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Measuring Lexical Equivalence

Between Languages

by

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Lexical equivalents are words that have the same meaning
but belong to different languages. Because of the
anisomorphism between languages, it is usually thought
that such equivalents are rather rare outside the realm of
scientific terminologies. Nonetheless, lexical
equivalence is at the heart of the bilingual
lexicographer's task; and, even though translation is not
necessarily syntax-preserving, lexical equivalence plays
an important role in the translation process. Although
extensive studies have been carried out in the domain of
contrastive semantic analysis, stressing the anisomorphism
between languages, there is still room for empirical
research in this field.
    This research was designed to provide a non-question-
begging systematic way of establishing lexical equivalence
between languages. The hypothesis formulated is:
        It is possible to develop a systematic non-
        question-begging method of empirically testing the
        equivalence of two words in two different languages.
As the desired method is to be used to decide whether two
words have the same meaning, the three terms `word',
`sameness' and `meaning' are defined within the context of
this study. Furthermore, a practical way of representing
word-meaning which facilitates comparison without
resorting to any question-begging device is proposed. An
analogy is drawn between synonyms and equivalents and a
systematic method of establishing synonymy proposed by Roy
Harris is adapted to fit equivalence.
    A pilot study was conducted, using a small vocabulary
subset expressing emotions in French and in English, in
order to refine the method proposed. The method was then
applied to three bilingual (English/French) corpora.
    The objective of the practical application within the
framework of this research was not to draw conclusions
about specific subsets of the vocabularies of French and
English; rather, it was to find a workable empirical
method of measuring lexical equivalence. The study found
that there seems to be evidence for the hypothesis: that
the method can measure the degree of equivalence between
two potential equivalents. It also shows that the method
exhibits certain limitations. These limitations are
analysed and a revised method is proposed.
    The contributions which the proposed method can make to
translation and to bilingual lexicography are outlined,
and the possibilities it presents for further research are
summarized.

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Chapter 1: Introduction

1.1. Purpose of the study

The aim of the translator is to provide as "good" a translation as possible, i.e. to preserve the meaning of the original as far as possible in spite of the constraints of the target language. Zgusta (1971:296) points out that "the translator is not obliged to produce a word-for-word translation". Indeed, as stressed by translation theory, translating involves a lot more than replacing a word of the source language by a word of the target language. However, finding the *mot juste* is often at the centre of the translator's preoccupations. Although this is a controversial issue (discussed in 2.1.), lexical equivalence represents one of the main practical aspects of the process of translating. To help him in his endeavour, the translator has at his disposal a bilingual dictionary which, in some cases, suggests possible equivalents that can be immediately inserted into a sentence in the target language. However, the dictionary does not always provide an appropriate answer. It is then usually felt that intuition plays a major role in the task of finding an equivalent, but the fact remains that the translator often undertakes a great deal of reflexion and research to make the right choice. The comparison of the meaning of words is part of this activity. The purpose of this study is to find a systematic, non-question-begging method of comparing word-meanings across languages. An attempt is made to

represent lexical meaning in a way that facilitates comparison.

1.2. Scope of the study

"Le traducteur [...] part du sens et effectue toutes ses opérations de transfert à l'intérieur du domaine sémantique" (Vinay and Darbelnet 1977:37), i.e. translation is essentially meaning-based. Therein lies the main reason why translatability is the subject of so much controversy. Part of the difficulty is deciding what kind of relationship exists between thought and language. Indeed, if it were to be argued that language is "the shaper of ideas" (Whorf 1956:214), the way in which the world is seen by speakers would be dependent on the language they speak and translation would be very difficult, if not impossible. At the other extreme, there is Katz's effability principle, which he states as follows (1978:209): "Each proposition can be expressed by some sentence in any natural language".

In Katz's terminology, propositions are abstract objects the tokens of which are thoughts (1978:217). His principle, then, clearly implies that language is at the service of, and is optimally adapted to, thought. Furthermore, effability entails intertranslatability (Katz 1978:218-219), since if there is any proposition that can be expressed in one language, but not in another, effability is false. In other words, the effability principle would ensure the success of the

Exact Translation Hypothesis as expressed by Keenan
(1978:157): "Anything that can be said in one natural
language can be translated exactly into another
language". However, this hypothesis is shown to fail by
Keenan himself (1978) and by most literature on
translation studies which tends to concentrate on cases
where translation is not meaning preserving. Katz's
position, for instance, is diametrically opposed to that
of Quine (1953, 1960). Quine rejects effability, noting
that "it is not clear even in principle that it makes
sense to think of words and syntax as varying from
language to language while the content stays fixed"
(1953:61). For Quine, "basic differences in language are
bound up, as likely as not, with differences in the way
in which speakers articulate the world itself into things
and properties, time and space, elements, forces,
spirits, and so on" (1953:61). This opinion is largely
shared and illustrated by Nida (1945), Jakobson (1959),
Mounin (1963), Catford (1965) and Vinay and Darbelnet
(1977), to name but a few.

In any case, the question of translatability remains
a theoretical one; it will probably cause a lot more ink
to flow and lies beyond the scope of this study.
However, translation, as a human activity, does exist and
its feasibility can hardly be called into question. The
limitations to translation found on the theoretical level
are overlooked in practice as they are not crucial to the
communication process. What theorists call translation

does not correspond to the practical criteria of a good translation.

This study concentrates on a restricted practical aspect of translation, i.e. the comparison of the meaning of words across languages. It deals with the contrastive semantic analysis of words; it is not concerned with the fact that translation is not syntax-preserving. It is an attempt to find a workable method of measuring the degree of equivalence between two words of two different languages.

1.3. Research plan

1.3.1. Need for the research

To justify engaging in a research project about comparing word-meanings across languages, it is first necessary to verify that there is a practical use for such a method. The first part of Chapter 2 (2.1.) shows that lexical equivalence, omnipresent in translation theory, plays an important role in the translation process.

The task of the bilingual lexicographer is not easy because of the anisomorphism between the vocabularies of different languages (see 2.2.). Although extensive studies have been carried out in the domain of contrastive semantic analysis between French and English, stressing the differences between the two languages, there is at the moment, as Chapter 2 demonstrates (2.3.),

no satisfactory method to measure the degree of equivalence between two words. Meaning differences found on the lexical level have been so far studied subjectively through intuition. A need therefore emerges for an objective systematic method of measuring lexical equivalence, for a tool to test hypotheses that such a word in English, say, has the same meaning as its potential equivalent in, say, French.

1.3.2. Hypothesis

The hypothesis formulated can be expressed as follows:

> It is possible to have a systematic non-question-begging method of empirically testing the equivalence of two words in two different languages.

1.3.3. Definition of terms

Since the principle of this research is to be scientific, it is necessary to define clearly the boundaries of the field of study and the terms used. This is the subject of Chapter 3. The analysis in question consists in deciding whether two words have the same meaning; therefore the three terms to be defined precisely are : `word', `sameness' and `meaning'. Furthermore, a practical way of representing word-meaning which facilitates comparison without resorting to any question-begging device is proposed (3.4.3.). The choice

made is not a theoretical commitment but is only dictated by the practical aim stated above.

1.3.4. Choice of a method

Chapter 4 outlines the proposed empirical method of comparing word-meanings across languages. Procedures and devices used in the descriptive analysis of one language can prove useful when the investigation is carried out across languages. An analogy is drawn between synonyms and equivalents and a systematic method of establishing synonymy proposed by Roy Harris (1973) is adapted to fit equivalence.

1.3.5. Application

It is established in Chapter 4 that to compare word meanings the bilingual lexicologist has at his disposal three kinds of informants:

(1) speakers of language 1

(2) speakers of language 2

(3) speakers of both language 1 and language 2.

A statistical formula is used to determine how large the sample of informants has to be to remain below the 0.05 significance level commonly used in social science research.

The aim of the empirical research is not to analyse a specific subset of vocabulary but to demonstrate that the method is valid and useful, and could be used for more extensive analyses.

The method proposed is based on the principle that to be scientific a study must be empirical; it must be possible to test and verify the statements made. This method is tested by using it, as described in Chapter 5, to study the anisomorphism between English and French. A pilot study is conducted, using a small vocabulary subset expressing emotions in French and English, in order to identify any practical problems that might arise. As Harris's method of establishing synonymy was not empirically tested, some practical problems remained after it was adapted to measure equivalence. Therefore, following the results of the pilot study, the methodology and the measurement instrument are refined. The method is then applied to three corpora:

- corpus of the first empirical study: higher education;

- corpus of the second empirical study: the vocabulary subset of the pilot study;

- corpus of the third empirical study: a few pairs of potential equivalents representative of particular phenomena.

1.3.6. Conclusions and recommendations for further research

Finally, Chapter 6 draws conclusions regarding the method proposed. Although the results obtained in Chapter 5 exhibit face validity (6.1.), the limitations of the method, both theoretical and practical, are discussed (6.2.). A critique of the method emerges (6.3.) and a solution is proposed (6.4.) to solve various practical problems. Furthermore, the usefulness of the method in its revised format is anticipated (6.5.). The contributions the method can make to the fields of translation and bilingual lexicography are envisaged. Now that the method is finalized, it would be of interest to use it in further research (6.6.): to study problematic cases of lexical equivalence; to compare the meanings of synonyms; and, to attempt to analyse the role of the context in the perception of word-meaning. Finally, in order to establish the extent of the usefulness of the method, the percentage of cases where literal translation is possible between two given languages could be measured.

Chapter 2: Lexical Equivalence

2.1. Lexical equivalence and translation

2.1.1. Introduction

Lexicography , the technique of dictionary-making, is a practical activity that is at least three thousand years old (Hartmann 1983b:5), but it is only in the 16th century that the first attempts were made to describe vocabulary in a systematic way. According to Cohen (1962:498-499), these attempts were brought about by cultural needs and were comparative in nature. In France, for instance, Latin was no longer the vernacular language but it was still the language of the intellectuals. There was therefore a growing need for bilingual glossaries. As Anderson (1972:1) states, French-foreign language dictionaries began to appear at the end of the 15th century and in the early 16th century. The modern trend in the discipline of terminology (Rondeau 1984:73) stresses that the best methodology in comparative lexicography consists in describing the vocabulary of each language independently and systematically first, the comparison coming later as a final step. Though the bilingual dictionary is now viewed as an appendage of the monolingual, historically these roles are reversed (Wiezell 1975:132): bilingual dictionaries made their appearance before the monolingual types. In this connection, two points should be stressed. First, the bilingual dictionary (the repository of interlingual equivalents) is not the

product of a highly developed theory but rather a
practical answer to two precise needs : to preserve the
threatened usage of dead languages and to facilitate the
acquisition of living ones. Second, these requirements
involved the necessity to translate. Now, although
translation theory went through various stages during its
history (e.g. the perennial debate about faithfulness),
nothing suggests that the translation process itself (the
methods and procedures used by translators) was
fundamentally different in the 16th century from what it
is today. These two observations seem to provide
conclusive evidence that lexical equivalence plays an
important role in the translation process. Before trying
to define this role, an attempt will be made to outline
the part played by lexical equivalence in translation
theory.

2.1.2. The place of lexical equivalence in translation theory

Translation theory encompasses several themes that
are still controversial--the effability principle ("Each
proposition can be expressed by some sentence in any
natural language." (Katz 1978:209)) which asserts the
very possibility of translating; the question of deciding
whether translation is an art or a science (e.g. Finlay
1962); and, the feasibility of having a single theory of
translation irrespective of the nature of the text being
translated (e.g. "As I see it, any talk of a single
translation theory [...] is a waste of time." (Newmark

1988b:37)). However, the problem which dominates the history of translation theory is the dichotomy between literal, or word-for-word translation, and free translation. "Le problème de la traduction est souvent posé dans les termes antinomiques: traduction littérale ou traduction littéraire dite `libre'..." (Ladmiral 1979:14).

This dichotomy has been discussed at different times in relation to every main type of text. As Larose points out (1987:5), for early religious translations, only word-for-word renderings were acceptable; literary translation is characterized by an alternation between free adaptation (cf. the "Belles infidèles" of the 17th century) and a strict adherence to the form of the source language (cf. the translators of the 19th century). Finally, "pragmatic" texts, to use Delisle's terminology (1984:22) ("Ceux qui servent essentiellement à véhiculer une information et dont l'aspect esthétique n'est pas l'aspect dominant"), have constituted the bulk of the translation practised throughout the world since the 1950s, when information came to be exchanged worldwide in every field; the predominance of these texts has coincided in time with the incorporation of the findings of discourse analysis into the translation process (e.g. Delisle 1984) and the insistence that the translator must translate the text, not the words.

Furthermore, since the middle of the 20th century, when for the first time translation was considered as a

discipline and studied as such, this dichotomy between literal and free translation has been referred to in many different ways. For Nida and Taber (1969:22), for instance, it is the distinction between formal correspondence (which "focuses attention on the message itself, in both form and content") and dynamic equivalence (based on the principle of equivalent effect); for Newmark (1988b:38-56) the difference between communicative translation ("which emphasizes the `force' rather than the content of the message") and semantic translation (which stays close to the source text); and, for Ladmiral (1979), it is the separation of translation theoreticians into two groups--the *sourciers* (who put emphasis on the form of the source language) and the *ciblistes* (who advocate freer translation).

This dichotomy is also at the centre of the controversy between the comparatists (e.g. Vinay and Darbelnet), who compare translated texts after dividing them into translation units, and the textologists (the ESIT School of Paris with Seleskovitch, Lederer, Delisle, etc...) who insist that translation does not involve units of this kind but whole texts. It is interesting to note in passing that no statistical study has ever been conducted to establish how often literal translation is in fact possible between two languages. The data used by Newmark (1988a:68) in that respect is only very limited. Such a study would certainly have important implications for the theory of translation.

To show that lexical equivalence is omnipresent in translation theory, it is not necessary to go into the detail of each of these views, nor is it necessary to decide whether the literal/free distinction has any validity. When word-for-word translation is advocated, it is obvious that lexical equivalence plays a key role in the translation process. But it is interesting to note that even those who insist that what should be translated is the text and not smaller units and who vigorously attack what they call (Ladmiral 1979) *terminologisme* or *idéologie lexicaliste*, always go back to discussing the translation of words when they want to show a concrete example of the translation process (see e.g.Ladmiral (1979:219) or Delisle (1984:62)). They insist on a different method of translating involving text-sized units but never show concretely how to do this except through lexical equivalence. Delisle called his book *L'analyse du discours comme méthode de traduction*, but the only step in the translation process, as he describes it, that is developed in any concrete way and at any length is the *exégèse lexicale* (1984:101-112). The *organicité du texte*, which, according to the theory he embraces, would have been expected to be the most important step, if not the only one, in his model, is hardly touched upon; in fact, the use of discourse analysis as a translation method is mentioned on only one page (142) and the discussion consists only of questions that the translator

must ask himself before he starts translating; nowhere does Delisle explain what form the method would take.

It is then possible to say that problems of lexical equivalence are at the heart of all theoretical discussions, regardless of the perspective adopted (e.g. comparative versus textological or translation considered as a product (e.g. Vinay and Darbelnet) versus translation considered as a process (e.g. Delisle)). Once again, this indicates that lexical equivalence plays an important role in the translation process. The next section will attempt to define this role.

2.1.3. The role of lexical equivalence in the translation process

As mentioned above, recommendations about how to translate particular words predominate in most theoretical discussions; the notion of lexical equivalence, however, is not explicitly mentioned in any of the translation models proposed (see e.g. Nida and Taber (1969:33); Moskowitz (1973:73); Pergnier (1980:60); Delisle (1984:85); and Newmark (1988b:18)). This reluctance to acknowledge the role of lexical equivalence probably stems from the fact that translation theory always stresses that "translation involves far more than the replacement of lexical and grammatical items between languages." (Bassnett-McGuire 1980:25). The process may involve discarding the basic linguistic elements of the source-language text; it is not necessarily syntax-preserving: translating means more than simply

transcoding. The term *transcodage* "scornfully [used] by
the *ESIT* (*Ecole supérieure d'interprétation et de
traduction*) of Paris" (Newmark 1988a:31) is defined as
follows by B. Harris (1988:94): "direct passage from an
SL expression to its translation, possibly with
structural transformations but without integrating the
content with the translator's *bagage cognitif*, i.e. his
extra-linguistic knowledge." Two factors seem to obscure
the role of equivalence in the translation process: (1)
dissimilarities of form, and (2) the distinction between
"linguistic" and "contextual" meaning.

2.1.3.1. Form and lexical equivalence in the translation process

As R. Harris (1970:465) states, "to give by
translation the meaning of a word in a remark cannot be
equated with giving part of a language-expression which
translates that remark, or with finding what has been
called a `textual translation equivalent'. In `He swam
across the river'[a well-known example first used by
Vinay and Darbelnet in 1958 to illustrate the phenomenon
of *chassé croisé* between English and French (1977:58)],
the meaning of the utterance-word `across' might
satisfactorily be given by French *à travers*. But no such
preposition occurs in the sentence which would normally
translate that remark, namely: *il traversa la rivière à
la nage.* This raises the question, then, whether lexical
equivalence has any raison d'être. The answer to this
question is undoubtedly yes. Even if translation is

rarely word-for-word, lexical equivalence is indeed
necessary for translating. While the translator may
claim that when he translates into French the English
expression `to swim across', the linguistic equivalence
of à *travers* and `across' never enters his mind, this is
only possible because the equivalence in this instance is
between `to swim across' and *traverser à la nage*,
not between `across' and à *travers*. Rather than
invalidate lexical equivalence as part of the translation
process, the above-mentioned example shows that the unit
involved in lexical equivalence does not necessarily
correspond to the orthographic word. The status of the
word has been discussed at length in linguistics (see
3.3.). Conversely, in translation, this status is taken
for granted; since the translator always works on a
written text, the word is naturally defined as a textual
unit between two spaces. The problem in translation is
to decide what constitutes a translation unit.
Translation theory has indeed been prolific on this
question (Larose (1987:218) found in the literature nine
different names for the translation unit). The
characteristics of the unit involved in an
interlinguistic analysis will be explained in detail in
Chapter 3 (3.3.), but at this point the definition given
by Vinay and Darbelnet (1977:16) will suffice, as
subsequent discussions on this topic (e.g. Tatilon 1982)
have modified their classification or proposed another
one but not questioned the basic definition. This

definition is as follows: "le plus petit segment de
l'énoncé dont la cohésion des signes est telle qu'ils ne
doivent pas être traduits séparément". Theoretically,
then, these units could vary in length from a single word
to a whole sentence in the case of idioms. This is an
important fact to consider when establishing the role of
lexical equivalence in the translation process.

2.1.3.2. Linguistic meaning and lexical equivalence in the translation process

Since its origin in 1540 with Etienne Dolet (Larose
1987:6), translation theory has compared source-language
texts with target-language texts. Lexical equivalence is
accordingly viewed as the result of a comparison that
takes place after the act of translation itself (see e.g.
Seleskovitch's preface to Delisle 1984:10). On the
lexical level, then, the literal/free dichotomy takes the
form of a distinction between, to use Delisle's
terminology, the linguistic meaning (*signification
linguistique*) and the contextual meaning (*sens
contextuel*) of a word. To justify this separation,
theorists invoke the Saussurean opposition between *langue*
and *parole*. As Delisle (1984:58) explains, "la
signification [linguistique] d'un mot est ce à quoi il
renvoie dans le système abstrait de la langue. Tout mot
peut avoir plus d'une signification. Ces diverses
`acceptions' sont perceptibles hors contexte, c'est-à-
dire indépendamment de toute énonciation concrète, et
c'est pourquoi il est possible de les compiler dans les

ouvrages lexicographiques." The *sens contextuel* of a
word, on the other hand, "est ce à quoi un signe renvoie
lorsqu'il s'insère dans un énoncé concret, dans une
séquence linguistique issue d'un acte individuel de
parole." In other words, for each translation unit, the
translator would have at his disposal a linguistic
equivalence (*équivalence de signification*) that he could
usually find in the bilingual dictionary and a contextual
equivalence (*équivalence de sens*) that he would have to
create himself in the cases when the linguistic meaning
and the contextual meaning do not coincide. According to
Delisle (1984:69), when there is such a coincidence, it
is due to "an accident". This term is in fact
inappropriate since, if the concordance were fortuitous,
it would occur randomly and it does not; it is a function
of whether the context in question is the same as the
context considered by the lexicographer.

The difference thus established between linguistic
equivalence (recorded in the bilingual dictionary) and
contextual equivalence (the translation of the
translation unit in an actual context) is very useful
pedagogically and practically, but it is not justifiable
on the theoretical level. In translation, only one
meaning is involved at any one time, the meaning in the
context that is being translated. Under these
conditions, then, the linguistic meaning is as context-
bound as the contextual meaning. It is the most
frequently used meaning of the translation unit; it is

not out of context, but it corresponds to the most frequently found context. As Saussure (1973:30) expresses it, the *langue* is "un trésor déposé par la pratique de la parole dans les sujets appartenant à une même communauté." When a lexicographer establishes the linguistic meaning of a word, his first task consists in placing the latter in as many contexts as possible and in isolating its discrete meanings. For practical reasons--e.g. traditionally lack of space, although with modern technology this obstacle is removed--he has to give precedence to the most frequently used meanings over the others. This is why, for instance, he will give `*compréhensif*' as the equivalent of `sympathetic', but he will not include `*réceptif*' which would be used, as stated by Delisle (1984:62), in the translation of a sentence such as "While I am more than sympathetic with the recommendation of the social worker, we have to recommend that...". However, these practical constraints do not give to these meanings a particular status on the theoretical level in the context of translation. In the *langue,* words have only potential meanings ("*des virtualités de signification*" to use Lederer's (1973:8) expression) and the only way to represent the linguistic meaning of a word would be to have an exhaustive list of all its potential meanings. Although this list is not infinite (*pace* Delisle (1984:134) or Larose (1987:14)) since it is possible to communicate, it is not feasible to enumerate all the meanings in practice. Nonetheless,

in the context of the theory of translation, the meaning of a word is always both linguistic and contextual. On the one hand, all the meanings of a word exist potentially in the *langue*, otherwise it would be impossible for several speakers to understand the same sentence. On the other hand, all these meanings are specific to the context in which they appear. While the *langue/parole* distinction is crucial to the work of the lexicographer, it is also important in the translation process: the subject matter of translation is always *parole*, but translation would not be possible without the contribution of *langue*.

2.1.3.3. Place of lexical equivalence in the translation process

Defined as a sameness of meaning in a particular context between two translation units belonging to two different languages, lexical equivalence is at the centre of the translation process as is shown in figure 1. It is part of the translator's *bagage cognitif*. It is to be noted that the table (figure 1) imposes a certain order in the three steps of the process, but, as Delisle (1984:78) points out, "la réflexion avance par étapes successives, mais sans nécessairement suivre une trajectoire rectiligne."

Figure 1 : Place of Lexical Equivalence in the Translation
          Process

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                    │ a sentence written in   │        o
                    │ the source language     │        m
                    └─────────────────────────┘        p
                                 │                      r
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      ┌──────┬──────────┬────────┴──────┬──────────┬───┐ h
      │      │          │               │          │   │ e
  ┌───┴──┐┌──┴───────┐┌─┴─────────┐┌────┴──────┐┌──┴──┐n
  │context││grammatical││potential  ││extra-     ││style│s
  │      ││and       ││meanings of││linguistic ││     │i
  │      ││syntactical││the words  ││knowledge  ││     │o
  │      ││structures of││         ││of the world││    │n
  │      ││the sentence││          ││           ││     │*
  └───┬──┘└──┬───────┘└─┬─────────┘└────┬──────┘└──┬──┘
      │      │          │               │          │   t
      │      │          │               │          │   r
  ┌───┴──────┴──────────┴───────────────┴────────┐ │   a
  │ decomposition of the sentence into translation units │ │  n
  └───────────────────────┬───────────────────────┘ │   s
                          │                          │   l
            ┌─────────────┴────────────────┐        │   a
            │ establishment of lexical      │────────┘   t
            │ equivalences                  │            i
            └─────────────┬─────────────────┘            o
                          │                              n
  ┌──────────────┐        │        ┌──────────────┐
  │grammatical and│       │        │ choice of    │      a
  │syntactical   │        │        │ appropriate  │      n
  │structures of │        │        │ style        │      a
  │the target    │        │        │              │      l
  │language      │        │        │              │      y
  └──────┬───────┘        │        └──────┬───────┘      s
         │                │               │              i
         │                │               │              s
         │                │               │              *
  ┌──────┴────────────────┴───────────────┴──────┐
  │ construction of sentence in the target language │    a
  └───────────────────────────────────────────────┘    c
                                                         t
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```

Stage 1: A source-language sentence

According to Catford (1965:vii), "Since translation
has to do with language, the analysis and description of
translation processes must make considerable use of

categories set up for the description of languages". One
of these categories is the sentence. It is usual to say
that when a text is translated, the translator proceeds
one sentence at a time, without losing sight of the text
as a whole. Even when it is advocated that one always
translates texts (e.g. the *Ecole supérieure
d'interprétation et de traduction* of Paris), "Dans la
pratique, il est plutôt question de traduction `phrase à
phrase' dont l'objectif est de parvenir, de proche en
proche, à une traduction `texte à texte'." (Larose
1987:23). This opinion is also shared by Halliday
(1962:31-32), Pergnier (1980:134-135) and Newmark
(1988a:30). As will be explained in the translation
analysis stage, in the translation process the sentence
is decomposed into translation units before it can be
translated. These units have been studied at length, for
instance, by Vinay and Darbelnet (1977, *passim*) and by
Chuquet and Paillard (1989:179-224).

