005:56)
    d)   **Cream**   : Rivombo   (2005:62)

Mathumba's compilation would in this instant not be very much useful to the users of the dictionary in a sense that the words **mpfutla, nongoti, n'wari** and **rivombo** will not serve the semantic purpose because the intended users have hardly heard them. This would result in these words not being used by the intended users in their daily conversations would gradually become extinct and replaced by borrowed items.

The English words **channel, concept**, **earthquake** and **cream** are frequently used in the places of **mpfutla, nongoti, n'wari** and **rivombo**. However, these English words are transliterated as follows:

(51) **English**   **Xitsonga**

    a)   **Channel**   : Chanele
    b)   **Earthquake**   : Earthquake
    c)   **Cream**   : Khirimu
    d)   **Concept**   : khonsepe

It is mostly undisputable that globalization has exerted the greatest impact on languages, and the impact has been more disastrous to indigenous languages. The chosen languages gradually penetrate the private domain of citizen's lives to the point where it becomes everybody's vernacular. However, this process, result in the addition of new words to the lexicon of a language and standardize them to become formal.

3.7 CONCLUSION

It has been demonstrated in this chapter that language contact naturally leads to language change and language evolution through borrowing and lexical engineering. The result of this process is the addition of new words to the lexicon of a language that strive to be standardized and be recognized as formal. The isiNdebele and Xitsonga lexicography has taken an important step towards formalizing new words in their lexicon

CHAPTER 4

TRANSLATION STRATEGIES THAT HAD AN IMPACT ON THE TRANSLATION OF TECHNICAL AND SCIENTIFIC TERMS OF XITSONGA BILINGUAL DICTIONARIES

4.1 INTRODUCTION

This chapter aims at providing information on translation strategies that had an impact on the translation of technical and scientific terms in the Xitsonga Bilingual Dictionaries. Translation is normally seen as a way of transferring meaning from one language to another, therefore the best methods and strategies should be utilized in the translation of technical scientific words in bilingual dictionaries. The translation strategies should always be discussed in line with the following:

a) Procedures to be followed in translation,
b) General problems encountered by translators while translating; and
c) Translation strategies that had an impact on the Xitsonga bilingual dictionaries.

4.2 TRANSLATION PROCEDURES

Newmark (1988:81) differentiates between translation methods and translation procedures by stating that while translation methods relate to the whole text, translation procedures are utilised on sentences and smaller units of the language. Newmark's version on the matter implies that in order for a proper translation to take place, words and sentences need to be analysed. Nida (1964:45) divides translation procedures as follows:

4.2.1 Technical Procedures

According to Nida (1964), technical procedures assist the translator to do the following:

a) Analysis of the source and target languages;

b) A thorough study of the source language text before attempting to translate it; and

c) Making judgments of the semantic and syntactic approximation.

This means that translators are advised to thoroughly analyse both texts that are establishing a distinction between the two languages or cultures involved. Nida (1964) also points out that the source text must be studied thoroughly because it is considered to be the source of information. This means that it is the source text producer who produces a text which will serve as a source of information in the translation process.

A source text is seen as a point of departure for offering information to be formulated in the target text. House (1977:37) shares this view by mentioning that in order to be established as a functional equivalent, the source term needs to be analysed first, so that the equivalent that needs to be used for source text and target text be stated precisely. This analysis should be done before the translation process takes place.

Nord (1991) in Naude (2004:190) emphasises that the analysis of a source item serves as a guide to the translation process in a way that provides the basis for decision about (a) the feasibility of the translation assignment, (b) which source item units are relevant to functional translation, and (c) which translation strategy will lead to a target item that meets the requirements of a translation brief. Nord (1991) also indicates that it is imperative to compare the source items against the target items in relation to the translation brief in order to achieve optimal transfer procedure.

This means that the lexicographers should be able to identify the difference in the cultural knowledge of the two communities involved, and be able to offer adjustments that would result in textual expansions.

The lexicographers and terminologists are therefore prompted to make valuable judgments about semantic and syntactic approximation. It is crucial for translators and terminologists to have a thorough knowledge of semantic implications on both texts because it enables them to deal with the problem of non-equivalents when it occurs. It also enables them to identify similarities and differences which occur in the

two languages involved as well as the gap that exists between them. It is therefore important that terminologists and lexicographers make syntactic evaluation because some of their choices of appropriate equivalents in a given context are strictly linguistical while some originate from extra-linguistic factors.

4.2.2 Organizational Procedures

Nida (1964:246-247) points out that organizational procedure involves the following:

a) a constant re-evaluation of the translated work.
b) contrasting it with the existing available translations of the same text done by other translators; and
c) check the text's communicative effectiveness by asking target users to evaluate its accuracy and effectiveness and study their reaction.

In accordance with this information, it is imperative that Xitsonga lexicographers and terminologists re-evaluate their work to make sure that they succeed in conveying the intended meaning to the target audience. They are also encouraged to consult other bilingual dictionaries from other African languages. Newmark (1988) in Naude (2004:24) also makes a productive contribution in differentiating translation procedures in relation to culture-bound terms as follows:

4.2.2.1 Transference

This is the access transferring of source item to target term. It includes transliteration. Harvey (2000:5) names this procedure transcription because the source item alphabets are borrowed and transcribed in the target equivalent. This means that the target item remains unchanged in a way that the source term becomes a loan word in the target language. Transference has been mostly used by Xitsonga lexicographers. Cuenoid (1967) illustrates the point:

(52)	**English**		**Xitsonga**	
a)	**Page**	: Pheji		(1967:63)
b)	**Saucepan**	: Susupani, Mbita		(1967:80)
c)	**Thermometer**	: Terimometere		(1967:187)
d)	**Wire**	: Wayere		(1967:202)
e)	**Wireless**	: Wayelese		(1967:202)

In the above articles, the English words **page**, **saucepan, thermometer, wire and wireless** have been transliterated to Xitsonga **pheji, susupani**, **terimometere, wayere** and **wayelese**. Transference has been utilised in the translation of these technical items.