Stage 2: Comprehension

Both theorists and practioners agree that,
obviously, the first step of the translation process
consists in thoroughly understanding the meaning of the
source language text. As Moskowitz (1973:74) explains,
to ensure the invariance of the information, "le
traducteur doit comprendre le message dans la langue
source, faute de quoi il ne pourra pas émettre un message
équivalent et compréhensible dans la langue cible." An

attempt is made below to list the main factors that are
involved in this admittedly mysterious mental process:

(1) the context (the context will be both linguistic
and situational);

(2) the grammatical structure of the sentence;

(3) the style;

(4) the extra-linguistic knowledge of the
translator; and,

(5) the potential meanings of the words from which
it will be necessary to choose the appropriate
one.

Stage 3: Translation analysis

In the same way that, as Wiggins (1971:18) points
out, "no speaker learns to produce or understand the
infinite number of sentences he can produce or understand
by learning their senses one by one", no translator
learns to translate the infinite number of sentences he
can translate by learning their translations one by one.
Since there is an infinite number of, for example,
English sentences, translations of them can be produced
only by a method of systematic decomposition of the
source-language sentences into the basic structures and
components from which they were built up in the first
place and, except in rare cases when the sentence is
translated as a whole (e.g. idioms), each component will
be translated separately. This does not imply that the
translator will translate word for word with the help of

a dictionary, but that he will thoroughly grasp the meaning of each translation unit and will find for it not a formal but a semantic equivalent in the target language - whether it is a literal translation, a modulation, a transposition, etc. In other words, translation is possible only because there are in the target language equivalents to the translation units of the source language.

Stage 4: Reformulation

The last step of the translation process consists in reformulating the message of the source language sentence into a target language sentence. To perform this task, the translator will use the lexical equivalences that he has established and take into account the grammatical structure of the target language and the style chosen to match that of the source language text.

2.1.4. Conclusion

Stressing the importance of the role of lexical equivalence in the translation process does not mean viewing a language as a nomenclature (a notion that would imply that each word has an equivalent in the other language) since the delimitation of the translation units is not dictated by formal constraints but by semantic criteria. Nor does it imply reducing translation to merely transcoding. In the same way that, until recently, translation was viewed by theorists as a

product rather than as a process, there is a tendency to consider lexical equivalence as a fixed equation recorded in the bilingual dictionary, but within the translation process it is in fact an exegetic activity as described for instance by Delisle (1984:101-105). In this activity, words are not studied separately from the message but as part of it. Furthermore, recognizing the preponderant role of lexical equivalence may be a way of bridging the gap between the two traditional poles - literal and free translation. Indeed, lexical equivalence, as defined above, conforms to Cauer's principle that Newmark (1988b:12) quotes as his first rule of thumb: "The translation should be as literal as possible and as free as necessary." In this perspective, the translator does not translate word for word, nor does he totally ignore the form of the source language. He must (1) delimit the translation units; (2) determine with precision what each of them brings to the meaning of the sentence; and (3) express this contribution by an equivalent in the target language. This process does not imply that the equivalents have the same form in the target language as in the source language; there is not necessarily, for instance, any concordance between grammatical and lexical devices. As Delisle says (1984:68), "La justesse d'une équivalence se mesure à l'adéquation des concepts à raccorder, non à la similitude ou à la dissemblance des formes qui les expriment." Nor does this perspective imply that there

is only one possible solution to a particular problem, since the fact that synonymy exists in the target language is not questioned.

As explained earlier, then, two factors seem to obscure the role of lexical equivalence in the translation process: (1) the dissimilarities of form and (2) the question of the most frequently used meaning. The translation unit does not have the same boundaries as an orthographic word and does not always have a similar form in another language. Furthermore, words are far more polysemic than any dictionary could ever acknowledge. Nevertheless, as an exegetic activity, the establishment of lexical equivalence is at the heart of the translation process. As Newmark (1988a:73) states: "... we do translate words, because there is nothing else to translate; there are only the words on the page; there is nothing else there."

2.2. Lexical equivalence and lexicography

2.2.1. Introduction

The bilingual dictionary is the repository of interlingual equivalents. The main task of bilingual lexicographers is therefore to find semantically equivalent lexical units. This task is described, for instance, by Gak (1970:105): "Les rédacteurs des dictionnaires bilingues cherchent à cerner, avec le plus de précision possible, la signification du mot-entrée,

à former une équation sémique dont le terme de gauche est
le mot à traduire et celui de droite la traduction", or
by Zgusta (1971:294): "The basic purpose of a bilingual
dictionary is to coordinate with the lexical units of one
language those lexical units which are equivalent in
their lexical meaning." Therefore, lexical equivalence
does not only play a crucial role in the translation
process, it is also at the centre of the bilingual
lexicographer's work.

2.2.2. Bilingual lexicography and theoretical issues

Weinreich (1975:26) says that "[...] lexicography
[...] uses many methods, none of which have been fully
explained. The indifference which lexicography displays
toward its own methodology is astonishing". This
statement may be something of an exaggeration since in
France, for instance, the *Centre d'étude du vocabulaire
français*, a research centre for studies in lexicology and
lexicography, was established at the University of
Besançon in 1957 under the directorship of B. Quémada.
Matoré's work (1953) is also of great significance in
this field. However, their findings have not had a
direct influence on actual dictionaries, and research
into bilingual vocabularies is not their primary concern.
Similarly, Tournier's research (1985, 1988, 1991) gives
an account of the principles governing English word
formation but does not explain the methodologies used in
lexicography. In English, Hiorth's studies (1955) and

Zgusta's manual (1971) constitute inquiries into the
fundamental concepts of lexicography but works of this
nature are rare, indeed Landau's *Dictionaries* (1989) is
deemed to be the first comprehensive book on English
dictionary-making. As Hartmann (1983b:8) says, bilingual
lexicography is one of the most lively areas of
dictionary production, but here, more than anywhere in
lexicography, there is an acute shortage of theoretical
models. Word meaning is an integral part of the bilingual
lexicographers' work and it could be assumed that they
are interested in research in the field of semantics.
Nevertheless, this is not usually the opinion of the
bilingual lexicographers themselves, as Zgusta (1971:24)
points out. As will be shown later (2.4.2.), their
approach to meaning is very practical. The
lexicographer's work is geared above all to users.
Although he may spend much time developing his
methodology, this methodology will not be explicit and
will be based on who the users are. The typology of
bilingual dictionaries established by Zgusta (1971:298-
307) shows that the form of the dictionary is indeed
dictated by users. Every lexicographer is conscious of
the user's importance (e.g. Martin 1975:154). This is
reflected, for instance, in Malone's (1975:111)
definition of a bilingual dictionary as a two-way
translation aid. Most works on lexicography, therefore,
tend to be normative, to instruct lexicographers on the
optimal solution to practical problems. Even Zgusta

(1971:20), whose stated main aim is to analyse theoretical issues, is no exception to this rule. In her discussion of translation theory, Bassnett-McGuire (1980:37) explains that its purpose "is to reach an understanding of the process undertaken in the act of translation and not, as is so commonly misunderstood, to provide a set of norms for effecting the perfect translation". The same type of confusion seems to exist in lexicography, monolingual as well as bilingual. Yet, as Zgusta (1971) points out, the theory of lexicography should be more than a generalized editorial instruction or an enunciation of the technical rules of compilation.

The purpose of the present study is to attempt to find a method for measuring equivalence which will have a sound theoretical basis, not to ascertain how the needs of the dictionary-user guide the dictionary-maker. As a consequence, only a small amount of the existing research devoted to bilingual lexicography will be relevant.

2.2.3. Theoretical framework of dictionary equivalents

The role of the bilingual dictionary is twofold, once again depending on who the user is. If the source language is not as well known as the target language, the user will consult the bilingual dictionary to find out or confirm the meaning of a word. However, most often, a bilingual dictionary will be used to find a word in the target language which will be able to replace exactly a word of the source language within a given

context, even though, as shown in 2.1.3.2., the
dictionary cannot always provide a satisfactory answer.

In the first case, an explanatory equivalent, to use
Zgusta's term, will suffice. This type of equivalent
describes the meaning of the lexical unit in question by
an explanation which is not dissimilar to the definition
of a monolingual dictionary but is worded in the target
language. The example cited by Zgusta is taken from a
Latin-English dictionary: *"consul,is,* m.: the highest
executive dignitary of the Roman republic" (Zgusta
1971:295). Explanatory equivalents are given when there
is no equivalent lexical unit in the target language.
Whether they have a place at all in a bilingual
dictionary has been a very controversial issue among
lexicographers for a long time. Zgusta (1971:322-323)
discusses the problem at length. However it lies beyond
the scope of this study, which is concerned with lexical,
not notional, equivalence. Explanatory equivalents can
be very useful in the decoding phase (see Nida and
Taber's model (1969:33)) of the translation process, but
what a user usually looks for in a bilingual dictionary
is what lexicographers call a translational equivalent,
that is an equivalent which can be inserted as such into
texts of the target language. While a monolingual
dictionary circumscribes the meaning of words in their
different senses, using definitions, explanations or
synonyms (Rey-Debove 1966), a bilingual dictionary

provides equivalents in another language; it states
meaning equivalence.

Leaving aside practical considerations, lack of
space for instance, the problems that the bilingual
lexicographer has to solve stem from the fact that
different languages are self-contained systems exhibiting
only limited isomorphism with one another. It is a well
recognized fact (Mounin 1963:ch.IV) that the semantic
structures of two languages rarely correspond perfectly
since each language segments reality in a unique way.
Language is never neutral in its relationship with
reality (Lyons 1977:259-260). Whether language
determines the perceived shape of the world as is
suggested by the Sapir-Whorf hypothesis (Whorf 1956) or
vice versa is probably , as Palmer (1981:32) expresses
it, a "chicken and egg problem". It is a problem, for
instance, which is not solved by Catford's (1965)
distinction between two types of untranslatability which
he terms linguistic and cultural. Although his argument
applies to text, it is easy to extrapolate it and apply
it to lexical units. On the linguistic level, then,
untranslatability occurs when there is no lexical
substitute in the target language for a word of the
source language (there is, for instance, no French verb
to translate the English verb 'to bake'). Linguistic
untranslatability is due to differences between the
source and the target languages themselves, whereas
cultural untranslatability is due to the absence in the

target culture of a relevant situational feature for the
source language word (see, for example, the Latin word
`consul', cited above, which has no equivalent in
English). This distinction is of interest on the
theoretical level, but on the practical level, it has the
same consequence for the translator - a lack of
equivalence. It is to be noted, however, that problems
arising from linguistic untranslatability are probably
easier to solve than those arising from cultural
untranslatability since, if the reality described by the
source-language unit exists in the culture of the target
language, it may be expressed by a unit of a different
size (to bake=cuire au four). At all events, the
important principle to retain from the Sapir-Whorf
hypothesis is that "No two languages are ever
sufficiently similar to be considered as representing the
same social reality. The worlds in which different
societies live are distinct worlds, not merely the same
world with different labels attached" (Sapir 1956:69,
cited in Bassnett-McGuire 1980:13).

Culture-bound words pose very difficult problems for
the lexicographer. A well-known example is that of the
many different words that Eskimo languages have to denote
snow (first noted by Boas 1911). It would be,
nonetheless, completely wrong, as Zgusta (1971:295)
points out, to limit the concept of anisomorphism to the
culture-bound words only. On the contrary, anisomorphism
can exist in all lexical units since the semantic systems

of two languages are rarely identical, as has been stated
above and stressed by translation studies (e.g. Nida
1945; Mounin 1963; Vinay and Darbelnet 1977). It would
also be a mistake to think that anisomorphism can happen
only if the two cultures are vastly different. This
situation can arise between any two languages, even when
the two cultures overlap in most areas: there is nothing,
for instance, in Europe similar to the American drugstore
and there is hence no suitable equivalent in the European
languages; `confit d'oie' in French or `corned beef' in
English are also culture-specific expressions. Finally,
a third error would consist in believing that it is only
the difference in the extralinguistic world, the absence
of the particular reality in the other language, which is
the key factor. Even in cases where the extralinguistic
world is identical, the same things are not conceived in
the same way, the lexical units of the two languages are
not different labels appended to identical notions.
There are very few pairs of exact equivalents across
languages; and when they do exist, in the majority of
cases, they are well defined scientific terms. Everyday
language segments reality in a way which is peculiar to
each language. Linguists use various methods to analyse
the anisomorphism which exists between French and
English. These methods will be examined in the next
section.

2.3. **Methods used to measure anisomorphism between languages**

Essentially, four methods are used to study anisomorphism between languages: the comparatist approach, comparison of dictionary definitions, comparison of linguistic contexts, comparison of semantic fields.

2.3.1. **The comparatist approach**

The lexical comparatist approach consists in analysing in detail points of difference between expressions of two languages and drawing comparative generalizations about the vocabularies of these two languages. This approach takes as its starting point the forms of the words or expressions concerned, not their meaning. Vinay and Darbelnet (1977) have used this method extensively to compare French and English vocabularies. They assert, for instance (1977:59), that French words are more abstract than corresponding English words: "D'une façon générale les mots français se situent généralement [sic] à un niveau d'abstraction supérieur à celui des mots anglais correspondants. Ils s'embarrassent moins des détails de la réalité". It is through this comparison that they came up with their now famous theory of lexical modulation (1977:88-90) which establishes logical relationships between French and English words (e.g. abstract/concrete, cause/effect, part/whole, etc.).

This method presents certain drawbacks and has been criticized often, especially by the adherents of textology (on this issue see Larose 1987:11-31). The argument is explicitly based on Saussure's theory of the sign (Vinay and Darbelnet 1977:28-30), but completely leaves aside the question of the arbitrariness of the sign. As Mounin points out (1976:231-232), as signs, all words are abstract: "[...] le mot *cheval* autant que le mot *liberté*, si l'on ne confond pas l'opération d'abstraction sémiologique avec les notions d'abstraction psychologique ou philosophique". While it is interesting and informative to compare translation units of two languages with one another, it is very dangerous to draw conclusions about the psychology of a language community from linguistic observation. The example given for `a part for another' modulation (1977:89), `keyhole' and `*trou de serrure*', may indicate that reality was perceived differently in each language when these lexical units were created. However, it would indeed be very difficult to prove that an English person saying `keyhole' today has in mind something different from what a French person thinks of when he(she) says `*trou de serrure*'. While grammar and semantics are often interrelated in a logical way, it would be a mistake to push the argument too far. While `hair' is singular in English, French has a plural noun, `*cheveux*', nonetheless, there is as yet no scientific method to prove Palmer wrong when he says (1981:120), "it is not to

be supposed that there is any difference in the way we look at hair".

In spite of its imperfections, the comparatist approach has great merits since it enabled those who used it to isolate interesting characteristics about both vocabularies. These findings are very useful in translation and neology. As Newmark (1988b:10) expresses it, "Of the literature which applies linguistics to translation procedures, Vinay and Darbelnet are outstanding." Indeed, their work has been the stepping stone from which most research in translation has evolved. Chuquet and Paillard (1989), for instance, take Vinay and Darbelnet's findings as a starting point, and then refine them and incorporate them into more modern research such as Culioli's theories of enunciation. However, the aim of the comparative approach is to identify and itemize the differences that exist between the two languages, not to establish lexical equivalence.

2.3.2. The definitional approach

Definition is the way meaning is expressed in unilingual dictionaries. The limitations of the effectiveness of this way of describing meaning stems from the fact that the descriptive metalanguage is the same as the object language under description. This creates a certain circularity that lexicographers have to accept if they want to be able to carry out their task. In any event, what is relevant to lexical equivalence is

not definition as a way of describing meaning, but
definition as a way of comparing meaning.

Weinreich (1975:27) conducted an experiment in a
monolingual setting. A group of graduate students was
presented with a set of eight synonyms: `crabby, gloomy,
glum, morose, saturnine, sulky, sullen, surly'. All said
they knew the words, and all claimed that no two were
identical in meaning. The students were then presented
with the corresponding definitions from the *Merriam-
Webster New Collegiate Dictionary*, and were asked to
match the terms with their definitions. The results were
poor. Weinreich concluded that dictionary definitions
are not enough to compare word-meaning within a language.
Across languages the problems will be compounded by the
fact that the two definitions will be in two different
languages.

Zgusta (1971) explains that the denotatum (what
words stand for) is a class of things in the
extralinguistic world (as opposed to one thing);
linguists would call this class the extension of the
word. To write a definition it is therefore necessary
for lexicographers to decide which attributes, qualities
and properties different members of the class share.
Zgusta (1971:29) gives the example of the word `table'.
He shows that in deciding whether a piece of furniture
will be called a table, such properties as being made of
wood or of metal, brown or white, cheap or expensive,
etc. are irrelevant. The few qualities or properties

that are relevant are narrowed down to: a flat, roughly
horizontal surface on which other things can be put and
which is supported by one or more legs. These qualities
are called criterial features. They are the criteria
that speakers are applying when they call a piece of
furniture a table. A good part of the lexicographers'
research is concerned with establishing criteriality,
that is with deciding what is criterial and what is not.
What is of importance to the bilingual lexicographer is
that criterial features very often vary from one language
to another; what is irrelevant, non-criterial in one
language can be relevant, criterial in another.
Establishing lexical equivalence through a comparison of
definitions, then, consists in deciding whether the
criterial features are the same in both languages.

Although at first sight this method appears very
useful, it in fact just begs the question of equivalence
which it aims to solve. Let us consider the example of
`armchair' versus `fauteuil'. Collins (1979:77) gives
the following definition of `armchair': "a chair,
especially an upholstered one, that has side supports for
the arms or elbows." Robert (1986:764) defines `fauteuil'
as follows: "siège à dossier et bras, pour une personne."
Without going into a detailed comparison of the two
definitions, it is immediately apparent that there are
differences in the choice of criterial features included
in their respective definitions. However, it seems to be
impossible to decide whether these differences stem from

dissimilarities in the meanings of `armchair' and `fauteuil' or whether they are due to the fact that `chair' is not a perfect equivalent of `siège'. This method, therefore, seems to create an infinite regress and does not provide an adequate way of deciding that two words are equivalent.

2.3.3. The contextual approach

The comparison of two potential equivalents by the contextual method is described by Zgusta (1971:314-315) as follows: "In order to be sure that he indicates real lexical units of the target language, the lexicographer collects contexts which illustrate the whole multiple meaning of the respective lexical unit [...] in the source language, [...] he translates these contexts into the target language and observes whether the prospective shortest possible equivalent can be used in all the translations (producing a sentence of the target language that absolutely conforms to its rules) or only in some of them, or in none."

The importance of the linguistic context in a contrastive lexical analysis has been stressed often, for instance by Halliday and McIntosh: "The part played by the citation [in the bilingual dictionary] is even more essential, if this is possible, than in a monolingual dictionary: not only is the range of contextual meaning of words radically different from one language to another, but so too is their collocational spread"

(1966:34). In his article dealing with the improvement of lexicography, James E.Iannucci (1975) says that though many problems remain to be solved before really efficient bilingual dictionaries can be constructed, the crucial issue of bilingual lexicographical methodology is the problem of meaning discrimination. The solution he proposes is to coordinate the bilingual dictionary with a monolingual dictionary by a system of number references, thus making the information in the monolingual dictionary serve as meaning discrimination for the bilingual dictionary. Indeed, oddly enough, it seems that bilingual dictionaries are useful only to those knowing both languages well, to those knowing the meaning of both words listed as equivalents, otherwise they are just a stepping stone leading to the monolingual dictionary. These are practical considerations which lie beyond the scope of this study; nonetheless, they show that the contextual method tackles three important facets of lexical equivalence: polysemy, connotation and collocation.

Multiplicity of meaning is a very general characteristic of language. Polysemy, or *"bifurcation"* as Darbelnet (1970:94) calls it, must therefore be taken into account when lexical equivalence is established. However, the most important part of the work in that area is done on the monolingual level. Within a bilingual analysis, a word that is polysemic will, naturally, have a variety of equivalents, each corresponding to one of

its meanings (e.g. to land = *débarquer, atterrir*) (see 3.3.4.2.1. and 6.3.2. for a more detailed discussion of this point).

Connotation - any stylistic property of a word - and collocation - the range of application of a word - are also evidenced through linguistic context. They have semantic relevance and are often used to differentiate meaning: `*bouffer*', for instance, will not be the equivalent of `to eat' because they do not belong to the same linguistic register.

The contextual method, then, would seem to be very informative. It is also the only one of the four that proposes a positive way of establishing equivalence. In other words, it does not only point out where the meanings of two words are different, it can also establish that they are equivalent: "If the prospective equivalent can be used in all the contexts and only those contexts, it is an absolute equivalent" (Zgusta 1971:315).

In spite of all these positive attributes, the contextual method raises some important difficulties. It is very similar to the substitution test used to determine whether two words are true synonyms, the disadvantage of which has often been pointed out. This test will always elicit a negative answer because no two words have exactly the same distribution - they do not occur in identical sets of contexts. In fact, as explained in 2.1.3.2., the notion of "absolute

equivalent" has no practical application, since the
translator is looking for a contextual equivalent and a
complete set of possible contexts cannot be isolated. It
could be argued, however, that this method is usable to
compare only one meaning at a time; it would then involve
comparing only two contexts, one in each language. But
one major hurdle would still remain; as it is applied
across languages, this method requires the use of
translation. It is therefore just as question-begging as
the definitional one. It is aiming at providing
translational equivalents, but it presupposes that such
equivalents already exist for all the other words of the
linguistic context in question. Therefore, it involves
an inescapable circularity which makes it unacceptable as
a way of determining whether two words are semantically
equal.

2.3.4. The structural approach

The three methods outlined so far all describe
meaning relations between individual words across
languages. Conversely, what has now come to be known as
the theory of semantic fields, instead of viewing the
vocabulary of a language as a nomenclature, considers it
as a set of structures. It was the German linguist Trier
(1934) who coherently organized ideas that were popular
in the 1930s and created the structuralist school of
thought in semantics. Trier's basic hypothesis could be
summed up as follows (Lyons 1977:250-261; Ullmann

1965:303-309): the vocabulary of a language is made up of
a set of groups of words (lexical fields) organized into
a hierarchy, each group covering a well delimited domain
on the level of notions (conceptual fields); furthermore,
each of these fields, lexical and conceptual, is formed
from units juxtaposed in the same way as the irregular
stones of a mosaic. Trier studied the conceptual field
of understanding in German, as used by mystical writers
of the 13th and 14th centuries. He, then, compared a
single language at two different periods. It is also
possible to use this method to compare the vocabularies
of two languages to see the way in which they segment
reality, the way in which they divide up a particular
field. There are indeed many examples of contrastive
lexical field analysis which show that these semantic
fields rarely coincide.

Different languages have different sets of words,
different semantic structures. The more coherent a
lexical subsystem is, the greater is the necessity to
study the pertinent lexical units not in isolation, but
in their relations within the group. Weinreich (1975:36)
speaks of narrow and wide semantic "spectra". He points
out that languages are lexically rich in domains
associated with cultural themes (e.g. Arabic camels,
Eskimo snow, medieval German chivalry, yiddish poverty).
A famous example in English is the set of words
describing light, while one in French is the set formed
by the different types of bread. According to him,

richness is defined as a high degree of semantic
continuity in sequences of definitions of relatively high
specificity. Naturally, if a rich field in a given
language is compared with a less rich field covering the
same domain in another language, a number of lexical gaps
will be found.