4.2.2.2 Naturalisation

This strategy is similar to transference but only used when an item is adopted from the source language with a slight modification to remove the foreignness on it. Newmark (1988b:82) indicates that this modification includes normal pronunciation and normal morphology of the target item. Naude (2000:24) regards this naturalization as indigenization or domestication. Let us observe the following articles from Mathumba's (2005) bilingual dictionary:

(53)	**English**		**Xitsonga**	
a)	**Sample**	: Sampulu		(2005:63)
b)	**Search**	: Secha		(2005:63)
c)	**Surgery**	: Sejari		(2005:63)
d)	**Circle**	: Sekele		(2005:63)
e)	**Gallery**	: Galari		(2005:11)

4.2.2.3 Cultural Substitution

Newmark (1988b: 83) explains that this procedure involves replacing a cultural item in a source language with a target one. However, Newmark also points out these target words are never accurate as the source terms. In this case there is a

replacement of a cultural-specific item of a source language with a target language item that does not have the same propositional meaning but would have the same impact on the mind of the target users. In The Lord's prayer **Tata wa hina la nge Matilweni**, the word **bread** has been replaced by a culturally equivalent concept **vuswa** as **porridge** is regarded to be a staple for the Tsonga speaking community.

This cultural substitution has also affected the translators of Christian Hymn Books. In Junod et al (1977 :288) *Tinsimu Ta Vakriste*, **Vonani wa ta Hosi Yesu** and *Lifila Tsa Sione* (2009:45) **Bonang hohlahile marung,** the substitution of words between the two hymns is misleading because of the cultural gap that exists. To illustrate the point, let us look at the first verses of the hymns:

Xitsonga Version:

a) Vonani wa ta Hosi Yesu
b) Loyi hi nga n'witshamela.
c) Wa vuya ku fuma vanhu,
d) Ni ku heta valala.

Chorus
Aleluya! Aleluya! N'wi dzuneni Aleluya.

Northern Sotho Version:

a) Bonang hohlahile marung
b) Ea shoetseng batho khale;
c) O tla hutla lehodimong
d) Ho phutha batho bohle.

Chorus
Alleluya! Alleluya! Lumelang alleluya.

The cultural differences between the Xitsonga and Northern Sotho languages created misunderstanding in both the songs above. The first line of the Xitsonga

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song can be translated to English as **look, Jesus Christ is coming** whereas the Northern Sotho song line1 can be translated as **look what came out of the clouds**. Line 2 of Xitsonga song says: **the one whom we are waiting for**, line 2 of Northern Sotho song says: **The one who died for people a long time ago**?

Furthermore, the words **N'wi dzuneni** and **lumelang** in the choruses connote different meanings. **N'wi dzuneni** could be translated as **Praise Him** in English whereas **lumelang** could mean **be happy**. It is evidently clear from the above argument that cultural difference contributes negatively towards translation process.

4.2.2.4 Generalisation

Newmark (1988:83) indicates that generalization requires the use of a cultural-neutral word. This procedure is also known as functional equivalent. Here, a neutral term that could be used to define the source language culture-specific item which is less expressive is selected. In the Lord's Prayer, the word **ku fuma** (ruling) has been used as a functional equivalent for **Kingdom**. The following are examples of generalisation:

(54)   **English**   **Xitsonga**

a)   **Helicopter**   : Xihahampfhuka-phatsa
b)   **Bicycle**   : Xikanyakanya
c)   **Radio**   : Xiyanimoya

4.2.2.5 Shift or Transposition

It involves the change in grammar from source language to target language, for example (i) change from singular to plural (ii) the change that is required when a specific source language structure does not exist in target language (iii) change of a source language verb to a target word, change of a source language noun to a target language noun, etc. In regard to this, the Xitsonga translators of The Lord's Prayer substituted the singular form of **Heaven** with the plural Xitsonga concept **Matilweni** (the skies).The following sentences illustrate the point further:

(55)	a)	**English**	: This man is very **big**
	b)	**Xitsonga**	: Wanuna loyi i **kurile** swinene.

The English verb **big**, has taken a position of a present tense and the Xitsonga verb **kurile** has taken the position of a past tense in order to convey a more similar meaning.

4.2.2.6 Descriptive and Prescriptive approaches

These are the two main approaches or methodological poles when addressing interference in technical writing. Descriptivists think that translators and terminologists should adapt to their readers' usage while prescriptivists think that the most correct term from the translator's point of view should always be promoted even if it means breaking the rules. The prescriptive approach emphasizes the use of common sense based on the sound knowledge of target language dynamics. Descriptivists believe that the role of technical and scientific translators must not be mainly pedagogical but communicative. This means that translators and lexicographers may be advised to choose communicative efficacy than intrinsic target language correction. The central idea in descriptive approach is that optimal technical and scientific communication does not only lie on choosing the best decontextualized terms but ensuring the clarity and precision of the information received by the target audience.

Professional technical and scientific translators somehow tend to be essentially descriptive and at the same time, attempt to achieve balance between intrinsic correction and the point of view of the structure, patterns and semantic logic of a target language. The following examples illustrate descriptive equivalence:

(56)		**English**	**Xitsonga**
	a)	**Paediatrician**	:Dokodela la tokoteke hi ta : vutshunguri bya tincence
	b)	**Bathroom**	: Kamara yo hlambela ka yona
	c)	**Diabetes**	: Vuvabyi bya chukele

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4.2.2.7 Paraphrasing

In this procedure, the meaning of the culture-bound term is explained. Newmark (1988b:91) points out that the explanation in this procedure is more detailed than of the descriptive equivalent. This explanation of the culture-specific item is given together with an explanation in relation to the linguistic gap that exists between the two languages. This procedure has been avoided by the technical and scientific translators of Xitsonga. The following examples illustrate the point:

(57) (a) **English**   : We'll drive in a new car.
      (b) **Xitsonga**   : Hi ta famba hi movha lowuntshwa.

4.2.2.8 Couplets

Newmark (1988b:91) argues that a couplet involves the combination of two different procedures. This means that the translator may render a source language item in the target language and at the same time add a cultural item which did not occur in the source term. Let us observe the following articles:

(58) **English**   **Xitsonga**

      a) **Saucepan**   : Susupani, mbita
      b) **Doctor**   : Dokodela, n'anga
      c) **Medicine**   : murhi, mbita

Transference and cultural substitution have been used in the above article. The Xitsonga word **Susupani** retained alphabets that have been transferred from English language whereas **mbita** is a cultural substitution word that connotes the same as **saucepan.** The same has happened with **dokodela** which retained most of the alphabets of **doctor** and **murh**i for **medicine.**

4.2.2.9 Thorough Translation

Newmark (1988:76) says that this procedure makes use of loan words when translating. Newmark calls this procedure adaptation. This means that translation in this procedure is generally literal. He further divides thorough translation as follows:

- Phonological adaptation;
- Morphological adaptation;
- Syntactic adaptation; and
- Semantic adaptation.

(a) Phonological adaptation

Bloemfield (1984:451) is of the opinion that phonological adaptation is an adaptation wherein a word is changed to suit the phonetics of one's language. Thus the borrowed term is subject to the phonetic changes that occur after its adaptation. The following examples from Mathumba (2005) illustrate the point:

(59) **English**   **Xitsonga**

    a) **Photocopy**   : Fotokopa   (2005:9)
    b) **Physiology**   : Fisiyologi   (2005:9)
    c) **Economy**   : Ikhonomi   (2005:117)
    d) **Curriculum**   : Kharikhulamu   (2005:112)

The sounds in the above English words have been adapted to suit the phonetics of the target language. For instance, the word **ikhonomi** has been adapted from English word economy. The **[k]** sound in the word **ikhonomi** is an adjective sound, whereas the **[c]** sound is an aspiration.

b) Morphological adaptation

According to Bloemfield (1984:452), morphological adaptation is an adaptation of word wherein a word is adapted to suit the morphological structure of a particular

language. Let us observe the following examples:

(60)   **English**   **Xitsonga**
   a) **Diary**   : dayari
   b) **Concrete**   : khonkhireti
   c) **Statement**   : xitatimente
   d) **Government**   : gavhumende

The words **dayari, khonkhireti, xitatimente** and **gavhumende** have sounds which do not appear in the source language. New sounds have been put to suit the morphological structure of the target language.

(c) *Syntactic adaptation*

This is the adaptation wherein words are arranged to form a sentence. Blomfield cites that a grammatically borrowed form is subject to the systems of borrowing. The following examples from Mathumba (2005) illustrate the point:

(61)   **English**   **Xitsonga**

   a) **Technical committee**   : komiti ya xithekiniki
                                      (2005:20)
   b) **Disciplinary committee**   : komiti yo tshinya
                                      (2005:20)
   c) **Guard of honour**   : ku fundza murhangeri hi ku yima
                                      (2005:21)
   d) **Mathematical literacy**   : litresi ya mathematiki
                                      (2005:26)

In the above article, words in the target language are arranged differently from the source language.

(d)Semantic Adaptation

According to Poulos (1990:79), lexical adaptation is concerned with the meaning in a word or in a sentence. Therefore, semantic adaptation is illustrated in occupants that coincide with the introduction of foreign language. For instance:

(62) **English** **Xitsonga**

a) **Corner** : Khona (Mathumba, 2005:20)
b) **Quotation** : Khothexini (Mathumba, 2005:20)
c) **Magazine** : Magazini (Cuenoid, 1967:145)
d) **Varnish** : Vhanichi (Cuenoid, 1967:196)

4.2.2.10 Shift of meaning in Translation.

Fromkin and Rodman (1988:313) explain shifts of meaning in translation as a situation whereby some adopted terms change meanings when translated to a target language. Fromkin and Rodman further indicate that these shifts occur in the following three directions:

- Narrowing;
- Broadening; and
- Total shift of meaning

(a) Narrowing

Narrowing implies that the original meaning of the source term is, as Trask (1994:72) puts it, found to be broad, and narrowed in the target language. Fromkin and Rodman add that it is a semantic change in which the meaning of a word changes to become less extensive in a period of time. According to Trask (1994:74), narrowing of meaning means that the word becomes more general in the target language than in the source language. Let us observe the following:

(63)   **English**   **Xitsonga**
        Folklore   : mitsheketo

The English word **folklore** is more general. The South African Oxford English
Dictionary (2005:179) defines **folklore** as beliefs and legends. This entails traditional
songs and praise poems. However, **mitsheketo** is specific and refers to folktales
only. This shows that it has been narrowed.

(b) Broadening

Broadening is defined by Fromkin and Rodman (1988:501) as a situation wherein
the meaning that was narrowed in the source language is found to be broadened in
the target language. Let us observe the following examples:

(64)   **English**   **Xitsonga**

        a) **Short plays**   : Mintlangu
        b) **Bar graph**   : Girafu
        c) **Short stories**   : Swirungulwana

The Xitsonga word **mintlangu** refers to various games whereas the source term
short plays is specific, meaning it has been narrowed. The word **bar graph** has also
been narrowed whereas **girafu** has been broadened and could mean any kind of
graph. The same applies to **swirungulwana**, it has been broadened because it
refers to any kind of narration.