Using this method, Lehrer (1974) studied the
vocabulary of cooking in various languages and showed the
importance of cultural considerations in this field.
Kinship is another lexical field which has often been
compared across languages (e.g. Lounsbury 1956), but the
most widely discussed case of semantic differences
resulting from different conceptions of the same physical
reality is undoubtedly the case of colours. Conklin
(1955) described this field in a language of the
Philippines, Hanunoo, and found in it four basic colour
terms that may roughly be translated as `black', `white',
`red' and `green'. Nida (1964:35) says that there is a
three-colour distinction in some languages in Africa,
four in Northern Brazil, five in Northern Mexico. As
Mounin (1963:75) explains, because light is physically
the same everywhere and the human eye remains the same
for all races, colour terminology is very interesting and
important in contrastive lexical field analysis, since it
is one of the few areas in which it is possible to
compare a linguistic system with a system that can be
delimited in objective physical terms. The fact that the
colour systems of languages differ, in spite of the

natural display of the colours of the spectrum in the
rainbow, proves that the structure of language does not
necessarily mirror that of the world. This conclusion is
not invalidated by the findings of Berlin and Kay (1969).
They argue that colour categorisation in languages is not
random. They claim that there is a universal inventory
of only eleven colour categories, from which all
languages derive eleven or fewer basic colour terms, and
that there is a partial ordering of these categories (if
a language has a certain colour term, it will have
certain other ones). Their theory has been criticized
(McNeill 1972), but whether they are right or wrong, the
fact that colour categorisation is not arbitrary does not
imply that it is identical in different languages.

Contrastive lexical field analysis, then, presents
some distinct advantages. First, if corresponding
lexical subsystems in different languages are compared,
it is easier to see the differences in the way the same
extralinguistic reality is segmented and organized than
if only isolated words are compared. Second, it ensures
that the research on a particular vocabulary is
exhaustive. Third, this method, unlike the previous two,
does not involve any regress or circularity. However, it
also has its limitations. It can be applied only to a
small number of domains. The elaboration of well-defined
many-number lexical sets is more typical of specialized
taxonomies (e.g. the elements in chemistry or the
different species in botany) than it is of language in

general. A second very important inconvenience of this
method of comparison is that, whilst it may appear
objective, nevertheless it is highly subjective. The
intuition of the researcher plays a major role in this
context since he does not have at his disposal any strict
criteria according to which he would classify the words
in a given field. A good example of this subjectivity is
the semantic field of housing which, according to Mounin
(1963:92-93), could be organized in eight different ways,
depending which criteria are used: the shape of the
building, the material it is built with, its function,
its usage, its state, its location, the speaker's
perception of the building, history. Taking these major
drawbacks into consideration, it is possible to see that
contrastive lexical field analysis is not a perfect way
of establishing lexical equivalence.

2.4. Conclusion

A number of major points emerge from this study of
the general treatment of lexical equivalence by
linguists. Translation theorists are reluctant to
acknowledge openly the role of lexical equivalence in the
translation process. Lexicographers seem to be mainly
concerned with the practical problems of what should be
in a dictionary. They take the user into consideration
but they do not seem to have a single systematic way of
establishing equivalence. Lexicographers, semanticists
and specialists in translation studies use mainly four

methods, the advantages and drawbacks of which have been explained. One further general remark about these four methods may be made. Equivalence studies usually point out differences rather than sameness of meaning. As Palmer (1981:100) expresses it, "sameness of meaning is not very easy to deal with but there seems to be nothing inherently difficult about difference of meaning". What is usually of interest to theoreticians is why words are not equivalent. If their methods were to be used in the field of equivalence, it would be necessary to say if two words are not "non-equivalent", they are equivalent. It seems, therefore, that the premise is very often that they are not equivalent, while in fact that should be the conclusion of a practical systematic method of asserting semantic equality between two words belonging to two different linguistic systems. Adopting scientific principles would require a method which assumes that the two words are equivalent, that is the null hypothesis that there is no difference between their meanings, and then tests the truth of this conjecture. Such a method does not exist yet and the aim of the present study will be to try to develop one.

Chapter 3: Definition of Terms

3.1. Introduction

In very broad terms, `equivalence' is generally used to mean `sameness of meaning' across languages. In translation studies, it is stressed that equivalence gives priority to semantic concerns over syntactic ones (e.g. Bassnett-McGuire 1980:23-29); equivalence is a process which renders meaning without necessarily preserving form. The definition given by Vinay and Darbelnet (1977:9) takes this characteristic of equivalence to its extreme: "Equivalence: procédé de traduction qui rend compte de la même situation que dans l'original, en ayant recours à une rédaction entièrement différente. Ex: `the story so far: `résumé des chapitres précédents'." In contrastive lexicology the notion of equivalence applies to words or expressions rather than to sentences, and equivalents are words having the same meaning across languages. In this context, then, establishing equivalence involves comparing the meaning of words in order to determine whether these words are the same in meaning.

It is customary in every science to define the boundaries of its field and the terms used. This holds true not only when the terms are technical and have been specifically coined but also when they are borrowed from everyday language. While linguistics has some specific terms such as `phoneme' or `fricative', it often borrows everyday-language words and gives them a technical meaning (e.g. `transformation'). As a necessary

preliminary, an attempt will be made to define the terms
used in this comparative semantic study.

3.2. Sameness

According to White (1958:194-195), it is possible to
distinguish at least four different kinds of sameness:

"(1) We have various parts of the history of the one
continuous thing, e.g., the same chair moved
into various positions in the room, the same
man we saw yesterday.

(2) We have two or more instances of non-continuous
things, e.g., the same dance step, the same
experiment.

(3) We have two or more coexistent copies of
something continuous, e.g., the same newspaper,
the same curtains, the same make of motor car;
where there may or may not be an exemplar over
and above the copies. (...)

(4) We have at least two continuous things which we
want to say are the same in a given respect,
however different in others. (...) For
example, `You are just the same as your
father', `Women are all the same', `A wrench
and a spanner are the same'."

The notion involved in establishing `sameness' of
meaning is White's `type-4 sameness: "[...] at least two
continuous things are the same in a given respect [...]".
This is indeed the kind of `sameness' found in

equivalence, since two given words are (or are not) the same in respect of X, their meaning. It characterises well the sameness which exists between a word `$w_1$' belonging to a given language $L_1$ and a word `w_2' belonging to another language L_2. However, as White comments himself, when we say that A and B are the same in a given respect, "it is the respect itself that we call the same". It is therefore important at this point to decide under which type the sameness of meaning between two equivalents should be classified, as this choice will influence the way in which meaning will be represented. In the case of equivalence, there is no logical reason why the sameness of meaning could not be White's `type-1 sameness - one and the same object that $w_1$ and $w_2$ share (`object' being taken in a very vague sense and in no way constituting a theoretical commitment as to what `meaning' is). While there is no need intralingually to have two ways of saying one and the same thing, across languages if the same reality exists in both cultures it would appear to be a necessity and it is definitely a possibility (For a more developed account of this argument see 4.2.). As mentioned above, the sameness between the two words `$w_1$' and `w_2' is White's type 4, but whatever word-meaning is theoretically considered to be, the practical way in which it will be described will have to involve White's `type-1 sameness'. If the method is to be objective and non question-begging, its viability will depend on this condition.

Only in the cases where the representation of the meaning of `w$_1$' and `w$_2$' is one and the same object will it be possible to say that `w$_1$' and `w$_2$' are equivalent. It will be necessary to find a way of deciding that two words have the same meaning that will not involve having to equate their meanings. While the expected format of the equivalence equation would be:

$w_1 = X_1$ (representation of the meaning of `w$_1$' in L$_1$) and,

$w_2 = X_2$ (representation of the meaning of `w$_2$' in L$_2$)

$X_1 = X_2$ therefore $w_1 = w_2$,

the only non question-begging format is:

$w_1 = X$ (representation of the meaning of `w$_1$')

and $w_2 = X$ (representation of the meaning of `w$_2$')

therefore $w_1 = w_2$.

From a methodological point of view, the meanings of `w$_1$' and `w$_2$' will first have to be circumscribed in each language separately, their representation as `X' constituting only the final stage of the analysis (cf. Chapter 4).

3.3. Word

3.3.1. Introduction

A great deal of discussion has centred on the linguistic status of the word. For Bloomfield (1933:178), the word was the `minimum free form', i.e. the smallest form that may occur in isolation. "Thus in

English `man' is a word, and so is `manly', because, though `man' can stand alone (...), `-ly' cannot (...)." (Robins 1964:194). As Palmer comments (1981:33), this definition is not clear enough since it all depends on what is meant by `in isolation'. Many words would not normally be uttered in isolation and, if they are, it is because they have already been recognised as words. This definition can therefore also be circular. In addition, as Robins points out (1964:194), Bloomfield's classic definition is really a "special application of the criterion of stability", which states that a word, as a stretch of speech, admits momentary pause on either side; in this case the pauses are indefinite. In Robins's extensive definition of the word, Bloomfield's statement constitutes only a complementary remark. According to Robins, words are unitary stretches that exhibit an internal stability. "These stretches may appear at different places in sentences relative to each other (...), may be separated by other stretches (...), and by momentary pauses; but they do not permit internal rearrangement of their constituent parts, nor the insertion of comparable and virtually unlimited further stretches of utterance, and they may not in normal speech be interrupted by any pause. Moreover, most of these stable stretches may themselves stand alone to constitute a complete sentence or whole utterance" (Robins 1964:194). More recently, Cruse (1986:35-36) stated concisely that, across a wide range of languages, a word

is typically (1) "the smallest element of a sentence
which has positional mobility" and (2) "the largest
[unit] which resists `interruption' by the insertion of
new material between [its] constituent parts."

Lexicography and translation deal with the written
word in a synchronic perspective. In these fields the
self-evident status of the word is taken for granted. In
languages that are conventionally written with an
alphabetical orthography, the word as a linguistic unit
described in dictionaries is defined in terms of spaces
in the written text: "a word is any sequence of letters
which, in normal typographical practice, is bounded on
either side by a space" (Lyons 1977:18). A contrastive
lexical analysis will therefore not try to redefine the
word as a linguistic unit, but it will have to state
clearly the form and the properties that the word takes
on when it is used in the context of equivalence; it will
have to establish explicitly what units of language can
be semantically compared. The first distinction that has
to be clarified when discussing the written word is the
word form / lexeme / lexical unit / lexical form
relationship.

3.3.2. Word form / lexeme / lexical unit / lexical form

The example given by Lyons (1977:19) to explain the
fundamental distinction between forms and lexemes is:
"The words *found* and *find* are different forms of the same
word." In this sentence the term `word' is being used in

two different senses. The first occurrence or token
could be replaced by `forms' or `word forms' while the
technical term for the second is `lexeme'.
Lexicographers are aware of the different word forms of a
lexeme and indeed usually indicate them in their
dictionaries, especially if the language they describe is
highly inflectional. However, the typical unit of
lexicography is the lexeme as described above. Word
forms are the domain of morphology and do not play any
role in the establishment of equivalence. Most linguists
concerned with lexical matters agree on the definition of
lexeme as the basic unit in dictionary-making (e.g.
Lyons 1977:550-569; Palmer 1981:34; Hartmann 1983a:8;
Cruse 1986:76-80). They define lexemes as the basic
vocabulary-units of a language, the expressions that one
would expect to find listed in a dictionary. However
there is some confusion in its usage; Kempson (1977:80),
for instance, uses it interchangeably with lexical item,
the meaning of which is very close to that of lexical
unit (see below). This is why it is necessary to clarify
its meaning before deciding whether it would be an
adequate unit of investigation in contrastive lexical
semantics.

As explained in Chapter 2 (2.2.), lexicography is
above all a practical field which theorizes very little
about its method. This is why the definition of its
minimal unit, the lexeme, is not precise. Normal
lexicographic practice is to use a syntactic criterion

(that is to say whether the lexeme is a noun, a verb, an adjective, etc.) to justify a separate main entry and to group all metaphorically related senses together. However, Cruse (1986:76-80) gives an extensive account of the nature of the lexeme. According to him, the lexeme is "a family of lexical units; a lexical unit is the union of a single sense with a lexical form; a lexical form is an abstraction from a set of word forms (or alternatively - it is a family of word forms) which differ only in respect of inflections" (1986:80). These definitions are illustrated in figure 2. Henceforth, the terms `lexeme', `lexical unit' and `lexical form' will be used with these meanings. The clarification of the distinction between these three terms facilitates the discussion a great deal; however, there still remains the question of deciding to what lexeme a certain lexical unit should be assigned. In lexicographical practice the answer would be that two or more lexical units belong to the same lexeme if their meanings are obviously related (e.g. metaphorically related senses). This statement is somewhat imprecise and does not offer a satisfactory answer on a theoretical level (for a more detailed discussion of this problem see 3.3.4.1. and 3.4.2.1.7.). Cruse (1986:79) proposes a more explicit criterion for assigning lexical units to a single lexeme; it "is that their senses should be local senses belonging to the same sense-spectrum". Understanding this criterion would

Figure 2: Lexeme / Lexical Unit / Lexical Form

lexeme

sense 1 (word form 1)	sense 1 (word form 2)	sense 1 (word form n)
sense 2 (word form 1)	sense 2 (word form 2)	sense 2 (word form n)
. . . .	. . . .	. . . .
sense m (word form 1)	sense m (word form 2)	sense m (word form n)

lexical
unit #1

lexical
unit #2

lexical
unit #m

lexical form   =   (******)

Example: lexeme=table

table

piece of furniture (table)	pieces of furniture (tables)
arrangement of data (table)	arrangement of data (tables)
. . . .	. . . .
food (table)	food (tables)

lexical
unit #1

lexical
unit #2

lexical
unit #m

lexical form = (table)

require elaborating on what he means by `sense-spectrum'.

Nonetheless, it is not necessary to do so as, in

contrastive semantics, the best-suited operational

semantic unit is the lexical unit. This will be

demonstrated in the following sections, which will

further analyse the properties of the basic unit of

investigation used in an interlingual lexical comparison.

3.3.3. Morphological restriction

Although, as stated above, the primary criteria must

be semantic, the first constraint put on the basic

semantic unit in the context of equivalence is

morphological in nature: it must be at least one word,

where word is taken in its pre-scientific sense of

printed word delimited by inter-word spaces. It will not

be the minimal meaningful units which may constitute

words or parts of words and are called morphemes by

American linguists (e.g. Harris 1961: chaps. 12-19) or

monemes by Martinet (1980:101-145). This   exclusion is

not a theoretical commitment as to what is adequate for

interlingual comparison. The study of these units is

central to morphology but does not correspond to what is

at issue in the context of equivalence. While it can be

morphologically instructive to compare for instance the

English suffix forming adjectives `-ish' with its French

counterpart `-âtre', such a comparison will not be

helpful to the translator as there is no set pattern of

word-formation across languages, as evidenced in the

following two pairs of translation equivalents: (1)
yellowish / *jaunâtre* and (2) boyish / *enfantin*.

In addition, as mentioned in 3.3.2., word forms are
the domain of morphology, therefore when the criterion is
stated that the basic unit used must be at least one
word, it is understood that `word' has the sense of
`lexical form' as defined above (a family of word forms
which differ only in respect of inflections). Words such
as `loves' or `loved' will not be compared individually
with words of other languages; but their lexical form
will be, which, for practical purposes, can be
represented as `to love'. It is important to note,
however, that, while `word' means `lexical form' in this
morphological restriction, it cannot be replaced by
`lexical form' as the equation is not reciprocal; a
lexical form is not necessarily a word in the sense of
unit delimited by spaces in the text (e.g. the example
above).

3.3.4. Lexical Form and meaning

Within one language, problems stem from the fact
that, very often, the relation between lexical form and
meaning is not one-to-one. When more than one language
are involved, these problems are heightened. Using
Saussure's terminology, it could be said that in an ideal
situation of exact equivalence there would be two
signifiants (e.g. one in English and one in French) for
one *signifié*. In fact, were it possible, it would be

more useful in an interlingual context to have
dictionaries that would take the signifié as starting
point, as Vinay and Darbelnet (1977:49) express it:
"Normalement, si nous avions des dictionnaires de
signifiés, il suffirait de chercher notre traduction à
l'article correspondant à la situation identifiée par le
message [de la langue de départ]." Three situations
occurring intralingually have to be considered in an
interlingual context:

> (1) The cases where one *signifiant* corresponds to
> several *signifiés* (cases of polysemy or
> homonymy);
>
> (2) the cases where one *signifié* requires a
> *signifiant* containing more than one word
> (collocations, idioms and dead metaphors); and
>
> (3) the cases where one *signifié* is expressed by
> several *signifiants* (cases of synonymy).

3.3.4.1. Polysemy and homonymy

"It is commonplace to describe a lexeme which has a
number of senses as polysemous [...], and a lexical form
which realises lexical units belonging to more than one
lexeme as homonymous" (Cruse:1986:80). A case of
homonymy is one of a word with two or more senses that
are far apart from each other and not obviously related
in any way. Occurrences of homonymy seem to be matters
of mere historical accident or coincidence. A case of
polysemy is one where a word has several related senses.

A great deal of scholarly discussion has centered on the distinction between homonymy and polysemy (e.g. Lyons 1977:550-569), but very often the distinction is rather arbitrarily drawn; as Ullmann (1962:159) expressed it, "the borderline [...] is sometimes fluid." Without going into these matters in detail, it is possible to state that homonymy and polysemy deal with complex relationships that exist within words of the same language. Equivalence, on the other hand, is concerned with the relationship of words across languages. Language-internal problems created by phenomena such as homonymy and polysemy therefore do not arise in connection with equivalence. The discrimination of the meanings of a polysemous lexeme will be carried out intralingually first and each basic unit involved in an interlingual comparison will have one single semantic description (about the indeterminacy of word-meaning see 3.4.2.1.7.). A word, then, in the context of equivalence, is a unit with a single meaning. If a lexical form can be attributed two different meanings, it will be considered that there are two distinct basic units whether these meanings are related or not. This maximisation of homonymy does not lead to redundancy since only semantic information is relevant and it is necessary because the process of metaphorical or figurative extension is not necessarily the same in different languages. The traditional examples `bank$_1$' (the side of a river) and `bank$_2$' (the financial

institution) will predictably be two different words;
`bank$_1$' will be compared with `*rive*', for instance, while
`bank$_2$' will be compared with `*banque*'. But, while an
intralingual lexicographical analysis will have to decide
for practical reasons (dictionaries usually list single
lexemes not syntagms and sometimes incorporate lexical
entries for compound words within the entries for one or
the other of the component simple lexemes) whether a
`bank of clouds' is to be associated with `bank$_1$' or a
`blood-bank' with `bank$_2$' (see Hartmann 1983:7), an
interlingual comparison will consider a `bank of clouds'
as `bank$_3$' and `blood-bank' as `bank$_4$'. Lexicographers
working across languages will look for an equivalent of
the expression `blood-bank' as a whole without asking
themselves whether the `bank' in that expression is the
same `bank' as the financial institution. If the two
languages compared are French and English, it so happens
that in this example the same metaphor exists in both
languages, but it is not always the case (e.g. `the
mouth of the river'/`*l'embouchure du fleuve*'; `the mouth
of the bottle'/`*le col de la bouteille*'). The adoption
of this criterion will not help overcome the difficulties
encountered when translating puns or poetry which require
equivalence between lexemes. However, in most cases, it
is a necessity.

So far, then, it has been established that in the
context of equivalence, the basic semantic units must:

(1) be at least one word (a textual unit between two

spaces) (3.3.3); and,

(2) have only one meaning (3.3.4.1.).

Since, as explained before, the form of the word in

(1) is its lexical form, these two conditions show that

the definition of this basic unit is very close to that

of the term `lexical unit' as used recently by linguists

such as Cruse (1986:passim); Kempson (1977:79-83) calls

it a `lexical item'. However, as the basic operational

unit used in the context of equivalence presents

characterisitcs of its own (see below), a specific term,

`tranunit', has to be introduced. Furthermore, a

traneme, term coined on the model of lexeme (3.3.2.) is a

family of tranunits in the same way that a family of

lexical units is a lexeme. A tranunit is the union of a

single sense with a tranform; a tranform is an

abstraction from a set of tranunit forms which differ

only in respect of inflections. These definitions are

illustrated in figure 3. Like Tournier's basic unit of

investigation in monolingual lexicology, the *lexie*

(1988:11; 1991:109), the tranunit does not necessarily

correspond to an orthographic word (see 2.3.3.1.). Its

length can vary from a single word, taken in its pre-

scientific sense, such as `dog', to a lexicalised phrase

or sentence such as, to quote Tournier's example

(1991:109), "give a dog a bad name and hang him". The

only criteria that Tournier gives to justify the length

of a *lexie* is that it *is*, by definition, memorised as

such during language acquisition. While this may suffice

Figure 3: Traneme / Tranunit / Tranform

traneme

tranunit #1	sense 1 (tranform 1)	sense 1 (tranform 2)	sense 1 (tranform n)
tranunit #2	sense 2 (tranform 1)	sense 2 (tranform 2)	sense 2 (tranform n)
	. . . .	. . . .	. . . .
tranunit #m	sense m (tranform 1)	sense m (tranform 2)	sense m (tranform n)

tranform = (******)

Example: traneme = academic argument

academic argument

tranunit #1	conforming to rules (academic argument)	conforming to rules (academic arguments)
tranunit #2	a justification for (academic argument)	a justification for (academic arguments)
	. . . .	. . . .
tranunit #m	of speculative interest (academic argument)	of speculative interest (academic arguments)

tranform = (academic argument)

in a monolingual setting, such is not the case when two
languages are involved as equivalence is not a natural
process of acquisition. It is then important to
determine precisely the criteria according to which a
syntagm is considered as a tranunit.

3.3.4.2. Collocations, idioms and dead metaphors

As mentioned before (3.3.4.), there are cases where
one *signifié* requires a *signifiant* containing more than
one word. In fact, the convention of representing as one
or several orthographic words seems to be often
arbitrary. In French, for instance, Vinay and Darbelnet
(1977:36) point out the coexistence of `bon sens', `non-
sens' and `contresens'. In English, a phonological
signal for word division is that one word seems to allow
only one main stress: "English words in isolation contain
one primary stress" (Schane 1973:101). This explains the
difference between `blackbird' and `black bird'. But, as
summed up for instance by Palmer (1981:33), there is no
complete correlation between the spoken and the written
forms as, according to the rule, the expression `White
House' should be one word and compounds such as
`shoeblack', `shoe-horn' and `shoe polish' show a
complete lack of consistency. In the context of lexical
equivalence, the criteria used are semantic in nature.

The need to use semantic criteria requires the
introduction of the notion of endocentricity as defined
in semantic, not syntactic, terms by Harris (1973:114):

"Any expression is semantically endocentric with respect to its parts if and only if the meaning assigned to it is exclusively determined by the meanings of the parts and of their combination. An expression which is not semantically endocentric is semantically exocentric." Harris (1973:114-115) then gives the following illustration of the distinction:

> [...] the English phrase *red roof* is semantically endocentric with respect to the parts *red* and *roof* if the meaning of the phrase is uniquely determined by the meanings assigned to *red* (`ruber'), *roof* (`tectum'), and the adjective + noun combination (`y that is x'). Whereas the phrase *white elephant* is semantically exocentric if either it has no meaning determined by the meanings assigned to *white* (`albus'), *elephant* (`elephas') and the adjective + noun combination (`y that is x') or, as well as this meaning, has independently some other meaning (`unwanted gift').

The term collocation, introduced by Firth (1957:197) into the technical terminology of linguistics, is used to mean "the habitual association of a word in a language with other particular words in sentences" (Robins 1964:67). There are then two kinds of collocation: (1) semantically endocentric collocations and (2) semantically exocentric collocations. Cruse (1986:40) uses the term collocation to refer only to "sequences of lexical items which habitually co-occur, but which are nonetheless fully transparent," i.e. only to the first kind, but he seems to be isolated in doing so.