(c) Total shift

Fromkin and Rodman (1988:511) mention that shift in translation shifts. Let us
observe the following examples:

(65)   **English**   **Xitsonga**

        a) **Radio show**   : Nongonoko wa radiyo

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b) **Show presenter** : Muhaxi wa nongonoko

The translation in the above examples brings a total shift in meaning. The word show in **radio show** would imply that something is displayed so that people may watch yet it talks about listening.

4.2.2.11 Notes

Newmark (1988b:91) says that notes are supplementary information in translation. Here translators are given permission to write foot-notes in order to help explain the incomprehensible item in the target language. The use of foot- notes has been discouraged by Xitsonga lexicographers. Nida (1964:237-239) recommends that the use of foot-notes to perform the following functions:

(i) To provide supplementary information; and
(ii) To call on attention to the original discrepancies

The most important fact in translation is that the translation should communicate effectively with the target recipient.

4.3 GENERAL PROBLEMS ENCOUNTERED BY LEXICOGRAPHERS AND TERMINOLOGISTS IN THE TRANSLATION PROCESS.

This study has established without doubt that there are no languages that are the same because of cultural diversity that brings in the question of zero-equivalents. The choice to provide an appropriate equivalent in a given context is influenced by a number of factors. Some of these factors may be strictly linguistically while others belong to an extra-linguistic domain. However, the choice of an equivalent is not only determined by linguistic systems but by the way in which the author of the source text and the producer of the target text (i.e. the translator) chooses to manipulate the linguistic system in question.

The target language may not always have an equivalent that would replace a word in the source language. Naude (2002:35) argues that there are various types of strategies that could be adopted by lexicographers, but there are general problems

which can be encountered when zero-equivalence strikes. These are some of the problems translators and terminologists can encounter:

4.3.1 Cultural-Specific Concepts

Baker (1992:21) mentions that the source language may use a word or describe a concept that is totally unknown to the target culture. According to Baker, these concepts may be abstract; or may be religious, a social tradition or even food. For example:

(66) **English**   **Xitsonga**

a) **Cheese**   : Chizi
b) **Commission**   : Khomishini
c) **Compass**   : Khophasi
d) **Generator**   : Jenaretara
e) **Cassava**   : Ntsumbula
f) **Pumpkin**   : Kwembe
g) **Cassava**   : Ntsumbula

The above articles provide items that display cultural differences. The word **cheese** is only known by the English speakers and **ntsumbula** is known by Xitsonga speakers only.

4.3.2 A source language concept is not lexicalised in the target language

At times, words in a source language may express a concept that is known in the target culture but not lexicalised, that is, a word has not been assigned in the target language to denote its meaning (Baker, 1992:21). For example, the English words **computer** or **satellite** are known to both English and Xitsonga languages, but not lexicalized in Xitsonga. Here are some of the English that are known by both English and Xitsonga speakers but not lexicalised in Xitsonga:

(67)	**English**		**Xitsonga**
	a)	**Cake**	: Khekhe
	b)	**Condom**	: Khondomu
	c)	**Jersey**	: Jesi
	d)	**Firm**	: Feme

4.3.3 A word in the source language is semantically complex

This is considered to be a common problem in translation because a word does not have to be morphologically complex to be semantically complex. Baker (1992:22) mentions that a single word may sometimes express a complex number of meanings. The English word **business** can be used to refer **issues, money** or a **work place**. In Mathumba (2005: 35) bilingual dictionary, the Xitsonga word **mufambisi** could mean **administrator, boss, chair, director, facilitator, guide**, **governo**r or **manager.**

4.3.4 The source language and target language distinguishes between divergent meaning

Here, a target language may distinguish greater or lesser meanings than the source language. Baker (1992:22) points out that what could be an important semantic distinction of meaning in a particular language may not necessarily apply to another language. For example, the English word uncle is translated in Northern Sotho as **malome, rangoane**, or **ramogolo**. Such complexity is also evident to Xitsonga where Cuenoid (1967) uses the word **manana** and **hahani** to refer to **mother** in English.

The translators do not realise how semantically complex a word is, and this poses a problem as such that these words may be misused by the intended users. Let us use the **manana** and **hahani** to illustrate the semantic difference:

(68)	(a)	Vele ra **manana** a ri na xilondza.
	(b)	**Hahani** u ta amukela xuma xa mina mundzuku.

This sematic difference clearly indicates that **manana** and **hahani** will never be used interchangeably in a sentence because they carry out different meanings.

4.3.5 The target language does not have a specific term (hyponym)

This occurs more often when the target language does not have a superordinate, thus a language may have a general word but not a specific word for a certain concept. Baker (1992:23) indicates that this occurs because each language distinguishes meanings that are relevant to its environment. Baker (1992:23) further illustrates that in English, the superordinate **house** would imply various hyponyms like **bungalow, cottage, lodge, hut, mansion** or **hote**l. In Xitsonga language, **yindlu** could subsume **lawu, nhanga, dladla**, or **ndhumba**. These words are only relevant to Tsonga speaking people.