Endocentric collocations are generated by the productive rules of the language system. Therefore, in

the context of equivalence, they will not be considered
as a single tranunit. They will be useful at the stage
of meaning discrimination (see, for instance, the example
of `spell' - `a period of time' or `an enchantment' -
given by Bolinger 1965:570-571), but they will not
constitute data for analysis in the comparison. However,
there exists a category of semantically endocentric
collocations that could be called `indivisible
collocations'; they cannot be broken up without changing
the meaning of their head word (e.g. `sewing machine',
`to go in', etc.).  They are `lexicalised' - they
function as one word in the language and it would often
be easy to replace them by one word without breaking the
morphological rules of the language in question. In
English, for instance, the convention of saying `sewing
machine' rather than `sewer' is completely arbitrary
since the pair `washing machine/washer' exists and in the
case of the machine that dries the washing only `dryer'
is accepted. In some cases, these collocations will be
only partially endocentric. Concerning `washing
machine', for instance, Lyons (1977:542) explains that,
although its [endocentric] meaning is regular - "machine
(used/usable) for washing" - it is underspecified in the
sense that it does not include "for clothes". In any
case, a semantically endocentric collocation will form a
tranunit when it is a bound semantic whole, an
`indivisible collocation' as defined above (one which
could conceivably be replaced by a single word).

Indivisible collocations should not be confused with what
Cruse (1986:41) calls `bound collocations', which are
bound as a result of collocational restriction (e.g. `to
foot the bill'), not on the basis of a semantic
criterion.

Semantically exocentric collocations, i.e. idioms
and dead metaphors, are by definition indivisible since
their meaning cannot be inferred from the meanings of
their parts. These collocations will then always
constitute minimal tranunits.

The third criterion now isolated is that, in an
interlingual lexical analysis, tranunits:

> (3) if more than one word, must be indivisible
> collocations.

3.3.4.3. Synonymy

Synonymy, like equivalence, is used to mean
`sameness of meaning' but this time within a single
language. Like homonymy and polysemy, synonymy is not
relevant to equivalence. For the purposes of
equivalence, it will be assumed that a difference in
lexical form within a language corresponds to a
difference in meaning and each synonym will have its own
equivalent in the other language. While both `fauteuil'
and `chaise' would probably be compared with `chair', the
problem of deciding whether as a consequence `fauteuil'
and `chaise' are synonymous is beyond the scope of this
study. It is worth noting, however, that equivalence is

sometimes used as a means of discriminating between word-
meanings within one language (See for instance Harris
1973:13: to show that `brother' and `male sibling' are
not used in exactly the same way, he states that one
expression provides a translation of the word `frère',
while the other does not.).

Within the context of equivalence, two synomyms will
be two different tranunits; one meaning will be
associated with only one tranform. Therefore a tranunit:

(4) has only one tranform.

3.3.4.4. Conclusion:

It has been established thus far that, in an
interlingual comparison, the basic semantic unit is a
tranunit and that this tranunit has to satisfy the
following four criteria:

(1) it must consist of at least one word (a textual
    unit between two spaces) (3.3.3.);

(2) it must have only one meaning (3.3.4.1.);

(3) if more than one word, it must be an indivisible
    collocation (3.3.4.2.); and,

(4) it must have only one tranform (3.3.4.3.).

It is now necessary to decide which tranunits will
qualify as units of investigation on a grammatical level.

3.3.5. Grammatical delimitation

Although equivalence implies the analysis of words
in isolation, it is impossible to escape the fact that

these words are part of a grammatical system. In this
system, words are assigned to word classes which, as
pointed out for instance by Robins (1964:227), since
medieval times, have been called parts of speech. These
classes can correspond to some semantic criteria (e.g.
noun = name of a person, place or thing, etc.), but they
are based on the syntactic behaviour of words.
Therefore, although still useful in the discussion as
will be seen, they cannot be a primary distinction in the
context of equivalence. The overriding factor in an
intralingual semantic analysis will be that not all words
have the same function. As shown earlier (3.3.4.),
semantic content is not the criterion used in
establishing word division in its pre-scientific sense.
There is no logical reason, then, why all words should
have the same kind of meaning. As Hockett (1958:153-54)
explains, some "serve not directly as carriers of
meaning, but only as markers of the structural
relationships between other forms". He calls them
"structural markers" and gives `and' as an example. This
is a fact that has been recognized for a long time, as it
was the basis for the old distinction made by Sweet
(1891:22-24) between the `full' words and the `form' or
`empty' words.  Examples of full words are `tree',
`sing', `blue', `gently' and of form words `it', `the',
`of', `and', i.e. full words are nouns, verbs,
adjectives, and adverbs while form words are pronouns,
articles, prepositions, and conjunctions. Chomsky

(1957:Ch.9) draws a similar distinction between what he calls lexical forms (equivalent to full words) and grammatical forms (equivalent to form words). These categories correspond also to what are referred to as `open' and `closed' word classes (Robins 1964:230) or closed set items and open set items (Allerton 1979:46-47). As Cruse (1986:3) explains, the closed set items belong "to classes whose membership is virtually constant during the lifetime of an individual speaker," whereas the open set items are "those which belong to classes which are subject to a relatively rapid turnover in membership." Most importantly for equivalence, the linguistic function of closed set items is to signal the grammatical organisation of sentences while that of the open set items is to bear meaning. When the items are independent words as opposed to morphemes, "[...] nouns, adjectives, adverbs and verbs are open classes; pronouns, prepositions, and conjunctions are closed classes [...]" (Robins 1964:230). While closed set items need to have equivalents in a translation (and indeed usually have well accepted ones because of their stability), their equivalence is often determined by semantic criteria (e.g. `under' = `sous') but is also governed by syntactical restriction and rules (e.g. `under these conditions'/`dans ces conditions). For all these reasons, only open set items will be part of an interlingual semantic comparison. This does not ignore the fact pointed out by Cruse (1986:20) that semantic

notions which are expressed in one language grammatically
(i.e. by means of closed set items) may well be
expressed in another language lexically (i.e. by means
of open set items). But this fact, while very relevant
to translation theory, lies beyond the scope of lexical
equivalence.

Furthermore, if a lexical form can function as more
than one part of speech, there will be a tranunit for
each part of speech in the same way that in a dictionary,
"if a word can figure as different kinds of speech this
will immediately give rise to more than one entry for it"
(Wiggins 1971:26). However, this fact is already
indirectly accounted for by the second criterion listed
above ("it must have only one meaning") since two
different parts of speech cannot have the same meaning.

3.3.6. Potential equivalents

Another important characteristic of tranunits in the
context of equivalence should be mentioned at this point:
two tranunits entering a comparison will be potential
equivalents. A certain overlap of their semantic area
will have already been established by lexicographers. If
`w$_1$' is an English word and `w$_2$' the French word it is
compared with, it will be assumed that `w$_1$' means `w$_2$'
for translation purposes, translation being taken here in
the sense of a practical activity. `Chair' will be
compared with `chaise' and `fauteuil', not with `table'.
The two tranunits under study will be potential `semantic

equivalents' in the sense that Harris (1970:463) gives to this expression: "Two language-expressions may be called `semantic equivalents' if their semantic characteristics do not differ." The investigation will attempt to determine to what extent `w_1' and `w_2' fulfill this condition, whether all their semantic characteristics are the same.

3.3.7. Summary

For two tranunits to qualify as objects of investigation in an interlingual semantic lexical comparison, they have to satisfy the following six criteria:

(1) they must consist of at least one word (a textual unit between two spaces) (3.3.3.);

(2) they must have only one meaning (3.3.4.1.);

(3) if more than one word, they must be indivisible collocations (3.3.4.2.);

(4) they must have only one lexical form (3.3.4.3.);

(5) they must be open set items (3.3.5.); and,

(6) they must exhibit a certain overlap of their semantic areas (3.3.6.).

The various facets and complications of the word `word' and its related terms, insofar as these are relevant to the establishment of equivalence, have been analysed. Finally, the term `meaning' remains to be studied.

3.4. Meaning

3.4.1. Introduction

As mentioned before (3.1.), `meaning' is borrowed from everyday language and is therefore polysemic. This term has also been used by philosophers, philologists, psychologists, literary critics and other specialists (Leech:1974:4). It is therefore important to make clear what is understood by meaning before using it and to give it a definition adequate for specific purposes. Semanticists are not primarily concerned with practical questions such as `What does this word mean?', but with theoretical questions about what it is for a word to have a meaning. It could be argued, conversely, that it is not necessary to dwell on such questions before starting a practical applied semantic analysis such as establishing equivalence. The intuitive grasp of the meaning of `meaning', calling upon the semantic competence mentioned by Leech (1974:7), or a certain consensus of opinion (Taylor 1981:18), would then be enough. The purpose of this analysis is primarily practical and only involves a very specific aspect of meaning - namely word-meaning. What is needed, therefore, is a representation of word-meaning which makes comparison possible. The choice made will not be a theoretical commitment to what meaning is; it will be dictated only by practical purposes. As Bendix (1966:2) expresses it, "this need not even be labeled a definition

of the term `meaning' but only of some researchable
object which [the linguist] feels justified in
provisionally calling by this name."

3.4.2. Word-meaning

3.4.2.1. Boundaries of word-meaning

It is now well established by language philosophers,
even when their views on other matters differ (e.g.
Wiggins 1971:16 and Alston 1971:36), that "the meaning of
a word is the constant contribution it makes to the
meaning of any sentence in which it occurs with that
meaning". The argument behind this theory is based on
the fact that languages contain only a finite set of
words while the set of sentences is infinite. Since no
speaker learns to produce or understand the infinite
number of sentences by learning their senses one by one,
there must exist a method of systematic construction of
the sentences from basic components. Katz and Fodor
(1963:171-2) expressed this reasoning as follows: "[...]
the fact that a speaker can understand any sentence must
mean that the way he understands sentences which he has
never previously encountered is compositional." Word-
meanings are part of these basic components. This
statement does not go against Quine's view (discussed for
instance by Pulman 1983:9) that any understanding of
language must be holistic. Indeed, saying that the
meaning of a word is the contribution it makes to the

sentence does not imply that the meaning of the sentence
is only the sum of the meanings of the words it contains.
Quine (cited in Wiggins 1971:25) explained how it is
possible to reconcile the two views that (1) the unit of
communication is the sentence and (2) words do have
meaning in isolation:

> The unit of communication is the sentence and not
> the word. This point of semantical theory was long
> obscured by the undeniable primacy, in one respect
> of words. Sentences being limitless in number and
> words limited, we necessarily understand most
> sentences by construction from antecedently familiar
> words. Actually there is no conflict here. We can
> allow the sentences the full monopoly of `meaning'
> in some sense, without denying that the meaning must
> be worked out. Then we can say that knowing words
> is knowing how to work out the meaning of sentences
> containing them. Dictionary definitions are mere
> clauses in a recursive definition of the meanings of
> sentences.

It is possible to adapt this theory to the purposes
of equivalence. As a tranunit has only one meaning, the
statement can be rephrased as "the meaning of a tranunit
is the constant contribution it makes to the meaning of
any sentence in which it occurs". In the context of
equivalence, it is therefore necessary to represent that
part of the meaning that the tranunit contributes to the
sentence, which is not determined by the context but
rather is context-specific.

3.4.2.2. Word-meaning and context

Words are very rarely used in isolation and there is
an intrinsic connection between meaning and

communication. For these reasons, the notion of context
- both linguistic and situational contexts - plays a
crucial role in the description of word-meaning. The
contextual approach to word-meaning, first outlined by
Haas (1962, 1964) and updated by Cruse (1986), defines
the meaning of a word as being "constituted by its
contextual relations" (Cruse 1986:16). When this
viewpoint is taken to its extreme, it is possible to say
that a lexical unit has "a different meaning in every
distinct context in which it occurs"(Cruse 1986:53). To
illustrate this statement Cruse gives, among others, the
following examples in which different parts of the car
are highlighted:

(1) The car needs servicing

(2) The car needs washing

While it is true that the two different contexts put the
emphasis on different parts of the car, the whole is
still present, as Cruse himself point outs ("This is not
to say that car refers to something different in each of
these sentences - in both cases it is the whole car which
is referred to."). What is relevant to equivalence is
the context-specific meaning of the word which must be
separated from the semantic properties of the context.
In (1) and (2), the "highlighting" (term used by Cruse
1986:53) is the result of the use of the verbs `to
service' and `to wash' and calls upon the speaker's
knowledge of the world. It is not part of the linguistic
meaning of the word `car'.

While its contribution is not considered a part of the meaning of the words, the context still plays a major role in circumscribing this meaning. First, it provides clues as to what a word means; indeed the meaning of a word can sometimes be deduced from the context alone. This is apparent in Larose's (1987:171) definition of the context: "Pour nous, un contexte c'est l'ensemble des indices qui dans un texte donné en éclairent une des parties." Secondly, and most importantly, the context can be used to discriminate word-meanings, to choose one meaning amongst several which exist latently within the word. Through contexts, it is possible to isolate the different meanings of polysemic words. The following examples where `paper' can mean either `newspaper' or `essay' are adapted from examples cited by Harris (1973:124) in the context of synonymy:

(1) The paper ceased publication

(2) The paper was on the mating habits of the giraffe

(3) Professor Jones is reading his paper.

The linguistic context disambiguates (1) and (2) while the situational context would be necessary to disambiguate (3). Harris considers that the latter role of the context is part of the available data. This implies that in using the substitution test (`newspaper' for `paper' in (1), etc.), it is assumed that the rest of the sentence holds fast semantically. As Alston (1971:39-40) points out, the technique of partial

substitution raises an unsolvable problem, but no analysis of word-meaning is possible unless "a principle of simplicity, according to which [words] are held to retain the same meaning over two contexts unless we are forced to recognise a difference" is accepted.

Furthermore, the context is also informative about the connotation and the collocational spread of a word (both as defined in 2.3.3.; connotation: any stylistic property of a word; collocation: the range of application of a word). Both these aspects of language have in common the fact that they are restrictions on usage. In the case of connotation, for example, it is not possible in French to write on an invitation "*Je vous prie à bouffer'* as the two expressions linked by the preposition `à' do not belong to the same stylistic register, while in the case of collocation, the sentence `the cat barked' is anomalous as only dogs bark. It could be argued that these two aspects of language go beyond lexical semantics as they both belong to another level of analysis, respectively stylistics and syntax. It is usually asserted by linguists (e.g. Lyons 1981:52; Palmer 1981:78; Wiggins 1971:26) that the explanation for restricted collocations should not be given in semantic terms. However, their arguments are not altogether convincing. One very famous example of this phenomenon is the adjective `rancid', which occurs only with bacon or butter. Palmer says (1981:91): "This does not seem to be a matter of its meaning, but of the company it keeps."

However, he concedes that there is "plausibility" in accounting for `dogs bark' in terms of the kind of noise made, since `bark' can also be used of other animals, e.g. squirrel (1981:78). His opinion about `rancid' seems to stem from a misunderstanding of the word as he states that it could be replaced by `rotten' or `bad' (1981:77). He seems to leave aside the fact that the word qualifies the tastes of rotten bacon or butter (which are probably very similar, being rotten animal fat), just as `sour' describes the taste of rotten milk. For the cook of the days when these words appeared, the taste was probably the most used barometer of whether a food was rotten or not. It seems, then, that the collocations of `rancid' could be explained semantically in the same way as those of `bark' are. A similar argument could be made about Wiggins's example of `snub' (1971:26). Wiggins defines `snub' as `concave' and then cannot find a semantic reason to explain why it does not apply to a mirror. But if a more precise definition of `snub' is used, such as `short and blunt', it then becomes apparent why it cannot be used to qualify a mirror. These remarks do not show that all collocational restrictions can be accounted for in terms of meaning, but they point out that it has not yet been satisfactorily proven that they cannot. In a theoretically uncommitted approach, it is not necessary to decide whether connotation and collocation are part of word-meaning ; however, it is essential to recognise that

they may have to be considered when establishing equivalence. Therefore, whenever relevant, they will have to be included in the description of word-meaning used in the comparison. As both of these features are context-specific, they will be represented by contextual parameters in the empirical study (e.g. connotation: BASTARD [insult]; collocation: SNUB [nose]).

To sum up, then, equivalence compares interlingually the context-specific meanings that the words potentially contain. The context is but a tool for achieving meaning discrimination and bringing to the fore connotative and collocational restrictions. It is important to note that the context plays this role not only in the source language, but also in the target language, especially when collocations are concerned. As mentioned in Chapter 2 (2.5.3.), the role of context must be limited to the monolingual stage of the analysis if the method is to be non-question begging.

3.4.2.3. Semantic boundary for linguistic knowledge

"A frequent topic of discussion among semanticists is the issue of where and how to draw the line between linguistic information about the meanings of words and real-world information about the properties of things" (Fillmore 1977:132). According to Katz and Fodor (1963:176), "a semantic theory is a theory of the speaker's ability to interpret the sentences of his language." Moreover, as mentioned above (3.4.2.1.), the

meaning of a tranunit is the constant contribution it
makes to the meaning of any sentence in which it occurs;
therefore the semantic boundary of a tranunit for
linguistic knowledge coincides with what is necessary to
understand the sentences in which the tranunit occurs.
As expressed by Harris (1973:149) in another context,
"the [...] semantic boundary for linguistic knowledge
coincides reasonably well with intuitive notions of what
it is to understand the meaning of a sentence, and with
plausible tests for establishing whether or not someone
knows what a sentence means." However, this sounds rather
unrigorous; indeed "there is no serious possibility of
systematizing all the knowledge of the world that
speakers share" (Katz and Fodor 1963:179), for two
reasons: (1) the number of possible sentences is infinite
and (2) it is impossible to test all speakers.
Statistical devices can help to solve (2), but it is
harder to cope with (1). Nonetheless, whichever way
meaning is represented for the purpose of interlingual
comparison, it will be necessary to find a practical way
of deciding what it includes, as nonlinguistic
information may be involved in the understanding of a
sentence. The proposed solution to this issue will be
discussed in detail in Chapter 4.

3.4.2.4. Words are part of a system

It is impossible to escape the fact, that the
vocabulary of a language is a system (Saussure 1973:43).

There are systematic relations between words within a
language and these inter-lexical relations are part of
word-meaning. The nature of these systematic contrasts
is studied at length in most works on semantics (e.g.
Lyons 1977:270-317). They are, like the context (see
3.4.2.2.), part of the linguistic data available to an
investigator attempting to describe word-meaning. They
are an integral part of the meaning of a word and cannot
be overlooked; they will play an important role in the
first stage of the analysis when the meanings of the
tranunits are established in each language by way of a
variation of componential analysis (see 3.4.3.).

3.4.2.5. Meaning and grammar

Drawing a clear-cut distinction between meaning and
grammar is an impossible task. Indeed, many grammatical
elements are themselves bearers of meaning. According to
Cruse (1986:2), it is not surprising that meaning and
grammar are interwoven in this way since the only purpose
of grammar is to serve the conveyance of meaning. The
theories of enunciation first established by Culioli (see
Bouscaren 1991) and at the center of most modern
grammatical analyses, are entirely based on meaning; they
study grammatical forms in terms of mental operations.
Keenan (1978:167) maintains that "we can easily entertain
thoughts for which we have, at hand, no grammatical
expression. [...] it is in principle possible to
conceive of a thought without having a grammatical

expression for it." Keenan's statement rests on the fact that we can understand ungrammatical sentences. This argument, though, does not seem to be very convincing. As it is still not known what happens in the brain when a sentence is understood, it is not possible to refute completely Keenan's assertion. However, it has often been said (e.g. Cruse 1986:7) that an ungrammatical sentence can be interpreted only when it is substituted with a non-deviant sentence. In the context of lexical semantics, the latest attempt to draw the line between meaning and grammar is probably Cruse's (1986:6). His criteria for deciding whether an anomalous sentence is semantically or grammatically deviant are:

"(1) an anomaly which can only be removed by replacing one or more open set items is semantic (It is too light for me to lift/It is too heavy for me to lift);

(2) an anomaly which cannot be removed by replacing one or more open set items, but can be removed by changing one or more closed set items, is purely grammatical (I have nearly completed/I have nearly completed them);

(3) an anomaly which can be cured either by changing one or more closed set items or by replacing one or more open set items is semantic (albeit with grammatical implications) if the open set replacements are distinguished by the possession of certain semantic

properties; otherwise, it is purely grammatical

(I visited Arthur next week/I shall visit

Arthur next week/I visited Arthur last week)."

These criteria confirm what has been said about the

choice of corpus (3.3.5.); only open set items will be

retained as carriers of meaning as closed set items are

primarily grammatical in nature.

3.4.2.6. Word-meaning and pragmatics

It has become usual to make a separation between a

semantic account of a language and an account of

communication (e.g. Kempson 1977:58-75; Lyons 1977:591),

between semantics and pragmatics. This distinction

which, as argued by Kempson (1977:73), "accords

reasonably well with the Chomskian distinction between

competence and performance," is graphically represented

by Wiggins (1971:24) as shown in figure 4. In the

context of lexical equivalence, only (4) on this diagram

will be relevant. The ways in which sentences are used

to convey a wide variety of messages (e.g. Grice's

implicatures (1957) and to effect linguistic actions such

as warnings, threats, etc. (Austin's speech acts (1962))

are part of pragmatics and play an important role in the

process of communication; however, they do not bear on

what Wiggins (1971:21) calls "strict meaning", i.e.

linguistic meaning. Lexical equivalence is concerned

with what words mean, not what someone uttering them

means. Therefore none of the theories

Figure 4: Distinction Between Semantics and
Pragmatics as Represented by Wiggins

SYNTAX AND SEMANTICS   PRAGMATICS

(1)   (2)   (3)   (4)   (6)   (7)

type s t^s_1

           t^s_2

                    (5)
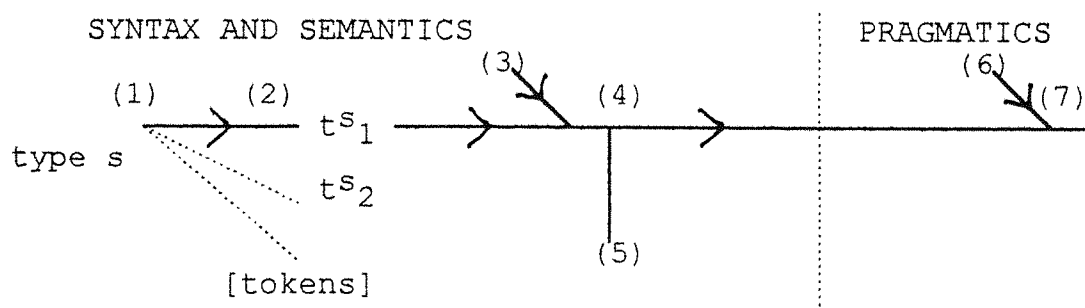
[tokens]

Key
(1) Sentence type s with assigned and determinate
    grammatical structure and generic sense S.
(2) Tokens T^s_1, t^s_2...produced in particular speech
    episodes $E(t^s_1)$, $E(t^s_2)$...
(3) Demonstrative (and any other) inputs to (4), these
    being determined by the context of utterance-episode
    $E(t^s_1)$. The demonstrative purport of any referring
    phrases in t^s_1 (plus any other semantically relevant
    purport as yet unaccounted for).
(4) The statement made or proposition propounded by the
    speaker in $E(t^s_1)$ - what he says, this being
    determined by what has to be the case for the speaker
    to count as saying truly (i.e. saying something
    true).
(5) Truth-value of (4).
(6) Situational factors bearing on (7).
(7) What the speaker means in or by saying (4).

that make the utterer the subject of `means' and

concentrate on the meaning which is in the utterer's head

will be relevant. Sentences, when uttered, may have the

same illocutionary force, as in (1) and (2):

    (1) Would you pass me the salt, please (request)

    (2) Could you bring me my slippers, please (request)

or the same implicatures, as in (3) and (4):

    (3) It is quite cold in here (= May I close the

        window?)

    (4) I wonder who opened the window (= May I close

        the window?)

but different meanings. The identification of
illocutionary force and implicatures assumes the prior
deciphering of the linguistic (as opposed to pragmatic)
meaning of sentences. Lexical equivalence deals only
with that first stage of meaning. Speech acts and
implicatures both apply to utterances whereas the
linguistic meaning of a tranunit is not dependent upon
the process of communication; therefore they do not
belong to this level of analysis.

3.4.2.7. Word-meaning and reference

Reference and linguistic meaning cannot be equated,
otherwise it could have been known without the help of
astronomical observation that the sentence "The Morning
Star is the Evening Star" expressed a true statement
(Harris 1973:113). Reference is situation-bound and
therefore cannot be used as part of a generalized method.