4.3.6 Difference in physical or interpersonal pespective

The physical or interpersonal perspective of an item may in some languages be more important than it could be in other languages. The interpersonal perspective refers to the relationship between people or things, as opposed to another or a place. Baker (1992:23) mentions that these inter-relationships are generally expressed in word pairs which also include relationship among participants in the discourse such as the Tsonga words:

(69) **English**   **Xitsonga**

   a) **Up/down**   : Henhla/hansi,
   b) **Come/go**   : Famba/vuya,
   c) **Arrived/depart**   : Fika/tlhela
   d) **Cry/lough**   : Rila/hleka

4.3.7 Difference in expressive meaning

According to Baker (1992), a word in the target language may have the same propositional meaning as a word in the source language, but may then encapsulate

a different expressive meaning. The meaning of that word in the target language may be less expressive even if the propositional meaning seems to be the same. For example:

(70) **English**   **Xitsonga**

    a)   **Delete**   : Sula

    b)   **Treat**   : Horisa

    c)   **Chief**   : Hosi

    d)   **Cast**   : Hoxa

The difference in meaning of both the above English and Xitsonga term can pose a problem to the intended users. The English word **delete,** may imply to **erase, rub or wipe**. All the implied words have variety of meanings. The word **chief** could mean **king, senior**, **manager** or **administrator**.

4.3.8 Difference in form

Sometimes there is no equivalent in the target language for a specific concept in a source language, in other words, some suffixes and prefixes that convey propositional and other meaning in English do not have direct equivalents in other languages. These English items may include following, **pre-natal** or **post-natal**. It is thus easier to paraphrase a propositional meaning although Baker (1992) argues that other types of meanings may not always be spelt out in translation.

4.3.9 Difference in the frequency and purpose of a specific form

Sometime there is a difference in the use or the purpose of a specific form in various languages. For example, the **–ing** form occurs more often in English than its equivalent in any other language (Baker, 1992:25). However, rendering **–ing** form in English source text with an equivalent in Xitsonga target term would result in a silted and unnatural style.

4.3.10 The use of loan words in the source text

Loan words cause different problems in the process of translation. Loan words such as **blonde, dude** or **chic** are often use in English to add prestige to the text. However, this prestige is lost in a translated text because it is not always possible to find a loan word with the same meaning in the source language.

Another problem in translation is the problem of the so-called false friends. In this regard, words or expressions that have the same form in two or more languages have divergent meanings. This implies that if a word has been borrowed into the language, any further developments and additional meaning gained by these cannot be predicted or controlled. If these common problems are identified by translator in the translation process, it will reduce the terminologists and lexicographer's chances of committing lexicographic blunders and the translation of technical and scientific terms in Xitsonga would be made easier.

It is considered that the term strategy is found to be broader than procedure hence it is used to refer to a particular method to translate a given unit, making use of one or more procedures chosen on the basis of relevant parameters. A strategy would link procedures taking note of conditions obtained when they are used. It is through this given information that lexicographer and terminologists would be able to select suitable strategy that could be used in a translation in accordance with the listed strategies listed above.

Unlike procedures, strategies are not directly visible as part of the output. Mainhac (2007:33) declares that according to principle, translation strategies fall into three categories; that is, they can be (i) conscious, (ii) potentially conscious, or (iii) totally subconscious. On the other hand, Krings (1986) feels that the translation strategy as the translators' potentially conscious plans for solving concrete translation problems in the framework of a concrete translation task.

This indicates that lexicographers and terminologists are faced with an undisputable duty of communicating meanings cross culturally, and should therefore come up with some plans to solve any of the issues listed above. Cohen (1998:4) emphasizes that

the element of consciousness is what separates strategies from procedures. This implies that lexicographers and translators are fully aware of what they are doing, and therefore should account for their actions.

Furthermore, Bell (1998) differentiates between global and local strategies. According to Bell, global strategies are those that deal with the whole text and local strategies deal with the text segments. Bell also confirms that this distinction is a result of different kinds of translation problems. Bell (1998) further states that global strategies are concerned with what happens to the text in the translation process, while local strategies deal with what happens in the translation process to serve the intended purpose.

Bell's view on global and local strategies is supported by Jaakskeilanen (2005) in (htt:/www.hum.expertise.workshop) by pointing out that global strategies are process-related because they refer specific activities towards the translator's problem-solving and decision making. These process-related strategies are strategies or principles which the translator uses in order to achieve the goals determined by the translation situation. Therefore, Xitsonga lexicographers and terminologists should have opted for local strategies in order to achieve the intended purpose.

Toury (1995:54) argues that translation may be described as subjects to constraints of many kinds of different degrees and that terminologists and lexicographers perform their jobs under different conditions and often adopt various strategies. This implies that there is inconsideration of linguistic and cultural differences between languages, lexicographers still meet obstacles due to lack of corresponding items. Thus, if a good or bad translation could be measured by what constitutes equivalence to the source text then translators are destined to fail their target users.

4.4 SPECIFIC PROBLEMS ENCOUNTERDED BY LEXICOGRAPHERS IN XITSONGA BILINGUAL DICTIONARIES

When dealing with the issue of lack of equivalence, lexicographers are faced with specific problems that often leave them with the challenge of untranslatability. There are mainly two specific problems that lexicographers are faced with, that is, the proper nouns and neologism.

4.4.1 Proper Nouns

It is imperative that the lexicographer check on all the proper nouns that are unknown to him. These nouns include (a) names of people, (b) names of objects; and (c) geographic names.

(a) Names of people

Normally, persons' first names and surnames are transferred to the target text in order to retain the nationality and connotations related to the person. However, names of holy persons and Popes are translated. For example, **Holy Spirit** is translated to Xitsonga as **Moya lowo Kwetsima**. Within the category of names, there are also eponyms that may course problems to the translator. The most significant problem regarding eponyms is whether they are understood by readers if they appear in the text. Some of these eponyms are meaningless, unless if the reader knows who is referred to. The connotations attached, among others, to **casanova, slob, jude**, etc. are well known but cannot be well transferred to the target language.