3.4.2.8. Indeterminacy of word-meaning

A practical analysis will not address the
philosophical issue raised by Quine (1960:chapter 2) of
the indeterminacy of `radical translation'. It will be
assumed that human cognitive processes are the same
across languages, that in the field of meaning there is a
universal ontological framework. Therefore trying to
decide whether `gavagai' means `rabbit' or whether it
should be translated by `undetached rabbit part' will not

be relevant. Quine (1971:146) himself concedes that
meaning is determinate enough on a practical, as opposed
to a theoretical, level: "An actual field linguist would
of course be sensible enough to equate `gavagai' with
`rabbit', dismissing such perverse alternatives as
`undetached rabbit part' and `rabbit stage' out of hand."

The fact remains, however, that, as explained
earlier (3.3.4.1.), in the context of equivalence,
compared tranunits have only one meaning. If two
identical lexical tranforms have two different meanings,
they will be considered as two tranunits whether these
meanings are related or not. This necessary condition
works on the assumption that words, or in this case
tranunits, are semantically determinate (`determinate'
being used here on a practical level, not the
philosophical level discussed above). Now, it is a well-
known fact that such is not the case (e.g. Harris
1973:142-145). Therefore, in order to be able to compare
the meanings of tranunits across languages, two
difficulties created by the indeterminacy of the meaning
of tranemes will have to be overcome; it will be
necessary to find a way of:

(1) describing the meaning of tranunits as
    satisfactorily and completely as possible; and,

(2) drawing the line between two meanings of one
    traneme.

Restating the problem of `open texture' raised by
Waismann (1945), Harris (1973:142) shows that a word such

as `house' is semantically indeterminate because its
extension is indeterminate: "Do cottages, military
barracks, caravans, igloos count as houses?" While this
problem should not be exaggerated, as it concerns
marginal referents, a criterion of semantic determinacy
will have to be used before a claim of equivalence can be
made. In other words, it will be necessary to specify
precisely what is to be included in the description of
meaning used to make equivalence statements. Chapter 4
(4.3.) explains in detail how this will be accomplished
in concrete terms in the empirical study.

The second problem - drawing the line between two
meanings of one traneme - should not be magnified either.
While deciding whether a word has one or several meanings
is not an easy task on the philosophical level (e.g.
Wiggins 1971; Alston 1971), in practice, in most cases,
it is not difficult to isolate the discrete meanings of
words (see for instance the role of the context in
meaning discrimination in 3.4.2.2.). As stated by Cruse
(1986:71-74), this is quite possible even when the
`literal' sense of a word has undergone metaphorical
extension and the different meanings of this word form
what he calls a "sense-spectrum". Zeugma, for instance,
will help to discriminate word-meanings as Cruse
(1986:72) shows in the following example: "The poisoned
chocolate entered the Contessa's mouth at the same
instant that the yacht entered that of the river."
Although there is a certain semantic continuum between

the two senses of the word `mouth', it is still easy to differentiate them. As established earlier (3.3.2.), in a contrastive semantic lexical analysis the most suitable operational unit is the tranunit, which by definition has only one meaning. The discrimination between different meanings of a traneme is performed by the monolingual lexicographer and is formalised, for instance, in monolingual dictionaries. Therefore, meaning discrimination will be a prerequisite and dictionary definitions will be used as a starting point, but it will not be part of the method used to compare the meanings of tranunits across languages. In this investigation, the pairs `mouth'/`bouche' and `mouth'/`embouchure' will be considered as completely unrelated.

3.4.2.9. Summary

Meaning as it has to be described for the purposes of interlingual comparison of tranunits displays the following characteristics:

(1) it is context-specific (3.4.2.1.);

(2) it includes connotation and collocational restriction (3.4.2.2.);

(3) it involves nonlinguistic information (3.4.2.3.);

(4) it rests on systematic inter-lexical relations (3.4.2.4.);

(5) it is distinct from grammar (3.4.2.5.);

(6) it does not involve pragmatics (3.4.2.6.);

(7) it cannot be equated with reference (3.4.2.7);
and,

(8) it is determinate enough to allow analysis
(3.4.2.8.).

What remains to be determined is whether any
existing representation of word-meaning can be useful to
the process of establishing equivalence between
tranunits.

3.4.3. Representation of word-meaning

3.4.3.1. Introduction

The most traditional way of representing word-
meaning is the definition. The limitations and
shortcomings of the definition as a way of comparing
word-meaning across languages have been presented in
Chapter 2 (2.5.2.). This method begs the question of
equivalence which it aims to solve and therefore will not
be used. Chapter 2 also pointed out (2.5.3. and 2.5.4.)
that the contextual method and contrastive field analysis
are not perfect ways of establishing lexical equivalence.
Another answer to the problem of representing word-
meaning lies in the theory which sees the total meaning
of a word in terms of a number of components -
componential analysis.

3.4.3.2. Componential Analysis

3.4.3.2.1. Introduction

In the context of transformational generative grammar, a semantic theory is an interpretation of the syntactical structure with the help of a lexicon and a certain number of rules called projection rules. In this framework, Katz and Fodor (1963) had proposed a new way of writing dictionary entries, based upon the breakdown of the words into basic semantic units that they called "markers" and "distinguishers". The search for these units or components is called componential analysis. The now famous example that Katz and Fodor (1963:190) gave was that of `bachelor' as shown in figure 5 where markers are placed in roundbrackets - e.g. (Human), (Animal) and (Male)- and distinguishers in square brackets - e.g. [who has never married].

Figure 5: Componential Analysis of `Bachelor' by Katz and Fodor
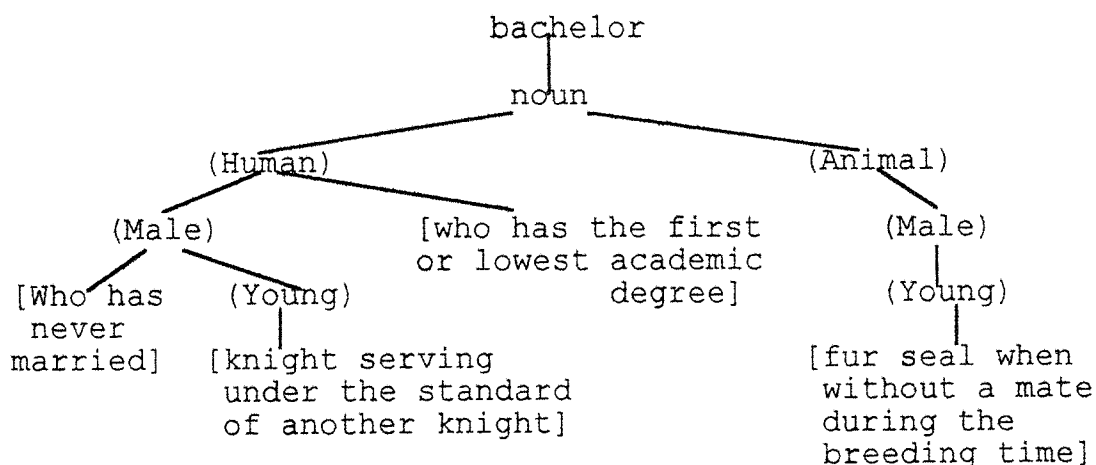
Markers are semantic features that are present also in
the lexical meaning of other words whilst distinguishers
are specific characteristics.

3.4.3.2.2. Componential analysis as a description of word-meaning

According to Newmark (1976:6), the term componential
analysis seems to have first appeared in 1948 (Harris
1948). Componential analysis has been used since the
fifties and the sixties in various ways for the purpose
of analysing word-meaning. Most of these techniques have
been reviewed in detail by Newmark (1976;1988a:114-123)
in the light of the place of componential analysis in
translation theory and of its application to translation.
In spite of its wide application, componential analysis
is usually considered to be "fraught with serious
theoretical and methodological difficulties" (Lyons
1977:553). Katz and Fodor's essay (1963) has been
strongly critized by a host of other linguists (e.g., to
name but a few, Bolinger 1965; Kempson 1977:18-22; Lyons
1977:332-335; Pulman 1983:29-52), but it still stands as
a pioneering work in interpretive semantics.
Nonetheless, it is necessary to address the difficulties
componential analysis presents before deciding whether it
can provide an acceptable way of representing word-
meaning in the context of interlingual lexical
equivalence.

The first problem to be reviewed which was discussed
at length when Katz and Fodor's theory first appeared

(e.g. Bolinger 1965) is the division that they created between markers and distinguishers. The aim of Katz and Fodor was, as they expressed it, to reach "the greatest possible conceptual economy with the greatest possible explanatory and descriptive power" (1963:190). However, re-examining the `bachelor' example, Bolinger (1965:558-560) shows that it is quite possible to create sentences that can be disambiguated only through the distinguishers quoted by Katz and Fodor and to elevate them to the status of markers since "markers are, by definition, the semantic atoms through which disambiguations are effected" (1965:558), thereby removing the dualism in question. Later Katz himself (1966) abandoned the difference between markers and distinguishers whilst some linguists (e.g. Newmark 1976:41-42) think that the division is still valid. In any event, if componential analysis is used to compare word-meanings, the process will consist in checking whether two words have the same components, whether they are markers or distinguishers. It is therefore quite possible in such a context to use practically this method of representing word-meaning without having resolved this theoretical issue. It will suffice to call them all semantic features or substantive semantic characterisations.

However, another issue remains controversial: that of the nature of the semantic feature. For Katz and Fodor (1963:208), "[a] marker like (Human) or (Color) is [...] not an English word, but a construct represented by

one," and components are universal constructs that would
exist in all languages. This argument is not supported
by many linguists (e.g. Bolinger 1965; Kempson 1977:101-
102; Lyons 1977:332-335; Pulman 1983:29-52) and is likely
to remain unsubstantiated. In view of what are very
obvious differences between languages, it seems
implausible that there would be a universal inventory of
semantic features and that all languages would lexicalise
the whole inventory, i.e. would have the same features.
As Lyons (1977:332) states, "[...] it is not clear that
there is any representative of extreme universalism to be
found among linguists who currently advocate or practice
componential analysis." Yet, as explained by Pulman
(1983:31), it is very difficult to show conclusively that
semantic universals or primitives do not exist because it
is not easy to show that something does not exist.
According to Pulman, Katz's argument fails because "when
we look to find some account of the relationship between
semantic markers and the concepts which he [Katz] claims
they designate, we find nothing of any substance at all,
merely the reiterated conviction that such concepts do
exist; that they are universal; that they are a result of
innate properties of the brain; and that they are
designated by elements which, for convenience only, look
like English words" (1983:33). Kempson (1977:102) states
that "despite the serious problems involved in
componential analysis, [...] an account of lexical
meaning in terms of semantic components can be made

viable," but she does not really explain how. Pulman
takes the argument further; he is convinced that the only
way to give validity to this semantic description is to
recognise that "Markerese is English in capital letters,
and [...] that this is not necessarily circular or
trivial" (1983:40). It can indeed be very useful, to
describe its meaning, to translate a complex English (or
French,etc.) word into less complex English (or French,
etc.) words. Further research may eventually show that a
basic English vocabulary and basic vocabularies of other
languages contain words representing the same concepts,
but this is an endeavour of wide scope which has not been
attempted yet. Until more evidence is brought forward in
favour of universal semantic primitives, it seems vacuous
to keep arguing for their existence. On the other hand,
if the components are considered as a subclass of English
(or French, etc.), it is possible to make practical use
of componential analysis as long as the methodology is
clearly defined. Bendix (1966:61) for example, explains
that in his study of the semantic structure of a set of
English verbs "the components of a definition will be
stated in the object language using forms that have a
frequency of occurrence which is higher than, or at least
the same as, that of the forms being defined." From the
above discussion it emerges, then, that componential
analysis presents certain theoretical problems, but that
it can be used practically. The final question to be

addressed is whether atomic reductions of words are
adequate or not as meaning descriptions.

Pulman (1983:41) is of the opinion that such
reductions are inadequate as full specifications of
meaning for theoretical reasons that lie beyond the scope
of this study (e.g. the question of whether or not there
are analytic sentences). His main practical objection is
that proposed definitions established in this way usually
generate controversy. He himself (1983:43-44) isolates
problems in Katz's reading of `chase' (Katz 1972:101); he
argues with Katz that the semantic marker `(Purpose)' is
not clear in `chase' since it is possible to chase
someone without intending to catch this person. But
these objections, rather than invalidate the method, seem
to provide evidence for the fact that, if componential
analysis is used to describe word-meaning, the
methodology will have to be carefully established and
must be empirical. Componential analysis will work only
if it uses informants; it cannot be based on the
intuition of the investigator otherwise semantic
components would be entirely arbitrary and subject to
individual bias. The linguistic procedures employed to
isolate components consist of four types: naming,
paraphrasing, defining and classifying (Nida 1975:64-67).
According to Nida, if elicitation of usage is carefully
conducted, there is every reason to believe that the
results of using these four basic processes can be
essentially accurate. Proposals for systematizing

semantic descriptions have often been discussed (e.g.
Katz and Fodor 1963; Weinreich 1966). For Putnam
(1978:79), for example, the normal description of the
meaning of a word should be a finite sequence whose
components should include: "(1) the syntactic markers
that apply to the word, e.g. `noun'; (2) the semantic
markers that apply to the word, e.g. `animal', `period
of time'; (3) a description of the additional features of
the stereotype, if any; (4) a description of the
extension". The method proposed in the context of
interlingual comparison will be described in detail in
Chapter 4; however a few preliminary remarks can already
be made.

First, it should be stressed again that the chosen
methodology is not intended to provide the best way of
arranging the information in a semantic description, its
only purpose is to propose a representation of word-
meaning that allows interlingual comparison.

Secondly, the method will be empirical, i.e. will
involve informants, but it will also be monitored by an
investigator. The components will then reconcile two
aspects of componential analysis that Nida (1975:21-22)
opposes to one another: they will exhibit both analytical
(role of the investigator) and psychological (part played
by the informants) validity. The psychological aspect
will be part of meaning if it is shared by all the
members of a speech community. The methodological
problems created by the notion of `all the members' will

be dealt with in Chapter 4 by means of statistical methods.

Thirdly, it is an established fact in componential analysis that linguistic meanings can be determined only through contrasts (e.g. Nida 1975:31-67). Components are usually contrasted with the components of another word or a different meaning of the same word, otherwise they would be infinite in number. They are in this respect akin to criterial features as described in Chapter 2 (2.5.2.). It will then be necessary to have an efficient empirical test for establishing the components through contrast. In addition, this method will ensure the elimination of the subjective components that involve personal perception. As pointed out by Newmark (1976:64), componential analysis is subjective "in the sense that it requires `people to look into their minds, each into his own' (Haas 1954) and to declare what they find there", but its subjectivity can be reduced if a consensus is reached among informants.

Finally, the use of informants will put some constraints on the actual form that the components will take. The economy of components, common in componential analysis (e.g. Bendix 1966:4), will have to be abandoned. It will not be possible, for instance, to reduce [female] to -[male] as most informants would not be familiar with this notation. For the same reason, the redundancy rules, which give the following representation

of the meaning of wife: [married]X -[male]X (Kempson
1977:92), will not be applied.

In conclusion, then, componential analysis is not
yet a satisfactory theory of word-meaning but can provide
a practical way of representing the meaning of words.
One advantage of this method is that at the unilingual
stage of the analysis it helps in meaning discrimination
since the components are a part of the language system
and are primarily used to distinguish one sense of a word
from another (thus, `day' may be opposed to `night', when
it refers to daytime, or include it, when it represents a
twenty-four hour period; `man' may be opposed to `woman',
when it is the male gender, or include it, when it means
humanity; etc.). It now remains to be determined whether
this way of representing word-meaning can be useful in an
interlingual comparison.

3.4.3.2.3. Componential analysis as a way of comparing word-meanings across languages

One of the advantages of componential analysis
claimed by Katz and Fodor (1963:184-185) is particularly
relevant to a contrastive lexical analysis: it above all
facilitates the comparison of words. The differences
between closely related words can be explained in terms
of distinctive semantic features. If `man' is defined as
[+human, +male, +adult] and woman as [+human, -male,
+adult], the meanings of these two words differ by one
semantic feature. Newmark (1988b:27-30) explains that,
when used in the context of translation, this aspect of

componential analysis is also very useful. Once the

source language and target language words have been

broken down into their components, "translation may be

said to consist lexically of a transfer not of senses,

but of sense-components." This allows the translator to

preserve more completely the complex meaning of words

that do not have a mono-lexical equivalent in the target

language [e.g. `élancé' = `tall and thin', `chétif' =

`wasted and wretched', `poussé' = `exaggerated and

extreme' (Newmark 1976:59)]. Newmark, however, does not

mention that, if componential analysis is to be used in

an interlingual lexical comparison, one major problem

will have to be solved. Since, as explained earlier

(3.4.3.2.2.), componential analysis is not the

representation of meaning by universal constructs, but

the translation of a complex word into less complex words

of the object language, the breakdown of the meaning of

the words must be performed in the language to which they

respectively belong. It will not be possible to follow,

for instance, Geckeler (1971), who, in his analysis of

the meanings of certain French words (e.g. `âgé'/`vieux';

`neuf'/`jeune) used German translations as his

metalanguage. In the analysis of word-meanings preceding

a bilingual comparison, then, the components of an

English word `w_1' will be in English while those of a

French word `w_2' will be in French. Attempting to show,

for instance, that `man' is the equivalent of `homme'

would then involve asserting that e.g. (+human) is an

exact equivalent of (+humain). This, of course, would
completely beg the question of equivalence that it is
trying to solve. Therefore, if componential analysis is
to be used in an interlingual semantic comparison, it
will be necessary to bypass this question by making it
irrelevant to the use that will be made of this method.

If this difficulty can be overcome, componential
analysis could be useful in the context of interlingual
semantic analysis, especially a version of it which would
take component formalisation simply as a way of
systematising definitions or explanations. A viable
solution to the problem of meaning in an interlingual
contrastive analysis might be a method that would rely on
some version of componential analysis. Chapter 4 will
outline such a method.

Chapter 4: Evaluation method

4.1. Informants in a contrastive lexical analysis

Native speakers of languages are the primary source of information about meaning (see e.g. Cruse 1986:8-9). Consequently, the lexicologist comparing the meanings of the vocabularies of two languages, L_1 and L_2, will be able to call upon two sets of informants: the speakers of L_1 and the speakers of L_2. A third population will also be helpful to him in his investigation - a bilingual population, the speakers of both L_1 and L_2. In a lexical context, speaking both L_1 and L_2 does not imply the union of two abstract concepts such as two different behaviours. For the purposes of this comparative analysis, it will simply mean that the bilingual possesses a wider vocabulary, a set of words V that will include the set V_1 contained in L_1 and the set V_2 contained in L_2. Relying on bilingual speakers requires that a speech community using V actually exists. There is no doubt that such communities can be found. In fact, according to Fishman (1967) more than half of the world's population today uses more than one language while engaging in the activities basic to human needs. It does not imply that all possible combinations of V exist, but if L_1 is English and L_2 French, the vocabulary users of V form a community widely spread. To mention but one example, vocabulary users of V constitute an important percentage of the language users in Canada. A great number of historical and sociological reasons account for

the existence of these bilingual communities, but these explanations lie outside the scope of this study.

It is then clear that, in the context of a bilingual lexical analysis, V exists as the union of V_1 and V_2. However, two main objections could be raised against using bilingual speakers as informants. First, they are not as easily identifiable as speakers of L_1 and L_2. According to Bloomfield (1933:56), bilingualism means "a native-like control of two languages". A "true" bilingual, often referred to as a balanced bilingual or an equilingual, is someone who at all times is taken for a native by native speakers of both the languages concerned (Thiéry 1976). Bilinguals, however, possess different degrees of bilingualism. They can be ranged from the rare equilingual at one end of the spectrum to the person who has just begun to acquire a second language at the other end. The lexicologist is not interested in the bilingual's degree of bilingualism in the four skills traditionally tested: aural comprehension, oral expression, reading comprehension and writing. What he requires of the bilingual is that he has an intuitive grasp of the meanings of words. For this reason, he will choose vocabulary users of V who possess what is usually called `infant bilingualism'. This term is used when bilingualism is the "first language", to use Swain's expression (Swain 1972:title), in situations where both languages are acquired simultaneously from birth and neither is ever abandoned.

Those who have learned the two languages successively as children, i.e. who possess `child bilingualism' will also be used.  The theory of bilingualism distinguishes between two types of bilinguals (Ervin and Osgood 1954): the `compound' bilinguals, who learn and use the two languages in the same sociocultural context, and the `coordinate' bilinguals who acquire and use the two languages in separate contexts. However as learning and using may be combined in a number of different environments, the classification seems to be too superficial. An individual may well learn two languages as a coordinate bilingual but subsequently use them both in the same environment. Immigrants to Canada provide a good example of this. It follows that this classification will not be relevant to the choice of informants as individuals with `infant' or `child' bilingualism could be either compound or coordinate bilinguals or a combination of the two. Therefore, the only criteria that will govern the choice of bilinguals will be whether they are `infant' or `child' bilinguals. Both these types of bilinguals qualify as reliable informants: that is to say, they are at least as reliable as native speakers of one language. The `ideal language user' who would know his language (languages) perfectly does not exist.  The second objection that could be raised against using bilinguals as informants lies in the fact that few of them manage to avoid transference.  The term `transference' is used by Clyne (1967) to refer to

the transferring by bilinguals of elements of one language into another. Transference may be of various types of which two will be relevant to a contrastive lexical analysis: lexical transference and lexical semantic transference. An example of lexical transference would be the following utterance: "I have put away all my toys in the *malle*". Far from being a handicap, this kind of transference could be seen as evidence that on the lexical level bilingual speakers do experience V_1 and V_2 as an extension of one another, as a union. Lexical semantic transference is a much more serious issue, since it consists in extending the meaning of a word in L_1 to a word in L_2. It is a problem inasmuch as what is under scrutiny in the present analysis is not the bilingual's actual use of language in everyday life but a comparison of two vocabularies belonging to two clearly distinct languages. However, although this phenomenon undoubtedly occurs in conversational situations, it is unlikely to do so when the meaning of a word is consciously described. It is a well-known fact that when questioned about points of language informants automatically revert to the norm, that is the form of the language which reflects average common use and is considered most often as obeying the rules. The contradictions that exist between introspective judgments and behaviour have been empirically measured by Labov (1975). Notably, he investigated the reactions of speakers to the positive

`anymore' dialect in five different regions of the United
States. In the Midwest, where this dialect is common,
`anymore' is used in positive sentences to mean
`nowadays'. What is of interest to the present study is
that he showed in a scientific way that people will say
one thing and do another. Speakers of the dialect in
question denied ever using `anymore' in a positive sense,
even when they were simultaneously doing so. Taylor also
points out that an informant will label `ungrammatical'
the sentence *That's the motorbike what I saw* "[...] in
spite of the fact that he and his friends regularly use
what to introduce relative clauses" (Taylor 1981:3). A
good example of such a phenomenon in French would be the
difference between *Je sais pas* that most speakers will
use and *Je ne sais pas* that they will only accept as
grammatical. In the same way, it can be safely assumed
that even if bilingual speakers do not always avoid
semantic transference in utterances, they will
automatically remove it from the sentences that they are
considering in a formal setting. Therefore, there is no
reason why semantic transference should unduly influence
the reliability of bilingual speakers as informants.

In his comparison of the meanings of tranunits, the
investigator will then have at his disposal three kinds
of informants:

(1) speakers of L_1

(2) speakers of L_2; and,

(3) speakers of both L_1 and L_2 .

It remains now to be established in what way these
informants will be utilized since the method used cannot,
if it is to be rigorous, merely consist in asking them to
decide intuitively whether two given words have or do not
have the same meaning. As Cruse (1986:10) points out
intralingually, "whether two expressions do or do not
mean the same [...] is evidently not something we should
expect informants to tell us directly"; interlingually
the situation will be even more complex.