(b) Names of objects

These are names of objects such as proper nouns which allude to trademarks or ownership. Such words are generally transferred directly to the target language. If the trademark is not well-known in the target culture, a classifying label is included and a brief explanation is also added so that the users may know exactly what the reference entails. Newmark (1988:200) points out that there may be a case where

other eponyms require an additional descriptive term especially when the target reader does not know the trade mark. For Example:

(71)   **English**   **Xitsonga**

a)   **Toyota**   : Toyota
b)   **koo**   : koo
c)   **Bakers Red Label** : Bakers Red Label

(c) Geographic names

When a geographic name appears in a text, it is important that lexicographers and translators look up for recent terms in atlases so that they find an appropriate term that is used.   Eponyms that fall under this category generally have fixed connotations. Such words should be transferred unchanged: For example:

(72)   **English**   **Xitsonga**

a) **Gauteng**   : Gauteng
b) **Emnotweni**   : Emnothweni
c) **Giyani**   : Giyani
d) **Kamagugu**   : Kamagugu

4.4.2 Neologisms

Neologism is defined as newly created lexical items or existing items that acquire new meanings. Neologisms are one of the significant problems in scientific and technical translation because most of these lexical items are created to satisfy a specific need or a specific group. The following kinds of neologisms can be distinguished.

4.4.2.1 Old words with new meanings

These types of words are generally non-cultural and non-technical and should be translated with a word that already exists in the target language. For example, the word **apartheid** is transferred with all connotations to other languages and not translated. However, when the lexicographer is not sure about the permanence of new meaning of a word, it is advisable to translate the word with a functional or descriptive term rather than to transfer the word unchanged. For example:

    (73)   **English**   **Xitsonga**

        a) **Thermometer**   : Thermometer
        b) **Cabinet**   : Cabinet

This kind of translation is unacceptable because the translator did not describe the terms. The following examples should have been better:

    (74)

English	Xitsonga
a) Thermometer	Xithirhisiwa xo kambela mahiselo ya mirhi
b) Cabinet	Vanhu lava nga le palamente lava hlawuriweke hi xidemocrasi ku fambisa tiko.
c) Democracy	Mfumo lowu hlawuriweke hi ku tsakela hi vanhu

4.4.2.2   Abbreviations

Abbreviations are a kind of pseudo-neologism, for example, **Dr** for **doctor; exam** for **examination**. Such abbreviations should be written out in the target language. Here are other examples:

    (75)   a)   **BCCSA**   : Broadcasting Complains Commission of South
                               Africa
        b)   **SAA**   : South African Airways

c) **GETC** : General Education and Training Certificate

4.4.2.3 Acronyms

Fromkin and Rodman (1988:499) say that an acronym is a word of the initial of several words. In scientific articles, the first letter of the words in a phrase is used to form a new word, for example **laser, maser**. They should be transferred to the target language unchanged. In the same vein Hudson (2000:242) argues that acronyming is a way of clipping wherein a phrase is replaced by a word based upon the first letters of its words. Hudson further identifies three types of acronyms, which are:

- Word acronyms;
- Spelling acronyms; and
- Two-level word acronyms

(a) Word acronyms

Word acronyms are pronounced as ordinary words and not as spelling. The following examples confirm this explanation:

(76) a) **RAM** : Random Access Memory

b) **UNICEF** : United Nations International Emergency Fund

c) **SASA** : South African Schools Act Spelling acronyms

These kinds of acronyms are read and pronounced as spelling as sequences of letters as in the following:

(77) a) **P.R** : Public Relations

b) **I.D** : Identification

c) **T.R.C** : Truth and Reconciliation Commission

(d) Two-level word acronyms

These are acronyms that express meaning on two levels. Thus, as an acronym and a word. The examples below illustrate the point:

(78) a) **WHO**   : World Health Organization

b) **NOW**   : National Organisation of Woman

c) **SPECTE**   : Special Executive for Counter intelligence, Terrorism, Revenge and Extortion

However, equivalence still plays an important role in these strategies of creating terminology. The lexicographer's main objective in the creation of terminology, as highlighted by Robinson (2006:148), is verbal action wherein translators strive for equivalence. This is further argued by Mthombeni (2005:9) whose focus is on quality of translations, as she maintains that a well- translated text should cause the target language to react in the same way to the communicative situation. In the same vein, Crystal (1987:344) that translation should provide semantic equivalence. Hatim and Mason (1997:215) are also of this opinion when they indicate that a well translated text depends on the co-operation of the translator, that is, the translator should adhere to the co-operative principles of communication. This is defined by Fromkin and Rodman (1988:255) as a principle that states a speaker's message should be informative in a sense that it should contribute to the discourse.

Lexicographers of Xitsonga bilingual dictionaries have also used this strategy of acronyms. However, they adopted the acronyms from the source language to the target language as evident from the following examples from Mathumba's (2005) bilingual dictionary:

(79) a) **NEPAD**   (2005:139)

b) **NEHAWU**   (2005:139)

c) **HIV/AIDS**   (2005:127)

d) **ELSEN**   (2005:118)

4.5 STRATEGIES FOR DEALING WITH NON-EQUIVALENCE

Non-equivalence or zero-equivalence as sometimes referred to, is a case where a source language form does not have an appropriate and immediate translation equivalent in the target language. Mphahlele (2002) refers to this case a case of untranslatable items. This means that there is no one target word to describe its corresponding source form. Here are some suggested strategies to help the terminologists and translators deal will the problem of zero-equivalence in the translation of technical and science vocabulary in Xitsonga bilingual dictionaries.

4.5.1 Translation using a more neutral or less expressive word

In the presence of non-equivalence, Baker (1992) states that lexicographers and terminologists should use a more fitting item which will be closer to both propositional and expressive meaning. A more neutral term is used in order to overcome the problem of lack of specificity in the target text. Baker further explains that the lexicographer should manoeuvre the given semantic field to obtain a more general concept that conveys the central propositional meaning of hyponym in the target text. However, the main problem with this procedure is that it could convey a lesser expressive meaning than its corresponding form in the source. The following sentences from The Lord's Prayer illustrate the point:

(80)	a)	**English**	: Who art in Heaven
	b)	**Xitsonga**	: La nga le Matilweni
	c)	**English**	: Thy will be done on earth
	d)	**Xitsonga**	: Ku rhandza ka wena a ku endliwe misave misaveni

The Xitsonga words **la ngale**, do not quite have the same connotation as who art. The words **who art** implies being stationed at a particular place whereas **la ngale** only suggest that being at a certain place. This means that **la ngale** has a lesser expressive meaning than **who art.**

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Mphahlele (2002:26) contributes by regarding surrogate equivalent as a case where a phrase or sentence in the target language is included as an equivalent to the lemma. He also indicates that it is imperative that lexicographers establish the nature of the lexical gap that prevails in the target language. Mphahlele distinguishes two types of lexical gaps, that is, linguistic gap and referential gap. Gouws (1999) in Mphahlele (2002:27) argues that the distinction between linguistic and referential gaps plays a vital role in translation of equivalents in the target language.

In a case of a referential gap, that is if the referent is known to one language while in the other language is not, a comprehensive description of the source term must be given because target users need intensive explanation in order to understand the meaning of the source form. If this is not properly done it may result in a lexicographic blander. Nord (1997:41) adheres to the same principle but refers to referential gap as the appellative function of translation because it is orientated towards objects in the real world and the models are determined by cultural perspective and traditions.

4.5.2 Translation through cultural substitution

This happens when the target language item does not have the same propositional meaning which will have the same impact on the target readers and lexicographers would be forced to replace the term with a cultural-specific item or expression. However, the decision to use this strategy would depend on the purpose of the translation (Baker, 1992:33). This strategy has been neglected much by the lexicographers and terminologists of Xitsonga bilingual dictionaries. For Example:

(81)   **English**   **Xitsonga**

a)   **Doctor**   : N'ganga
b)   **Medicine**   : Mbita

4.5.3 Translation using a loan word, or a loan word accompanied by an explanation

This strategy is mostly functional where cultural-specific terms and modern concepts occur. This use of loan word, followed by an explanation is usually helpful to the target users. For example, the English words **acronym, cake**, and **camera** are translated to Xitsonga as **akhronimi, khekhe** and **khamera.** All these terms bear items that are not cultural to Tsonga. Lexicographers should at least accompany these translated words with an explanation. This strategy was overlooked by terminologists and contributed to the lexicographic blander.

4.5.4 Translation through illustration

This strategy is often used in a case where an equivalent is not available in the target language but the word refers to a physical entity that can be illustrated. Baker (1992:42) gives an example of a **tagged tea** bag which is illustrated and much used rather than paraphrase on the labels in Arabic. The Xitsonga lexicographers could have used illustration to illustrate the term chimney which is translated as **chimela** or **chimele** to assist the users understand clearly.

Languages are different when it comes to correspondence in meanings. This means that there is no complete equivalence between codes units (Mthombeni, 2005:6). This is supported by Levefere (1992:1) who points out that languages seema not to have been created equally because some languages seem to enjoy more prestigious status than others. Levefere further indicates that no language is reach enough to match another in all stylistic traits and figure of speech, even to the most primitive language in all spectra. However, Erusmas (1999:322) argues that there is no such thing called primitive language. According to him, all languages are of equal complexity and as such, are equally well adapted to the communicative purpose they serve in the society in which they operate. However, Erusmas agrees with Levefere's notion that some languages, with the virtue of their role, are flexible and versatile than most languages.

Because languages are not equal, translators often create new words in order to bridge the linguistic gap that exists between them. Crystal (1987:344) points out that ''… exact equivalence is impossible and that…there is no such thing as best translation. Holmes (1970:80) seconds Crystal by maintaining that change in meaning is inevitable as far as identifying and differentiating between source and target languages are concerned. This implies that translators would always find it imperative to create new words to replace foreign language terms.

Lack of translation equivalence is most problematic when translating into African languages. Scholars such as Trasks (1994:19); and Fromkin and Rodman (1988:135-140) illustrate the following strategies of creating new words:

- Compounding;
- Blending;
- Derivation;
- Back-formation; and
- Clipping.

4.5.4.1 *Compounding*

Fromkin and Rodman (1988:501) define compounding as a way of creating new words by combining two words, as in the following example:

    (83)   **English compound words**

        a) Sea-horse
        b) Gau-train
        c) Sub-marine
        d) Cow-boy
        e) Lady-bird

Xitsonga compound words

a) Manhlamba-ndlopfu

b) Xihahampfhuka-phatsa

c) Ngwenya-nkekenge

d) Mafamba-borile

e) Mbuti-mahlanga

In all the above articles, two words have been used to form one word.