4.2. Synonymy and equivalence

As mentioned earlier (3.4.1.), an effort will be
made to find a method of comparing word-meanings which
will be as scientific as possible: that is, one in which
the role of intuition will be controlled, defined and
channelled in a specific direction. It will therefore be
necessary to systematize semantic descriptions in a way
which will allow the identification of sameness of
meaning. It is instructive to see whether procedures and
devices used in the descriptive analysis of one language
can be used across languages. For example, an obvious
analogy can be drawn between synonyms and equivalents,
the first term concerning the relationship between words
within one language, while the second applies to the
relationship between words in different languages.
Equivalents, like synonyms, are defined as words that
cover the same semantic area, i.e. that have the same
meaning. Therefore, equivalence, like synonymy, fits the

simple pretheoretical notion of sameness of meaning. An
identical sort of sameness, as previously discussed
(3.2), is involved in both cases. `Meaning' in
equivalence is also similar to `meaning' in synonymy: the
meaning that two words share is regarded as a
characteristic in respect of which the words are the same
(Harris 1973:12), whether they belong to one or different
languages.

Furthermore, while discussing synonymy, Harris
(1973:13) points out that "there will always be [...]
some reason for denying that the meaning is the same."
Indeed, most of the literature on synonymy explains at
great length why alleged synonyms in fact are not
synonyms (Collinson 1939, Quine 1953, White 1958, Schogt
1972, Dubuc 1985). The same is true about equivalence
(see Ch.2). It is interesting to note at this point the
similarity between the criteria used in both instances to
establish a difference in meaning. Different nuances
found in synonymous or equivalent pairs are attributed to
various factors such as linguistic register and
historical origin. Dubuc groups these factors under the
generic term of *marques d'usage* and notes the similarity
which exists between equivalents and synonyms in this
respect when he writes: "Les marques d'usage servent à
circonscrire l'aire d'utilisation de termes se faisant
pendant d'une langue à l'autre (on se sert aussi des
marques d'usage pour différencier les synonymes à
l'intérieur d'une même langue)" (Dubuc 1985:70). For

instance, `friend' and `mate' are not true synonyms for
the same reason that `friend' and `copain' are not true
equivalents: they do not belong to the same linguistic
register. Similarly, `tourne-disque' and `électrophone'
are not true synonyms for the same reason that `tourne-
disque' and `record- player' are not true equivalents:
they are in a part-whole relationship - strictly
speaking, the `tourne-disque' is only a part of the
`électrophone' or the `record-player'. Examples could be
multiplied to show that most modulations between
equivalents as defined by Vinay and Darbelnet (1977:89-
90) can also be used to differentiate synonyms. In spite
of similar approaches, however, the decision of whether
two words have the same meaning is probably less
arbitrary in the case of equivalence than in the case of
synonymy. While many explanations, mainly historical and
geographical, can be given of the existence of synonyms,
there is no logical reason to have within the same
language two ways of saying the same thing. As Palmer
(1981:89) points out, "it would seem unlikely that two
words with exactly the same meaning would both survive in
a language." Conversely, across languages, there is no
logical reason why exact equivalence should not exist,
especially when there is a large cultural overlap as is
the case between English and French. If a given reality
has to be expressed by a Frenchman, he will not have any
other choice but to express it in French. If the same
reality is part of the Englishman's experience, it will

also be represented in English. In this case, then, it would appear to be a necessity to have two ways of saying the same thing.

Finally, the notion of synonymy involves form and meaning, that is synonyms are expressions identical in meaning, not identical in form (Harris 1973:1). If form were defined by the relations inherent in a language, two words from different languages could never have the same form. The second part of the definition of synonyms would therefore be redundant in the case of equivalents. A restricted definition of form could be adopted, a definition that would favour the orthographical aspect over the phonological or phonetic levels, and would equate form with word-form (Lyons 1977:18). It would then be expressed as any sequence of letters which, in normal typographical practice, is bounded on either side by a space. There would be cases, then, where equivalents would have the same form as well as the same meaning (`table' = `table'). It therefore seems clear that what differentiates equivalents from one another is not their form but the fact that they belong to different languages. Borrowings, once adopted by the language which has borrowed them, will, in this context, be considered as part of the latter. `Finesse', for instance, will be French in a French linguistic environment and English in an English one. Equivalents, therefore, in a bilingual lexical analysis, are words identical in meaning, not identical in nativeness. What

is of interest, however, is that both terms - synonyms
and equivalents - refer to words that are physically
different (although not according to the same criteria)
and have the same meaning. The analogy seems well enough
founded to make it worth investigating whether a proposal
for establishing synonymy could be used to test
equivalence.

4.3. Choice of a method

Since an analogy has been drawn between synonyms and
equivalents, it is now necessary to decide which way of
testing synonyms will be applicable to equivalents. In
broad terms, synonymy refers to words different in form
and identical in meaning. In semantics, however, a
tighter definition is often used. Two words are true
synonyms if they are mutually interchangeable in all
their environments. Following this definition, the most
common way of testing synonymy is substitution. Used for
synonymy within one language, the substitution test is
not satisfactory. Since no two words have exactly the
same distribution - they do not occur in identical sets
of environments - this method will always yield a
negative answer. Across languages, the substitution test
is not only unsatisfactory , it is also impractical.
Indeed, a word (or tranunit as defined in 3.3) t_1
belonging to the language L_1 will not have any common
environment with a word (or tranunit) t_2 belonging to L_2
since L_1 and L_2 are different in nativeness.

Substitution, then, will not serve the practical goals of a bilingual lexical comparison (For a more detailed discussion of this question, see also 2.3.3.).

Another solution to the establishment of synonymy is provided by Harris (1973) in his study of the relationship between synonymy and linguistic analysis. Modelled on Harris's synonymy postulate - the supposition "that a correct linguistic analysis of a natural language may, in certain cases, treat as identical in meaning two [...] expressions [...] not identical in form" (Harris 1973:1) - the equivalence postulate will be the supposition that a correct comparative semantic analysis of the vocabularies of two natural languages will, in some cases, treat as identical in meaning two tranunits, by definition, not identical in nativeness. Adopting the equivalence postulate makes available a particular kind of statement which can be called an equivalence statement. Following the synonymy statement (Harris 1973:1-2), the equivalence statement can be stated as:

`t_1 and t_2 are equivalent in V'

`t_1 and t_2 are not equivalent in V'

where V is the union of V_1 and V_2, the two vocabularies of the two particular languages under description and t_1 is a tranunit of V_1 and t_2 is a tranunit of V_2. The two types of semantic characterization relevant to equivalence will be the same as those that concerned synonymy, that Harris called rho characterizations and represented as:

$\int_1$. `a = b'

$\int_2$. `a $\neq$ b'

"A characterization of the former type tells us that expression `a' and expression `b' do not differ semantically, while a characterization of the latter type tells us that expression `a' differs semantically [...] from expression `b'." (Harris 1973:102)

Adapted to lexical equivalence, the same two types of semantic characterization can be expressed as follows:

$\int_1$. `t_1 = t_2'

$\int_2$. `t_1 $\neq$ t_2'

In $\int_1$ the meaning of e.g. an English tranunit is the same as the meaning of e.g. a French one and, conversely, in $\int_2$ it is not.

In order to establish which one of the two types of characterization fits potential pairs of synonyms, Harris proposes a particular system of semantic categorization. Synonymous expressions will be those receiving identical characterizations under that system. The latter are what Harris calls `substantive semantic characterizations' (`σ-characterizations) and represents as:

`a : α...'

`b : ß...'

where `a' and `b' are expressions of the object-language (or language under description), while `α...' and `ß...' are expressions of the metalanguage (or language of description) (Harris 1973:103). While the distinction between object-language and metalanguage is useful to

fully explain what `a', `b', `α...' and `ß...' stand for,
it will not be used in the present analysis as an
argument to give a universal quality to `α...' and
`ß...'; in other words, the metalanguage will not be
considered as an entity separate from the language (see
3.4.3.2.2. for a full discussion of this position).
Harris's proposal gives the following rule (R) which
provides a method of formulating the substantive semantic
characterizations:

> (R): "For any expression `a', the
>   characterization includes a metalinguistic
>   description π if and only if (i) the
>   information represented by π is known to all
>   speakers of L, and (ii)the information
>   represented by π is utilized in the
>   interpretation of some sentence of L" (Harris
>   1973:155).

For a more consistent notation, it probably would have
been better in this rule to use α_n instead of π as Harris
puts suspension points after α which would mean that α =
$\alpha_1, \alpha_2, \ldots$ When the characterizations of `a' and `b' have
been drawn, synonyms will correspond to the cases where
`α...' and `ß...' are identical, that is the cases where
the metalinguistic descriptions are the same for `a' and
`b'.

The aim of the rule (R) is to determine the upper
bound of a semantic theory of L. If sameness of meaning
is to be established, it is indeed imperative to decide

precisely what is contained in the meaning of the
expressions compared. For the purpose of drawing
synonymy or equivalence statements, it is important to
find a boundary between what will be considered
linguistic and what will be considered nonlinguistic.
Since, as stated in 4.1.2., native speakers of languages
are the primary source of information about meaning, it
will be necessary to select from the totality of
knowledge of the speakers, the items that will qualify as
linguistic. The solution proposed by Harris and which,
according to him, best meets the requirements of
empirical linguistic analysis is to "count knowing the
meaning of an expression as including knowing that `p' if
and only if (i) all speakers of L know that `p' and (ii)
the assumption that all speakers of L know that `p' is
required to explain their normal interpretation of some
sentence or sentences of L comprising or containing the
expression in question" (Harris 1973:155). In this
statement `p' is an item of knowledge relating to the use
of the expression. A given `p' will then have to be
subjected to two kinds of tests before it can be included
in the substantive semantic characterization of a given
expression as a metalinguistic description π. Instead of
arbitrarily deciding, like Katz and Fodor (1963:178-179)
for instance, that `...often kept in cages...' is not
linguistic knowledge and that therefore it cannot count
as part of the speaker's semantic knowledge of the word
`lion', Harris will include it as a metalinguistic

description in the substantive semantic characterization
of `lion' if it passes both tests stipulated in (R).
Testing for (i), as Harris says, is straightforward
enough. In order to test for (ii), the linguist will
have to use his "ingenuity", to use Labov's term
(1975:53). He will have to construct ambiguous sentences
that will require the use of a metalinguistic description
to be disambiguated. As Labov points out (1975:50),
bringing out differences in meaning by adding
disambiguating material is a very common practice in
linguistic analysis. To show that `...often kept in
cages...' applies to `lion' and not to `bus' or `child',
Harris proposes the sentence "John could see buses and
children and lions in their cages." He also stresses the
fact that no information relevant to the disambiguation
(e.g. that the lions were in cages, but not the children
nor the buses) must be supplied by the context.

Harris is right when he points out that Katz and
Fodor do not clearly outline what can count as a semantic
marker (Harris 1973:154). However, his criticism does
not mean that he is in disagreement with Katz and Fodor.
The latter are saying that for several reasons - mainly
the difficulty of distinguishing between the speaker's
knowledge of his language and his knowledge of the world
- a complete theory of setting selection, which seeks to
account for the way in which aspects of the sociophysical
world control the understanding of sentences, is
impossible. But they do add that they do not "rule out

the possibility that, by placing relatively strong
limitations on the information about the world that a
theory can represent in the characterization of a
setting, a LIMITED theory of selection by sociophysical
setting can be constructed" (Katz and Fodor 1963:179).
It appears that through his rule (R) Harris has
constructed precisely such a theory. More than being in
opposition to Katz and Fodor, therefore, his work seems
to be a continuation of theirs.

What has to be shown is that Harris's theory is in
fact useful for empirical research. Two practical
aspects will have to be dealt with concerning the use of
the expression `all speakers' in the rule (R). First, it
is not feasible to test all speakers of a language.
Principles of statistics will make it possible to
determine how many speakers of L_1, L_2 and both L_1 and L_2
will have to be sampled for the test to have a given
level of confidence and precision. Secondly, another
problem with the expression `all speakers' is that it
would reduce the characterizations of an expression to
the lowest common denominator of that speaker who knows
the least about the expression. In conducting empirical
research it is therefore necessary to use `average' or
`normal' speakers as part of the universe from which a
sample will be drawn. It might also be the case that the
results of the study will point out that the second
clause of the rule (R) was not necessary for the language
under description. That is to say, it might be found

that for each metalinguistic description that passed the
first test it is possible to construct a sentence that
will be disambiguated by this description. In such a
case, therefore, all the potential metalinguistic
descriptions that passed the first test will be included
in the substantive semantic characterization of the
expression in question. But, as Harris explains
(1973:156), this is "an empirical fact about that
linguistic community" which does not affect the validity
of the theory. Harris also gives a practical solution to
the problem of the complexity of the relationship between
word-meaning and sentence-meaning through the second
clause of the rule (R). The question remains to decide
whether it is possible to adapt Harris's proposal and use
it to establish equivalence between two tranunits
belonging to two different languages.

In the context of comparative lexical analysis, the
substantive semantic characterizations (σ-
characterizations) will be represented as follows:

$$`t_1 : \tau_1...'$$
$$`t_2 : \tau_2...'$$

The Greek letter τ was selected to correspond to the `t'
of `tranunit'. The string of metalinguistic descriptions
represented by $\tau_1...$ and $\tau_2...$ are respectively τ_{1a}, τ_{1b},
etc. and τ_{2a}, τ_{2b}, etc. The format appears to be the same
as in the case of synonymy. However, while `a', `b',
`$\alpha$...' and `β...' belong to the same language, `t_1' and
`$\tau_1...$' will be part of $L_1$ while `t_2' and `$\tau_2...$'

will be part of L_2. Since `$\tau_1$...' and `τ_2...' are
expressions of the metalanguage, they could conceivably
both be formulated either in L_1 or in L_2. However, this
is not possible because, as explained in 3.4.3.2.3., the
point of view adopted in this componential analysis is
only the translation of a complex word into less complex
words of the object language. In addition, the rule (R)
in the context of lexical equivalence can be expressed
as:

> (R'):   For any tranunit t, the characterization
> includes a metalinguistic description τ_x
> if and only if (i) the information
> represented by τ_x is known to all users of
> t, and (ii) the information represented by
> τ_x is utilized in the interpretation of
> some sentence of the language containing
> t.'

It specifies that the content of the substantive semantic
characterizations is dependent on the users of `t_1' and
`$t_2$'. The characterizations `τ_1...' and `τ_2...' will
therefore have to be formulated in the same language as
`$t_1$' and `t_2' respectively.

Now, on the basis of (R'), relying on the competence
in the language of a population of speakers is a
necessary condition for the method to work. Formulating
`$\tau_1$...' and `τ_2...' in an interlingual analysis,
therefore, will not present any more problems than it
does in an intralingual analysis, so long as the

investigator knows both languages. The latter will
establish `τ_1...' in L_1, testing native speakers of L_1 in
the same way as it is done for synonymy, making sure that
the rule (R') is followed. Then, the same process will
be repeated for `τ_2...' in L_2. It is at the stage of the
comparison between `$\tau_1$...' and `τ_2...' that problems
arise. Harris's model of synonymy-in-L implies that
equivalence between t_1 and t_2 be defined by:

(i) making it both a necessary and a
sufficient condition for relational
characterizations of type $\int 1$ (`$t_1 = t_2$') that
there be no metalinguistic description τ_x such
that τ_x is excluded from the substantive
semantic characterization of one but not the
other of the two tranunits in question, and

(ii) making it both a necessary and a sufficient
condition for relational characterizations of
type $\int 2$ (`$t_1 \neq t_2$') that there be a certain
metalinguistic description τ_x such that τ_x is
excluded from the substantive semantic
characterization of one but not the other of
the two tranunits in question.

As has been explained above, the metalinguistic
description of `$t_1$' will be expressed in $L_1$ by `τ_1...'
and the metalinguistic description of `$t_2$' by `τ_2...' in
L_2. The semantic comparison of `$\tau_1$...' and `τ_2...' will
therefore involve more than recognizing (or not
recognizing) τ_x in `$\tau_1$...' and `τ_2...'. It will also have

to be more than deciding whether τ_{1a} in `$\tau_1$ ...' can be equated with $\tau_{2a}$ in `τ_2...'. Indeed, the latter procedure would bring circularity into the process. It would create an infinite regress since it would simply be pushing intuition-based statements about the equivalence of `$t_1$' and `t_2' to statements about the equivalence of items (τ_{1a} and τ_{2a}) in their respective semantic characterizations. A similar move for intralingual statements of synonymy would have been to have speakers of L judge whether what was listed under `$\alpha$...' meant the same as what was listed under `ß...'. In both the interlingual and the intralingual cases, such a procedure would beg the basic question of equivalence which it is the aim of the method to solve. Significantly, the solution Harris offers for synonymy is not to ask native speakers whether items in `$\alpha$...' are synonymous with items in `ß...' but whether any item listed under `$\alpha$...' could also be listed under `ß...'. A similar non-question-begging test for equivalence will therefore have to be found. To achieve this goal, it will be necessary to call upon a third population of speakers - bilingual speakers, speakers of both L_1 and L_2. As the method depends on all speakers of a language knowing the semantic descriptions [rule (R')] and bilinguals are a subset of the speakers of L_1 and also a subset of the speakers of L_2, bilinguals must also know them both in L_1 and in L_2. Furthermore, since these informants, as defined in 4.1.2., possess a vocabulary V, which contains

V_1 and V_2, they will be in a position to evaluate a bilingual list as the metalinguistic description of the meaning of a word in either L_1 or L_2. From a practical point of view, a bilingual list formed of all the metalinguistic descriptions contained in `$\tau_1$...', all those contained in `τ_2...' and a few additional irrelevant ones will be presented to the bilingual informants who will decide which of the metalinguistic descriptions apply to t_1. The same exercise will be repeated for all the t_1s and all the t_2s, making sure that the tranunits of one pair of potential equivalents are not in close proximity. A new set of substantive semantic characterizations will thus be generated for each pair of tranunits in a bilingual form that will allow the establishment of equivalence without involving any regress: it will not rely on the equivalence of any two words respectively contained in V_1 and in V_2. The addition of the few irrelevant metalinguistic descriptions will simplify the procedure. The only instruction given to the bilingual informants can then be: "Delete the expressions that you would not include in the meaning of the following words". Furthermore, the presence of the irrelevant metalinguistic descriptions will allow the testing of the systematic rational behaviour of the respondents; in other words, if one respondent does not delete obviously irrelevant descriptions, it will be an indication that this respondent is unreliable.

It seems, then, that with some adjustments Harris's proposal for establishing synonymy could be used in comparative lexical semantics to identify equivalences. A precise outline of the methodology that it will imply remains to be drawn.

4.4. Methodology

The investigation will be conducted in four stages:

(1) A preliminary list of all the possible metalinguistic descriptions will be compiled for each tranunit in both languages. This is a stage of the methodology which is not discussed by Harris. The technique used will be word-association; a sample of users of the word in question will be asked to write down all that they associate with this word. In fact this stage was slightly modified after the pilot study was completed (see 5.1.2.). The crucial factor at this stage will consist in deciding how large the sample has to be. The key variable in determining sample size is the probability that a respondent will forget to include a metalinguistic description that he in fact knows. The relevant formula is (as established with the help of a statistician):

$$[1 - p^n]^m = c$$

where: n = number of informants

        m = number of metalinguistic descriptions
        p = probability that an informant will forget any one metalinguistic description

        c = required confidence level

For example:

Assuming that $\qquad$ n = 7

$\qquad\qquad\qquad$ m = 10

$\qquad\qquad\qquad$ p = 0.4

Then $\qquad\qquad$ c = [1 - 0.4^7]^{10}

$\qquad\qquad\qquad$ = 0.9841 = 98% confidence

As a 95 percent confidence level is commonly accepted in social science research, it is possible to be confident that, in the above circumstances, the sample will yield reliable results.

The pilot study will provide estimates of the values of m and p which will be used in the above formula to calculate the sample required for the chosen confidence level.

(2) The second stage will consist in following the two clauses of the rule (R'). It will test that (i) the information represented by the metalinguistic descriptions is known to all the users of the tranunit in the sample and (ii) all the speakers in the sample use the metalinguistic descriptions constituting the preliminary list to interpret sentences containing the tranunit in question. To test for (i), the preliminary list of metalinguistic descriptions compiled for each tranunit in the first stage will be sent to the informants and they will be asked to strike out those that they do not know. In order to test for (ii), a simple ambiguous sentence will be constructed for each metalinguistic description. To disambiguate this

sentence, respondents will need to use the relevant

metalinguistic description. These sentences will be

submitted to the informants for their response. For

example, in the case of Harris's sentence "John could see

buses and children and lions in their cages", the

respondents will be asked to determine whether `their

cages' is to be interpreted as being the lions' cages or

the cages of the buses and the children as well (Harris

1973:155). The metalinguistic descriptions that do not

fulfill these necessary requirements will be deleted from

the list.

(3) A bilingual list of metalinguistic descriptions

will be prepared for each tranunit according to the

method outlined earlier (4.3). Then the test involving

the bilingual population of informants will be carried

out.

(4) The new bilingual substantive semantic

characterizations will be compared for each pair of

potential equivalents and conclusions will be drawn.

4.5. Conclusion

The apparent practicality of the chosen method

confirms what had been concluded in chapter 3: that a

description of meaning which will help in comparing

meanings of tranunits should be empirical and use some

version of componential semantics. Indeed, at stage (1)

of the methodology, meaning is seen as what is given by

an explanation, an explanation which expresses the way a

word is understood by its users and is given in terms of
isolable components. Stage (2) checks that these
components are used in disambiguations and therefore
qualify as linguistic semantic features. Contrastive
componential semantics constitutes the substance of
stages (3) and (4). However, the comparison, as proposed
in this method, does not require equating components with
one another and therefore leaves aside the question of
the universality of these components; the major flaws of
componential analysis discussed in Chapter 3 (3.4.3.2.)
are then circumvented. The next chapter will show an
example of the results obtained when applying the
outlined method to parts of the vocabularies of French
and English.

Chapter 5: Application

5.1. Pilot study

Before applying the methodology outlined in Chapter 4 to a chosen corpus, it was judged desirable to try it on a small preliminary corpus in order to identify at the outset any practical problems that might arise, especially as Harris never empirically tested his proposed method.

5.1.1. Description

The corpus chosen for the pilot study was a very small part of the vocabulary subset expressing emotions in French and English, namely the five following pairs of supposed equivalents: *colère*/anger, *amour*/love, *haine*/hate, *bonheur*/ happiness, *sympathie*/liking (towards somebody). All the corpora studied, including this one, followed the specifications outlined in Chapter 3 and consisted of tranunits as defined in 3.3. A total of fifteen informants were used: five monolingual francophones, five monolingual anglophones and five bilinguals in the sense defined in Chapter 4.

In the first stage of the study, the monolingual anglophone informants were given the following instructions: "Please write down all that you associate with the meaning of the following words: anger, love, hate, happiness, liking (towards somebody). Example: `lion': lives in Africa, kept in cages, fierce, furry, etc.". Monolingual francophone informants were given the same instructions expressed in French. From the

responses two preliminary lists (one in French and one in English) of all the metalinguistic descriptions were compiled for each pair of tranunits (see Appendices 1E and 1F).

In order to follow the two clauses of the rule (R'), the second stage then consisted in asking the same informants (1) to delete the expressions that they would not include in the meaning of the tranunits under study, and (2) to answer questions aimed at disambiguating a series of test sentences (see Appendices 1E, 1F, 2E, 2F, 3E and 3F). This exercise provided for each pair of supposed equivalents two final separate lists - one in French and one in English:

French tranunit `t_1' = t_{1a}, t_{1b}, t_{1c}.

English tranunit `t_2' = t_{2a}, t_{2b}, t_{2c}.

Numerically, the results at the end of stage 2 were as shown in figure 6.

The third stage consisted in drawing up for each of these pairs a bilingual list of metalinguistic descriptions and in asking bilingual informants to delete the irrelevant ones:

French tranunit `t_1'= $\tau_{1a}, \tau_{2a}, \tau_{1b}, \tau_{2b}, \tau_{1c}, \tau_{2c}$ (plus ξ and ψ obviously irrelevant to test the reliability of the informants - see Chapter 4)

English tranunit `t_2'= $\tau_{1a}, \tau_{1b}, \tau_{2a}, \tau_{2b}, \tau_{1c}, \tau_{2c}$ (plus ψ and ξ).

Figure 6: Frequency Distributions of Metalinguistic
Descriptions in Stages 1 and 2

TRANUNIT	Number of metalinguistic descriptions at the end of:	
	stage 1	stage 2
ANGER	57	11
LOVE	64	17
HATE	34	7
HAPPINESS	33	7
LIKING	30	9
COLERE	22	6
AMOUR	30	12
HAINE	22	9
BONHEUR	24	10
SYMPATHIE	21	14

As mentioned in Chapter 4, tranunits belonging to the
same pair of potential equivalents were not in close
proximity to one another in the list submitted to the
bilingual informants. In addition, as shown above, the
metalinguistic descriptions were not presented in the
same order in the two lists corresponding to each pair of
potential equivalents (see Appendix 4).

Finally, in the fourth stage, a comparison of the
final bilingual lists for each pair (see Appendix 5) was
carried out to see whether the method showed the
tranunits in question to be equivalent or not. This
analysis gave the following results:

```
anger      = colère

happiness  = bonheur

hate       = haine
liking     ≠ sympathie
(towards
somebody)

love       ~ amour
```
(the meaning of these two tranunits differed by
one metalinguistic description, i.e. `douceur'
which was present only in the list for `love').

These results cannot be considered definitive since this
is only a pilot study. However, it is interesting to
note that they correspond to what could be expected and
therefore exhibit face validity. Indeed, the only French
tranunit in the list for which it is usually difficult to
find an equivalent in English is `sympathie' and the only
pair which gave a negative answer is the one containing
`sympathie'. One could speculate about the difference
between `love' and `amour'. However, it would be
premature to do so at this stage since these results are
not statistically reliable. Nevertheless they provide
some evidence that the method is applicable and is likely
to yield useful comparisons.

5.1.2. Problems encountered and solutions adopted

As Appendices 1E and especially 1F indicate, the
word-association technique used in the first stage does
not work very well. The instructions given seem to be
too loose in spite of the example. In other words, some
of the informants did not completely understand what was

expected of them and gave very personal emotional
responses. In French, for instance, one lady put `moulin
à café' as a metalinguistic description of `haine'
because she wished she could put the people she hated in
a coffee grinder. This is not a major problem in itself,
since this sort of metalinguistic description will be
eliminated in the next stage. However, it seems to be
symptomatic of a flaw: the word-association technique
expected too much from informants. As stressed for
instance by Pulman (1983:33-34), the proper object of
linguistic inquiry is not only a person's conscious
knowledge of his language, but it also includes his tacit
knowledge. It was unrealistic to expect informants to
retrieve this knowledge and to bring it to the surface
without being prompted especially since it is desirable
for them to respond fairly rapidly and spontaneously: too
much reflexion tends to spoil intuition. The
instructions will need to be more explicit and helpful.

It was therefore decided that it was better to give
the informants a list of metalinguistic descriptions and
to ask them to delete from it those that they felt did
not belong and to add any that they felt had been
omitted. The core list submitted to them will be
established from dictionary definitions. It is quite
legitimate to use dictionary definitions to isolate
semantic components since, as mentioned earlier
(3.4.3.2.2.), the latter are akin to criterial features
as described in Chapter 2 (2.5.2.). It is indeed quite

common practice in componential analysis. Bolinger
(1965:556) was the first to point out the similarities
between lexicography and the semantic analysis proposed
by Katz and Fodor (1963): "While they do not claim in so
many words that their procedures in setting up
definitions are just a refinement of what dictionary-
makers have been doing all along, there are some obvious
resemblances". When he explains how it is possible to
improve on Katz's and Fodor's distinguishers he states
(Bolinger 1965:561) that it "involves simply examining
the terms they contain (e.g. knight), looking up their
definitions in the dictionary and identifying the markers
(Human, Male) (...)". To quote but one more example, as
summarized by Newmark (1976:36), Bierwisch and Kiefer
(1969) state that "the semantic characterization of a
lexical entry may divide into two parts: (1) the `core',
i.e. the specifications within the dictionary (e.g. for
`spoon': Physical Object, Artifact, Used for Eating
Liquid Food); (2) the `periphery', i.e. the
specifications in the encyclopaedia which are additional
to the dictionary entries (e.g. for `spoon': Standard
Sizes, Place of Use, Place of Manufacture)". The first
list submitted to the monolingual informants will then be
a dictionary definition in telegraphic style. Definition
as a way of describing meaning was eliminated in Chapter
2 inasmuch as comparing two definitions in two different
languages creates an infinite regress and begs the
question of equivalence. The method advocated now

starts with dictionary definitions, but the last stage consists in comparing two identical bilingual lists; therefore this minor modification does not introduce any regress. The result of the first stage of the analysis will be a list of all the metalinguistic descriptions for each tranunit.

This modification presents several major advantages. It not only gives the informants a clearer idea of what is expected of them, but it also reduces the probability that metalinguistic descriptions will be overlooked, since it is not asking any given informant to generate an exhaustive list. In addition, since this modification diminishes greatly the likelihood that informants will include emotional personal perceptions that they associate with the tranunit under description, it was decided that the testing for the two clauses of the rule (R') could be combined into one step. In other words, the second stage of the analysis will consist only in asking the monolingual informants to disambiguate a series of sentences. This exercise was considered sufficient to test whether the monolingual informants (1) know the metalinguistic descriptions and (2) use them in the interpretation of sentences. When an ambiguous sentence is submitted to an informant, there are two possible outcomes. First, the informant might not be able to disambiguate the sentence in question, in which case he is not using the metalinguistic description and the latter is eliminated whether he consciously knew it

or not; in this situation, then, the first step of the second stage which consisted in asking him whether he knew this metalinguistic description is clearly unnecessary. Second, the informant might be able to disambiguate the sentence in question; this shows that he uses the metalinguistic description in the interpretation of the sentence; but if he uses this metalinguistic description, he can only do so if he knows it, whether consciously or not, since, as stressed by Harris (1973:155) and explained earlier (4.3), no information relevant to the disambiguation may be supplied by the context. It appears, then, that in this instance too the first step of the second stage is redundant and that the method can be simplified. In addition, the requirement that no information relevant to disambiguation may be supplied by the context will have other practical consequences: the ambiguity must be entirely semantic and never logical; each section containing the metalinguistic description has to be phrased in such a way that if the metalinguistic description is removed from it, what remains could apply to either part of the sentence. It is imperative that the metalinguistic description alone makes the disambiguation possible and that there are no other clues:

Example: tranunit=anger; metalinguistic description=
           (Appendix 2E, sentence 4)   wrath

"Peter was working and Albert was full of anger; his
wrath was obvious. Question: Whose wrath was obvious?"

It was imperative to have two masculine first names to
prevent the possessive adjective "his" from becoming an
additional clue. In addition, if the metalinguistic
description "wrath" is removed from the section
containing it, "his...was obvious" could apply to either
part of the sentence; to apply to the first part, for
instance, it could be "his dedication was obvious?".

Once the first two stages have been conducted as

explained above, the other two stages should be

relatively straightforward.

Another problem that arose in the pilot study

concerns the reliability of the informants in stage 2

when they are asked to disambiguate sentences. They were

allowed the option of answering `nobody' if they could

not disambiguate the sentence (see Appendices 2E and 2F).

This option is necessary if the test is to have any value

at all. However, one French informant gave `personne' as

an answer to 84 percent of the questions. This could be

attributed to the fact that, as mentioned above, the

French metalinguistic descriptions elicited were not very

satisfactory. The other four informants, though, did

manage to disambiguate the majority of the sentences. It

seems, then, that the problem lies with this particular

informant, who may not have spent enough time answering

the questions. His responses had to be disregarded and

the questionnaire was submitted to another informant. In

order to prevent such a problem arising in the subsequent

studies, the instructions at this stage will be modified

and will include: "Please answer the question for each

sentence. Every effort should be made to provide a

definite answer. However, as a last resort, the answer

can be `nobody'". In French the equivalent will be:
"Veuillez répondre aux questions suivantes. Veuillez
vous efforcer de donner une réponse précise et ce n'est
qu'en dernier recours que votre réponse peut être
`personne'". This modification should correct the
problem. However informants whose answers deviate very
significantly from the average will still need to be
eliminated as this would be an indication that they are
not reliable. A frequency distribution of the response
`nobody' will be calculated and any informant whose score
is unacceptably high will be removed from the sample.
The initial sample size will need to be increased to
allow for this eventuality.

Another modification was deemed necessary in stage
2. It was decided that in the ambiguous sentences it was
important that the "right" answer would not always be in
the same part of the sentence; it should occur randomly
either in the first or the second part.

Finally, in the third stage, the obviously
irrelevant metalinguistic descriptions revealed that two
out of the five informants were not reliable. The sample
size will therefore also have to be bigger at this stage
in order to ensure that a sufficient number of reliable
informants is included in the final analysis.

5.1.3. Summary

Once the above corrections are made, the method
described in Chapter 4 will include the following stages:

(1) A preliminary list of possible metalinguistic descriptions extracted from monolingual dictionary definitions will be compiled for each tranunit in both languages. Monolingual informants will be asked to delete from these lists the expressions that they would not include in the meaning of the tranunits and to add any that they felt had been overlooked. From the responses, two preliminary lists (one in each language) of all the metalinguistic descriptions will be compiled for each pair of tranunits.

(2) To follow the two clauses of the rule (R'), an ambiguous sentence will be constructed for each metalinguistic description. To disambiguate this sentence, respondents will need to use the relevant metalinguistic description. The sentences will be arranged in a questionnaire the format of which will take into account the recommendations made above. The questionnaire will be submitted to the monolingual informants for their response. The metalinguistic descriptions that are contained in sentences that were not disambiguated by "all" the informants - that did not fulfill the necessary requirements of the rule (R') - will be deleted from the list.

(3) A bilingual list of metalinguistic descriptions will be prepared for each tranunit according to the method outlined in 4.3. Then the test involving the bilingual population of informants will be carried out.

(4) The new bilingual substantive semantic characterizations will be compared for each pair of potential equivalents and conclusions will be drawn.

It should be feasible to apply this revised method to a given corpus. As explained in Chapter 4 (4.3.), the method used to try to identify equivalences was modelled on Harris's proposal for establishing synonymy (Harris 1973). Harris's model, however, remains theoretical as its advocator never tried to put it to the test of an empirical study to check that it could be used as a practical tool. This is the reason why a certain number of amendments may still have to be made during the course of the research.

5.2. First empirical study

5.2.1. Choice of corpus and informants

The principal aim of the practical application within the framework of this thesis is not to draw conclusions about specific subsets of the vocabularies of French and English; rather it is to establish whether the method is usable and yields interesting results. However the corpus chosen was a coherent subset of the vocabularies of both languages. This is in keeping with the principle universally applied in the discipline of terminology (e.g. Picht and Draskau 1985:33 and 160-164) that systematic research (covering a whole subject field) is more rigorous and reliable than a "punctual

investigation" (*loc. cit.*:162; dealing with one or a small number of terms). The field chosen was higher education as this domain was well-known to the researcher and an ample supply of knowledgeable informants was available. This field was narrowed down to three main sub-fields: (1) student affairs, (2) faculty and (3) administration. A total of 78 terms (39 English terms and 39 French terms) were studied (see Appendix 6). These terms were selected from a glossary (Secretary of State of Canada 1983) established by the Terminology and Linguistic Services Branch of the Department of the Secretary of State of Canada. As specified in 3.3.4.2., when they were syntagms then the tranunits were "indivisible collocations". The terms belong to a specific field and are technical in nature; it was therefore necessary to take into account a fact about language pointed out by Putnam (1978:65-67): that there is division of linguistic labour; every linguistic community possesses at least some terms which are known only to a subset of its speakers. This phenomenon cannot be overlooked. Therefore, in order to ensure that the informants were familiar with the meaning of the chosen vocabulary, they were selected amongst students and faculty of an officially bilingual university (Laurentian University in Sudbury, Ontario).

A technical field was chosen so that the meanings of the tranunits would be more easily delineated and the problem of meaning discrimination circumvented. It

seemed wiser to test the method in optimal conditions
before applying it to lexical translation problems.
Thus, if it is unsuccessful, its failure will not be
attributed to peripheral problems. On the other hand, if
the method works it will be necessary to ensure in
subsequent analyses that only one meaning is considered
at any given time (see 3.3.); this requirement, if it is
relevant, will be discussed after the study has been
conducted.

5.2.2. Sample size

As explained in Chapter 4, it was necessary to know
what sample size (number of informants) is required to
determine satisfactorily the metalinguistic descriptions
of one tranunit, e.g. if tranunits on average have 10
metalinguistic descriptions, how many informants are
needed to be 95 percent confident that all the
metalinguistic descriptions have been included. Using
the formula mentioned in Chapter 4 and the results of the
pilot study it was possible to calculate the size of the
sample. The formula is (see 4.4.):

$$[1 - (P)^n]^m = 0.95$$

where: n = number of informants

                 m = number of metalinguistic descriptions
                 P = probability any informant will forget
                     to include any metalinguistic
                     description he in fact knows

                 0.95 = 95 percent confidence level

For m = 11 (average number of metalinguistic
                 descriptions from pilot study)

P = 0.35 (probability calculated from pilot study; on average each word had 11 metalinguistic descriptions and on average each informant listed spontaneously 7.15 (some listed 6, some 7, some 8 and so on). Therefore on average they forgot 3.85 metalinguistic descriptions out of 11, which is a probability of forgetting of 0.35 (3.85/11).

if   n = 6

then $(1 - 0.35^6)^{11} = (1 - 0.002)^{11}$

$$= 0.998^{11}$$

$$= 0.978 \text{ (i.e. in excess of 0.95)}$$

Therefore, it was determined that with 6 informants the confidence level would be 97.8 percent. Using five informants gives slightly less than 95 percent confidence, but if seven informants are used instead the confidence level is 99 percent. In fact, with the improvements brought to the methodology after the pilot study was completed, the probability that n informants will each forget the same metalinguistic description is reduced, and therefore the confidence level is even greater than that calculated above. The main study, then had to use at least seven informants in each category (i.e. seven anglophones, seven francophones and seven bilinguals). In fact, the total of informants who accepted to participate in the experiment was divided as follows: 14 anglophones, 13 francophones and 12 bilinguals.

5.2.3. Results

5.2.3.1. Stage 1: Empirical componential analysis

In the first stage of the first empirical study, a definition was found for each one of the 78 terms, either in monolingual specialised documentation or in the terminology bank of the Canadian Secretary of State. From these definitions, metalinguistic descriptions were extracted (see Appendix 7) and respectively included in the first questionnaires (one French-Appendix 8F, one English-Appendix 8E) submitted to the monolingual informants. The purpose of this first questionnaire was to ask the informants to delete from the preliminary list of metalinguistic descriptions, established by the investigator, the expressions that they would not include in the meaning of the tranunits and to add any that they felt had been overlooked. From the responses two preliminary lists (one in French and one in English) of all the metalinguistic descriptions were compiled for each pair of tranunits (see Appendices 9F and 9E).

5.2.3.2. Stage 2: Disambiguation of test sentences

For each metalinguistic description, an ambiguous sentence was constructed. This exercise provided two questionnaires (one in French-Appendix 10F- and one in English-Appendix 10E) asking the informants to disambiguate the test sentences, taking into account the modifications made after the pilot study (see 5.1.2.).

The frequency distribution of the response `nobody' was
plotted for both the English and French samples. The
informants whose responses deviated significantly from
the average were removed from the sample as this
indicates they are not reliable. Figures 7 and 8 show
the two frequency distributions:

Figure 7:   Frequency Distribution of the Response
`Nobody' in the English Sample

Number of informants
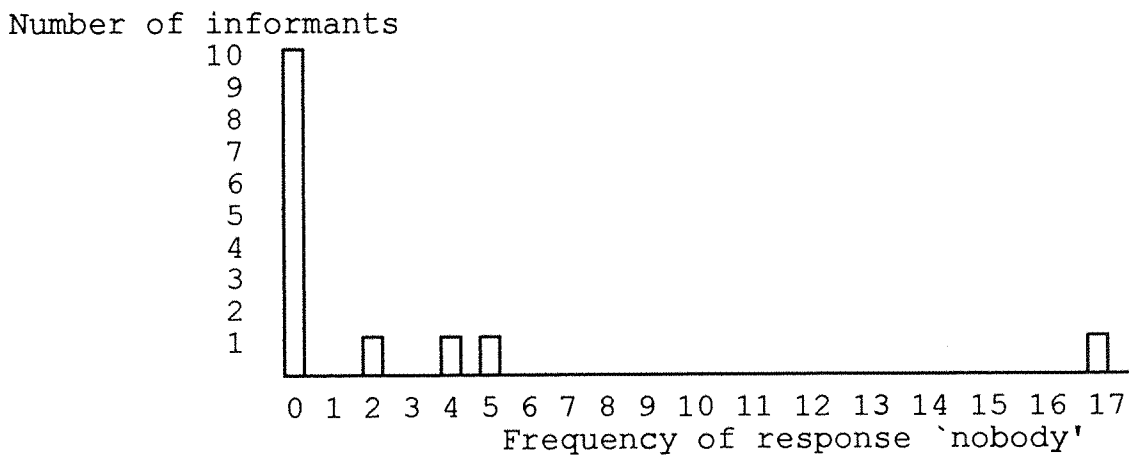
Figure 8:   Frequency distribution of the response
`personne' in the French sample

Number of informants
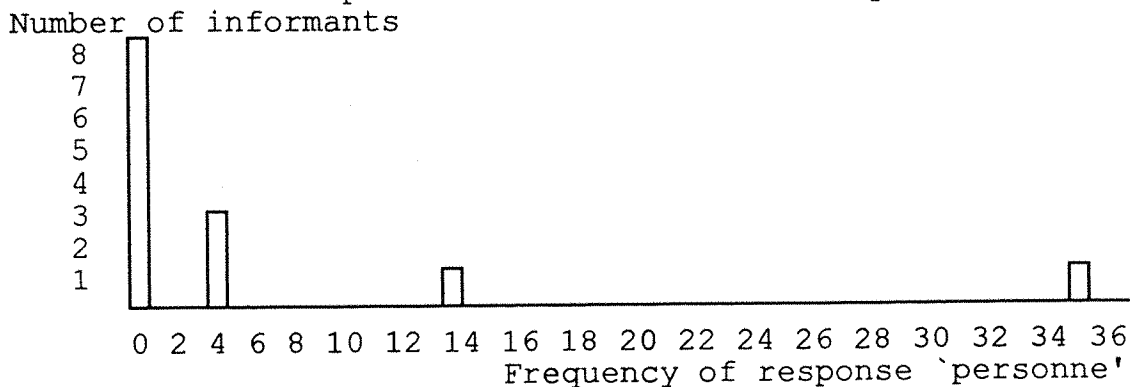
The outlying informant who had 17 replies of `nobody' was
removed from the English sample. Two outlying informants
who had respectively 14 and 35 replies of `personne' were
removed from the French sample. The number of informants

retained for the analysis was 13 in English and 11 in French.

After the answers to the test sentences were analysed, it was possible to compile, for each pair of supposed equivalents, two final lists -one in English and one in French- of the metalinguistic descriptions. As pointed out in 4.3., the expression `all speakers' used in the rule (R') is problematic. It cannot be taken literally as this would reduce the metalinguistic characterization of a tranunit to the lowest common denominator of that speaker who knows the least about the tranunit. In the empirical study, it was therefore necessary to replace `all' by `average' and to decide how many informants had to misdisambiguate a particular test sentence before the metalinguistic description was eliminated from the list. As a sample was used the number decided upon had to be statistically significant. The stage 2 questionnaire measures the frequency with which informants misdisambiguate sentences containing metalinguistic descriptions. This frequency can be formed into a distribution (see figure 9) which makes it possible to decide what is an unusual, significantly high number of misdisambiguations; that is the point at which it was decided that the metalinguistic description is not used by `all' informants to disambiguate a sentence and therefore is deleted from the metalinguistic characterization of the tranunit in question.

Figure 9: Frequency Distributions of
Misdisambiguations of Test Sentences

Frequency of misdis- ambiguations	Absolute Numbers	Percentage Distribution	Cumulative Percentage Distribution
0	463	87.7	87.7
1	52	9.8	97.5
2	9	1.7	99.2
3	3	0.6	99.8
4	0		
5	1	0.2	100
	528	100	

The distribution (figure 9) indicates that 87.7% of the sentences were misdisambiguated 0 times, 97.5% were misdisambiguated 1 or 0 times, 99.2% were misdisambiguated 2, 1 or 0 times. If a minimum 95% confidence level (97.5% in this case) is used, then a significant number is 2 or above because it is an unusual event that 2 informants misdisambiguate the same sentence - it occurs only (100 - 97.5) 2.5% of the time. It was then decided that a metalinguistic description would be eliminated if 2 or more informants had not used it to disambiguate the corresponding test sentence. From Appendices 11E and 11F, the following results emerged (Figure 10):

Figure 10: Results from stage 2

Tranunit	Metalinguistic description removed
ACADEMIC YEAR	annual session
ANNÉE UNIVERSITAIRE	livres
CONDITIONS D'ADMISSION	exigences
BACCALAURÉAT	permis pour faire une maîtrise
AUDITEUR	conditions d'admission différentes
ANNUAIRE	contrat
DEMI-COURS	session
COURS MAGISTRAL	notes au tableau
MINEURE	deuxième spécialisation
NOTE DE PASSAGE	C
ÉTUDIANT A TEMPS PARTIEL	plus âgé souvent a un emploi

5.2.3.3. Stage 3: Test involving bilingual informants

From the two final monolingual lists for each pair of potential equivalents, a bilingual list of metalinguistic descriptions was prepared for each tranunit according to the method outlined in 4.3. and a bilingual questionnaire was prepared (see Appendix 12EF). This questionnaire was then submitted to the bilingual informants asking them to delete the expressions (metalinguistic descriptions) that they would not include in the meaning of the words (tranunits) listed. After

the answers were received, it was established, for each tranunit, which metalinguistic descriptions had been deleted by how many informants (see Appendix 13EF).

5.2.3.4. Stage 4: Comparison of bilingual substantive semantic characterizations

The purpose of the study is not to measure the meaning of individual tranunits but to compare the meanings of pairs of potential equivalents. This introduces the notion of `significant difference': the point at which the absolute difference between the frequencies of deletion of a particular metalinguistic description in the two substantive semantic characterizations of a pair is high enough to be considered as a difference. This significant difference had to be determined.

The bilingual questionnaire measures the frequency with which informants delete metalinguistic descriptions. In order to decide on a cut-off point for the significant difference, a distribution was formed: the distribution of the difference in the deletions of metalinguistic descriptions between English and French tranunits (see figure 11).

The distribution indicates that, 60.5% of the time, the difference in the deletions of metalinguistic descriptions between English and French tranunits is equal to 0; 91% of the time, it is equal to 0 or 1; 97.2% of the time, it is equal to 0, 1 or 2; 99.2% of the time,

Figure 11:Distribution of the Difference in the
Deletions of Metalinguistic Descriptions
Between English and French Tranunits

Frequency of deletions	Absolute Numbers	% Distribution	Cumulative % Distribution
0	311	60.5	60.5
1	157	30.5	91
2	32	6.2	97.2
3	10	2	99.2
4	3	0.6	99.8
5	1	0.2	100
	514	100	

it is equal to 0, 1, 2, or 3. If a minimum 95%
confidence level (97.2% in this case) is used, the cut-
off point that seemed reasonable was 3 or more; if there
is an absolute difference of 3 or more, between the
English and the French tranunits of a pair, in the number
of deletions of a particular metalinguistic description,
this difference is a significant difference which has to
be discussed.

It is interesting to note that in the cases where
some metalinguistic descriptions are deleted, the
difference in the deletions between English and French
tranunits is rarely equal to 0. This seems to indicate
that the informants, as they were expected to do, did
treat separately the two tranunits of one pair,
especially in view of the fact that when the difference
is equal to 0, it is not necessarily the same informants

who deleted the particular metalinguistic description in
one tranunit and in the other.