4.5.4.2 *Blending*

According to Fromkin and Rodman (11988:501), blends are words composed of the parts of more than one word. These are words formed of more than one word, or are fused to make one word. In the same thoughts, Trask (1994:21) indicates that blending is another type of word formation wherein an initial and terminal segment of two words are joined together to create a new word as in a tree **brunch**. This word is created from the initial morpheme of the word **breakfast** and the terminal morpheme of the word **lunch** to form **brunch**. Hudson (2005:245) agrees with Trask's opinion by arguing that blending has to do with replacing two words of a phrase with parts of both by fusing the first part of the first word with the last part of the other, as in the following examples:

(84)   a) Motor + hotel > motel

           b) Channel + tunnel > funnel

           c) Smoke + fog > smog

4.5.4.3 *Derivation*

This is the process wherein morphemes are added to the main stem of the word; something that will change the syntactic meaning of the word. Trask (1994:19) mentions that prefixes and suffixes could be combined with the root word to derive new words. Let us observe the following examples:

(85) **English words**

a) Disbelief
b) Disregard
c) Misfortune
d) Disrespect
e) Inappropriate

In the articles above, prefixes have been used to form negative form of the words. However, in the articles below, suffixes were used to change the present tense to past of the verbs in Xitsonga language.

(86) **Xitsonga words**

a) **Famba** : Fambile
b) **Kula** : Kurile
c) **Tsala** : Tsarile
d) **Dyana** : Dyile

4.5.4.4 *Back - formation*

Hudson (2000:263) argues that back –formation occurs in a language due to unnecessary and wrong cutting of words when communicating. This refers to new words created by means of removing is mistakenly considered to be an affix. Trask (1994:21) also mentions that back – formation is a removal of something from a word that is apparently an affix. The following example illustrates the point:

(87) **English words**

a) **Editor** : Edit
b) **Peddler** : paddle
c) **Babysitter** : babysit
d) **Rider** : ride

The cutting of the words **editor**, **peddler**, **babysitter** and **rider** resulted in the formation of **edit**, **paddle**, **babysi**t and **ride**.

4.5.4.5 *Clipping*

According to Hudson (2000:24), clipping is the shortening of the spoken form of a word. However, Trask (1994:21) indicates that clipping is a process in which a word is created by extracting an arbitrary portion of a longer word of identical meaning. The following examples illustrate the point:

(88) **English words**

    a) **Refrigerator**   : Fridge
    b) **Public house**   : Pub
    c) **Fanatic**   : Fan
    d) **Petite**   : Pet

A new word has been formed in the above articles by shortening the existing one.

4.6 CONCLUSION

In this chapter, a thorough investigation of general and specific problems encountered by terminologists and lexicographers, when translating technical and scientific terms in Xitsonga has been conducted. Translation strategies and procedure that these translators followed in their translation processes has also been looked at. It has also been discovered that if a translator renders a literary text without paying attention to adequate practical steps, he/she may consequently loose the majority, of the target users, and the translation will be ineffective.

Recommendations on strategies to be followed in translation have been made in order to assist the translators to convey undisputable target meanings to the readers.

CHAPTER 5

SUMMARY AND CONLUSION

5.1 INTRODUCTION

This chapter aims to provide a summary of the study; presents its findings and conclusions and make necessary recommendations in order to assist future Xitsonga lexicographers on the kinds of methods and strategies to follow when dealing with the same kind of text.

5.2 SUMMARY

The main core of this study is to establish whether the lexicographers of Xitsonga bilingual dictionaries presented in Chatelain (1907), Cuenoid (1967) and Mathumba (2005) followed lexicographic procedures in the treatment of technological and scientific terms. The study also aimed to prove that transliteration of technical and scientific term result in language change, language shift and language death in some cases. To achieve all this, a summary of each chapter will be given and recommendations be made with regard to the importance of interpretation of meaning in the translation process.

Chapter one serves as an introduction and provides the background of the study. The chapter also highlights the aims of the study; the significance of the study; the research methodology of the study; the delimitation of the study; and the significance of the study. In order to maintain objectivity of the study, different data collection and analysis methods, have been used. This will also help reduce the possibility of biasness.

Chapter Two renders the views of different scholars in relation to the treatment of technical and scientific terms in bilingual dictionaries. The literature related to the study from scholars like Svensen (1993), Gouws (1999), Alkasimi (1977), Mphahlele (2001), Roets (2001), Alberts (2001) and Ziervogel and Mokgalong (1979) is

thoroughly analysed and practical steps to be followed in translation process are given.

Chapter Three analyses the impact of transliteration on the treatment of technical and scientific terms in Xitsonga. A further investigation on how transliteration of technical and scientific words in Xitsonga through language change and language shift. The study also looks at the impact of lexical engineering by using loan words in African languages which resulted in language evolution.

Chapter Four deals with the translation strategies that impacted the translation of technical and scientific terms in Xitsonga bilingual dictionaries. General and specific problems encountered by terminologists and lexicographers in the translation process are highlighted. Suggested strategies for dealing with zero-equivalence are also made in this chapter.

5.3 FINDINGS

The findings that the researcher arrived at with regard to the Treatment of Technical and Scientific Terms in Xitsonga bilingual dictionaries are as follows:

❖ The lexicographers did not adhere to the correct translation strategies and procedure. Transliteration has been used as a first solution when supplying target equivalents and this has left users with uncertainty in meaning.

❖ The vocabulary of a language is in constant flux where old items drop out and new terms come in due to socio-economic factors and language globalization.

❖ The lexical gap was not located in most cultural terms, that is, lexicographers would have used surrogate equivalents.

❖ Most of the bilingual dictionary users do not find these dictionaries user-friendly because the target items retained most of the source language words.

5.4 RECOMMENDATIONS

The following recommendations are thus made:

- The translation process should follow an acceptable terminology procedure that adheres to the orthography.

- Xitsonga Lexicographers should revisit their work and strive for the development of technological and scientific vocabulary of African language by staying informed of emerging international developments in all fields and translate those forms from a language of transit into a mother tongue equivalent.

- Future Xitsonga lexicographers should consult related sources in order to establish how others approached a similar situation.

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