5.2.3.5. Results from the first empirical study

Figure 12:Significant Difference in the Deletions of
Metalinguistic Descriptions Between
English and French Tranunits

Tranunit pair	Metalinguistic Description	Significant Difference E - F
ACADEMIC YEAR / ANNÉE UNIVERSITAIRE	temps	4 - 0 = 4
ADVANCED STANDING / ÉQUIVALENCE	beyond minimum	1 - 4 = 3
CREDIT / CRÉDIT	accumuler	1 - 4 = 3
DEGREE / GRADE	hiérarchie universitaire	2 - 6 = 4
ELECTIVE COURSE / COURS AU CHOIX	nécessaire	8 - 4 = 4
GRADUATION / COLLATION DES GRADES	rassemblement	4 - 1 = 3
HALF-COURSE / DEMI-COURS	court (fr.) half as many meetings	6 - 3 = 3 5 - 2 = 3
HONOURS DEGREE / BACCALAURÉAT SPÉCIALISÉ	intensive	4 - 1 = 3
LECTURE COURSE / COURS MAGISTRAL	théorie	3 - 0 = 3
MARK / NOTE	letter	4 - 1 = 3
REQUIRED COURSE / COURS OBLIGATOIRE	plusieurs	4 - 1 = 3
TERM / TRIMESTRE	4 months	0 - 5 = 5
TRANSCRIPT / RELEVÉ DE NOTES	enseignement post-secondaire	5 - 2 = 3

Tentative explanations for the lack of equivalence:

ACADEMIC YEAR / ANNÉE UNIVERSITAIRE:
It seems that the French term is perceived as a period of time more than the English term. When it comes to education, the French-speaking settings (France, Québec) have a traditional rigid system whilst the English-speaking system in Canada is very open (summer school, intersession, etc.). The English tranunit contains a less well defined concept of an academic year, whereas in French the `année universitaire' starts in October and finishes in June, i.e. it corresponds to a specific length of time.

ADVANCED STANDING / ÉQUIVALENCE:
Probably because of the presence of the past participle "advanced", the English term includes the notion of more than the minimum; on the other hand, the etymology of the French term seems to stress the concept of equality.

CREDIT / CRÉDIT:
The French term, in this case, may be perceived in a more abstract way than the English term.

DEGREE / GRADE:
In English, the `degree' is part of the university establishment more than the `grade' is in French. The distinction graduate/undergraduate does not exist in French.

ELECTIVE COURSE / COURS AU CHOIX:
Some `elective courses' are necessary for the degree but none in particular. In English, the concept of choice overrides that of necessity.

GRADUATION / COLLATION DES GRADES:
It is possible to graduate without attending the ceremony whereas the `collation des grades' is the ceremony. When it is the equivalent of `collation des grades', `graduation' is an abbreviation of `graduation ceremony'.

HALF-COURSE / DEMI-COURS:
The French term seems to retain more of the literal meaning than the English term; it is perceived as motivated more than the English term.

HONOURS DEGREE / BACCALAURÉAT SPÉCIALISÉ:
>   The determiner `honours' includes the notion of a
>   longer period of study whilst `*spécialisé*' stresses
>   a study more in depth of the subject matter.

LECTURE COURSE / COURS MAGISTRAL:
>   A `lecture course' is not necessarily theoretical in
>   nature whereas a `*cours magistral*' is.

MARK / NOTE:
>   A grade could be a letter but a `mark' is usually a
>   number; in French there is only one term for both
>   English terms.

REQUIRED COURSE / COURS OBLIGATOIRE:
>   In English, the fact that several `required courses'
>   are necessary for a degree is not included in the
>   meaning of the term.

TERM / TRIMESTRE:
>   In French, the etymology of the term containing the
>   notion of three restricts its meaning.

TRANSCRIPT / RELEVÉ DE NOTES:
>   The term `transcript' can apply to other educational
>   levels while the French term is used only for higher
>   education.

As expected, because the corpus was selected from a specialized field, most terms studied have direct equivalents. However, there were, as shown above, some minor differences in meaning which indicate that the method can lead to some good comparative insights. Depending on the context, these differences can have an impact upon translation. Concerning the pair `term/*trimestre*', for instance, it would not be possible in French to use `*trimestre*' to refer to a period of time which would not be perceived as equal to three months; it would have to be replaced by, say, *une période de quatre mois*.

5.3. Second Empirical Study

5.3.1. Choice of corpus and informants

After the method had been refined, it was decided to apply it again to the vocabulary subset used in the pilot study - *colère*/anger, *amour*/love, *haine*/hate, *bonheur*/happiness, *sympathie*/liking (for somebody). As these tranunits belong to everyday language, it was not necessary to select the informants from any special group of language users. However, out of convenience, they were mainly students and teachers. Furthermore, it was statistically established in 5.2.2. that with seven informants the confidence level that all the metalinguistic descriptions would be included was 99 percent. In this study, the total of informants was divided as follows : 13 anglophones, 14 francophones, 11 bilinguals.

5.3.2. Results

5.3.2.1. Stage 1: Empirical componential analysis

The first stage of the second empirical analysis was conducted in the same manner as the initial stage of the first one. Metalinguistic descriptions were extracted from dictionary definitions for each tranunit and included in the first questionnaires (see Appendices 14E and 14F) submitted to the monolingual informants. From the responses two preliminary lists (one in French and

one in English) of the metalinguistic descriptions were
compiled for each pair of tranunits (see Appendices 15F
and 15E).

5.3.2.2. Stage 2: Disambiguation of test sentences

Two questionnaires (one in French - Appendix 16F -
and one in English - Appendix 16E) containing test
sentences to be disambiguated were constructed and
submitted to the monolingual informants. The frequency
distribution of the response `nobody' was plotted for
both samples (see figures 13 and 14).

Figure 13: Frequency Distribution of the Response
`Nobody' in the English Sample

Number of informants
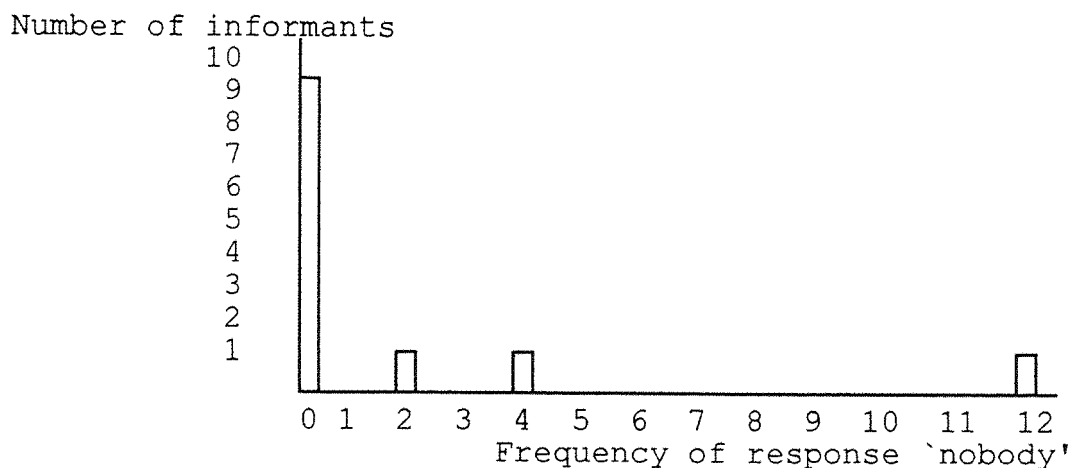
The outlying informant who had 12 replies of `nobody' was
removed from the English sample; no informant was removed
from the French sample. The number of informants
remaining for the analysis was then 12 anglophones and 14
francophones.

Figure 14: Frequency Distribution of the Response
`Personne' in the French Sample

Number of informants

```
11 ┌─┐
10 │ │
 9 │ │
 8 │ │
 7 │ │
 6 │ │
 5 │ │
 4 │ │
 3 │ │
 2 │ │
 1 │ │  ┌─┐ ┌─┐ ┌─┐
   └─┴──┴─┴─┴─┴─┴─┴──────
    0  1   2   3
```

Frequency of response `personne'
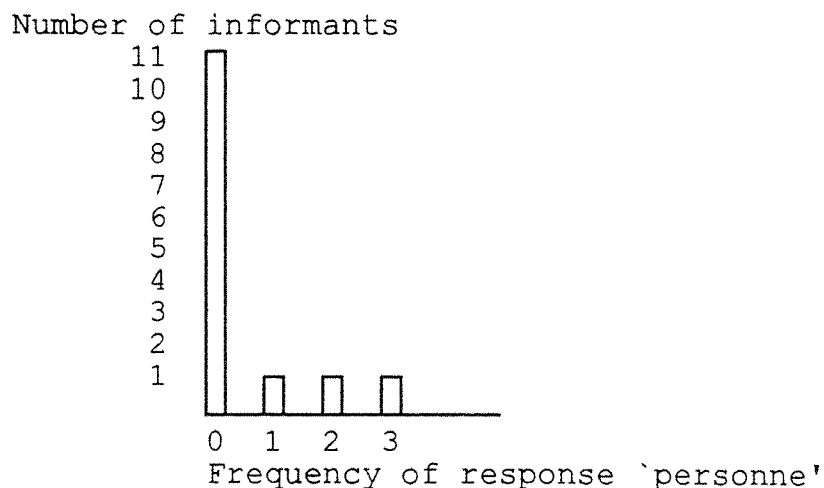
After the answers to the test sentences were
analysed, and for the reasons explained above (5.2.3.2.),
the distribution of the frequency with which informants
misdisambiguate sentences was drawn (see figure 15).

Figure 15: Frequency Distribution of
Misdisambiguations of Test Sentences

Frequency of misdis- ambiguations	Absolute Numbers	Percentage Distribution	Cumulative Percentage Distribution
0	65	65	65
1	22	22	87
2	7	7	94
3	2	2	96
4	3	3	99
5	1	1	100
	---	---	
	100	100	

It was then possible to decide that, if a minimum 95%
confidence level is used, 4 was, in this case, a
significantly high number of misdisambiguations and that
a metalinguistic description would be eliminated from the
metalinguistic characterization if 4 or more informants
had not used it to disambiguate the corresponding test
sentence.

From Appendices 17E and 17F, the following results
emerged (Figure 16):

Figure 16: Results from Stage 2

Tranunit	Metalinguistic description removed
LOVE	union
LIKING	respect
AMOUR	jalousie tolérance

5.3.2.3. Stage 3: Test involving bilingual informants

A bilingual questionnaire was prepared (see Appendix
18EF) according to the method outlined earlier (see
4.3.) and submitted to the bilingual informants. From
the answers to this questionnaire, it was established,
for each tranunit, which metalinguistic descriptions had
been deleted by how many informants (see Appendix 19EF).

5.3.2.4. Stage 4: Comparison of bilingual substantive semantic characterizations

As explained in 5.2.3.4., the `significant difference' between the frequencies of deletion of a particular metalinguistic description in the two substantive semantic characterizations of a pair had to be determined. Therefore, the distribution of the difference in the deletions of metalinguistic descriptions between English and French tranunits was formed (see figure 17).

Figure 17: Distribution of the Difference in the Deletions of Metalinguistic Descriptions Between English and French Tranunits

Frequency of deletions	Absolute Numbers	% Distribution	Cumulative Distribution
0	29	30	30
1	45	47	77
2	16	17	94
3	3	3	97
4	1	1	98
5	1	1	99
6	0	0	
7	1	1	100
	---	---	
	96	100	

The distribution (figure 17) indicates that, if a minimum "95% confidence level (97% in this case) is used, the

cut-off point is 4 or more; if there is an absolute

difference of 4 or more, between the English and the

French tranunits of a pair, in the number of deletions of

a particular metalinguistic description, this difference

is significant.

5.3.2.5. Results from the second empirical study

Figure 18:Significant Difference in the Deletions
of Metalinguistic Descriptions Between
English and French Tranunits

Tranunit pair	Metalinguistic Description	Significant Difference E - F
LIKING / SYMPATHIE	inclination (En.)	0 - 4 = 4
	être à l'aise avec	2 - 7 = 5
	compréhension	8 - 1 = 7

As in the pilot study (see 5.1.1.), "liking /

sympathie" was the only pair of potential equivalents

which showed some differences in the final metalinguistic

descriptions of the tranunits composing it. As mentioned

before (5.1.1.), this could be expected as it is usually

difficult to find an English equivalent for sympathie.

It would seem, then, that in English to have a `liking'

for somebody includes an `inclination' for that

person while it is not necessarily the case in French

with `sympathie'. Moreover, in English when you feel a

`liking' for somebody you are `à l'aise avec' this person

but there does not have to be `compréhension' between

you. Conversely, in French, when you experience

`sympathie' for somebody, you do not have to be `à l'aise

avec' this person but it is important that there is

`*compréhension*' between you.

As the results exhibited face validity and the
problems encountered in the pilot study seemed to be
remedied, it was decided to apply the method to a third
corpus.

5.4. Third empirical study

5.4.1. Choice of corpus and informants

In this analysis, the corpus chosen was not a
coherent subset of the vocabularies of both languages,
but a few pairs of potential equivalents representative
of particular phenomena. First, it was decided to test
this method with very clear-cut cases, cases for which
there is a strong consensus of opinion; this is why the
corpus included *soleil*/sun, *ordinateur*/computer, i.e.
pairs that are usually considered as exact equivalents.
Second, cases where one tranunit (in this instance,
English --designer, management) has a multiplicity of
(French) equivalents were studied; it was thought that a
qualitative analysis of the results obtained might
provide possible explanations for the multiplicity
phenomenon. Once again (see 5.3.1.), to help the
informants in meaning discrimination, specifications were
attached to some tranunits--e.g. `management (people)',
`management (action)'. Finally, a verb (to work) and an
adjective (beautiful) were added to the corpus in order

to check whether the method could possibly accommodate these parts of speech. The corpus therefore consisted of the following tranunits: *soleil* / sun, *ordinateur* / computer, *dessinateur* / designer, *concepteur* / designer, *cadres* / management, *gestion* / management, *administration* / management, *direction* / management, *management* / management, *travailler* / to work, *beau, belle* / beautiful.

Thirty-seven informants (13 anglophones, 13 francophones, 11 bilinguals) agreed to participate in this experiment, i.e. more than the minimum required (see 5.2.2.) for a 99 percent confidence level that all the metalinguistic descriptions would be included.

5.4.2. Results

5.4.2.1. Stage 1: Empirical componential analysis

The first questionnaires were constructed from dictionary definitions as per the method outlined in 5.1.3. (see Appendices 20E and 20F) and submitted to the monolingual informants. This resulted in two preliminary lists (one in French and one in English) of metalinguistic descriptions for each pair of tranunits (see Appendices 21E and 21F).

5.4.2.2. Stage 2: Disambiguation of test sentences

Stage 2 of the method, described in detail in 5.1.3., consists in constructing an ambiguous sentence

for each metalinguistic description and submitting these test sentences to the informants. This process is very costly in time and effort for both the investigator and the informants. In order to check whether this cumbersome step could be removed from the method, a test was carried out in the first two empirical studies. In both of these studies stage 2 was conducted normally and it was established which metalinguistic descriptions were eliminated (see 5.2.3.2. and 5.3.2.2.). However, the results obtained were not incorporated in the next stage, i.e. the eliminated metalinguistic descriptions were included in the bilingual questionnaire. This made it possible to see that in both studies the results would not have been different had stage 2 been removed.

Example: In the first empirical study, the significant difference in stage 4 is 3 or more (see 5.2.3.4.). As shown in figure 19, none of the metalinguistic descriptions eliminated at stage 2 exhibited a significant difference in the last stage.

Furthermore, doing away with the disambiguation of sentences amounts to removing the stage which was testing the two clauses of the rule (R') (see 5.1.2.) - that the monolingual informants (1) know the metalinguistic descriptions and (2) that they use them in the interpretation of sentences. As stated by Harris himself (1973:156), if the informants know the metalinguistic description, it would be very unlikely that they would not use it to interpret a sentence. Although the rule (R') is theoretically sound, from a practical point of

Figure 19:Results from Stage 4 for the
Metalinguistic Descriptions Eliminated in
Stage 2 (First Empirical Study)

Metalinguistic description eliminated in stage 2	Significant difference in stage 4
annual session	0 - 0 = 0
livres	7 - 5 = 2
exigences	0 - 0 = 0
permis pour faire une maîtrise	2 - 2 = 0
conditions d'admission différentes	2 - 2 = 0
contrat	7 - 5 = 2
session	0 - 0 = 0
notes au tableau	2 - 1 = 1
deuxième spécialisation	0 - 0 = 0
C	0 - 0 = 0
plus âgé	2 - 2 = 0
souvent a un emploi	1 - 2 = 1

view it is sufficient to test that the informants know

the metalinguistic descriptions established through stage

1. Now, the question is whether it is necessary to

reintroduce step 1 of stage 2 (see 5.1.2.) which

consisted in asking the informants to delete the

expressions that they would not include in the meaning of

the tranunits under study. The answer to this question

is negative: as bilinguals are a subset of monolinguals,

the stage 3 of the method, asking the bilingual

informants to delete from a bilingual list the

metalinguistic descriptions that they would not include

in the meaning of the tranunits, makes step 1 of stage 2 redundant. Indeed, there is empirical evidence that stage 3 includes the function which was performed by step 1 of stage 2. If the tranunit is English, the English metalinguistic descriptions in the bilingual list have been established as part of the meaning of the tranunit by English-speaking monolingual informants. It would not be expected therefore that bilinguals would delete any of them, but in fact in some cases they do and a plausible explanation for this phenomenon could be that they do not know the metalinguistic descriptions that they delete. The same could be said about a French tranunit; in this case the French metalinguistic descriptions would be expected to stay. The occurrence of this phenomenon is very scarce, as shown in the summary below (figure 20).

In view of all this evidence it seemed reasonable to remove stage 2 in order to make the method more manageable. The method used in the third empirical study therefore consisted of stages 1, 3 and 4 as outlined in 5.1.3.

Figure 20:Occurrences of Metaliguistic Descriptions Established by Monolinguals and Deleted by Bilinguals

Tranunit	Metalinguistic description	Number of bilinguals who delete the English meta-linguistic description in the English tranunit or the French in the French ...
	In the first empirical study:	
CRÉDIT	accumuler	4
GRADE	hiérarchie universitaire	6
HALF-COURSE	half as many meetings	5
HONOURS DEGREE	intensive	4
MARK	letter	4
	In the second empirical study:	
SYMPATHIE	être à l'aise avec	7
	In the third empirical study:	
DESIGNER	drafter	3

5.4.2.3. Stage 3: Test involving bilingual informants

A bilingual questionnaire was prepared (see Appendix 22EF) and submitted to the bilingual informants. This questionnaire was then analysed (see Appendix 23EF).

In the cases where one tranunit had a multiplicity of equivalents, the metalinguistic characterization of the tranunit in the bilingual questionnaire included its metalinguistic descriptions and those of all its

equivalents. However, in keeping with the methodology,
at the stage of the analysis, the metalinguistic
characterization of this tranunit consisted only of the
metalinguistic descriptions of the two tranunits being
compared.

Example: Metalinguistic characterization of the tranunit
            `designer' in the bilingual questionnaire
            (excluding the irrelevant metalinguistic
            descriptions used to test the reliability of
            the informants):
            devises designs; executes designs; idées
            nouvelles; publicité; works of art; inventeur;
            clothes; machines (En.); drafter; dessins
            industriels; créateur; dessins d'architecture;
            mise en scène; artist; makes model; artiste;
            creator; qui élabore des projets; dessins
            décoratifs; créateur d'images; innovative.

            Metalinguistic characterization of `designer'
            when compared with `concepteur':
            devises designs; executes designs; idées
            nouvelles; publicité; works of art; inventeur;
            clothes; machines (En.); drafter; mise en
            scène; artist; makes model; creator; qui
            élabore des projets; créateur; innovative.

            Metalinguistic characterization of `designer'
            when compared with `dessinateur':
            dessins industriels; devises designs; executes
            designs; dessins d'architecture; works of art;
            inventeur; clothes; machines (En.); dessins
            décoratifs; créateur d'images; artiste;
            drafter; artist; makes model; creator;
            innovative.

5.4.2.4. Stage 4: Comparison of bilingual substantive semantic characterizations

In order to determine the `significant difference'
(see 5.2.3.4.) between the frequencies of deletion of a
particular metalinguistic description in the two
substantive semantic characterizations of a pair, the
distribution of the difference in the deletions of

metalinguistic descriptions between English and French

tranunits was formed (see figure 21).

Figure 21: Distribution of the Difference in the
Deletions of Metalinguistic Descriptions
Between English and French Tranunits

Frequency of deletions	Absolute Numbers	% Distribution	Cumulative % Distribution
0	138	59.4	59.4
1	69	29.7	89.1
2	17	7.3	96.4
3	6	2.6	99.0
4	1	0.5	99.5
5	1	0.5	100
	---	----	-----
	232	100	100

The distribution (figure 21) indicates that, if a minimum

95% confidence level (96.4% in this case) is used, the

significant difference is 3 or more.

5.4.2.5. Results from the third empirical study

Figure 22: Significant Difference in the Deletions
of Metalinguistic Descriptions Between
English and French Tranunits

Tranunit pair	Metalinguistic Description	Significant Difference E - F
MANAGEMENT/ DIRECTION	technique (En.) practice science (En.)	1 - 6 = 5 1 - 4 = 3 4 - 7 = 3
TO WORK/TRAVAILLER	to contribute	0 - 3 = 3
DESIGNER/ DESSINATEUR	dessins d'architecture works of art drafter	3 - 0 = 3 1 - 4 = 3 3 - 0 = 3
MANAGEMENT/GESTION	performance (En.)	1 - 5 = 4

As it is apparent in Appendix 23EF, the clear-cut
cases (`sun / *soleil*' and `computer / *ordinateur*') show a
very high degree of equivalence. In the case of
`computer / *ordinateur*', 90.9% of the absolute
differences (E-F) are equal to zero. In these tranunits,
the *référent* (reality) is well described and defined, the
signifié (signified) is very precise; therefore, their
high degree of equivalence is not surprising. It is
interesting to note, however, that in the meanings of
`computer / *ordinateur*', the *référent* plays a bigger role
than the form. The etymological meanings of these two
tranunits are different:

$$\text{computer} \qquad = \qquad ordinateur$$
(latin, computare = calculer)   (latin, ordinare = mettre
de l'ordre).

This difference could be explained historically. The
term `computer' was formed early in the history of
computers, at a time when they were used only to compute.
Very quickly, however, computers were used for non-
numerical applications and the meaning of the term
changed even though the term retained the same etymology.
The French term, on the other hand, was created later and
therefore incorporated this shift in meaning. The
difference that exists in the forms of the two terms
would then not be further proof that the two languages
segment reality in a different way but rather evidence of
the evolution of the meaning of the tranunit. In any
case, this difference occured at the level of language

planning, when the terms were created; it seems, however, that it does not reflect a real difference in meaning between the two tranunits of the pair as they are used today.

If the results of the pair `designer / concepteur' are compared with those of the pair `designer / dessinateur', the French equivalent `concepteur' is the better one as there is no significant difference in the deletion of the metalinguistic descriptions of the two tranunits by the bilingual informants.  On the other hand, `*dessinateur*' is not as close an equivalent: a `*dessinateur*' may draw `*dessins d'architecture*' while a `designer' does not; a `designer' sometimes produces `works of art', a `*dessinateur*' does not; finally a `*dessinateur*' is also a `drafter' but this is not the case for a `designer'.

Appendix 23EF shows that, when `management' refers to `people', `cadres' is a close equivalent in French. If `management' is an action, two out of the four possible equivalents exhibited a high degree of equivalence: `*administration*' and `*management*'. On the other hand, the concept of `performance' present in `management' is not part of the meaning of `*gestion*'; and, `*direction*' is neither a technique, nor a practice, nor a science, whilst `management' is seen to be both a technique and a practice and, to a lesser extent, a science.

Finally, the results concerning the last two pairs seem to indicate that the method could be used for verbs and adjectives as well as for nouns. The adjectival pair `beautiful / *beau, belle*' consisted of two close equivalents; in the case of the verbal pair, the notion of contribution contained in `to work' is not part of the meaning of `*travailler*'. As mentioned before (2.3.1.), it is dangerous to draw psychological conclusions from linguistic evidence, but the fact that French society is more hierarchical may explain the difference between `to work' and `*travailler*'; it could be that in French, when people work, they do what they are supposed to, they do not feel that they `contribute'.

5.5. Conclusion

The method was modified to take account of the findings from the pilot study. The revised method was applied to two more corpora of potential French and English equivalents and again to the corpus of the pilot study. As it was the first time that this method was put to the test of empirical research, it had to be refined further during the course of these studies. The set of procedures finally adopted differ somewhat from the ones originally suggested by Harris's proposal, but they are not substantively different.

The first empirical study demonstrated that the method has face validity when applied to a specialized field; most tranunits have direct equivalents and this

was supported by the findings. The second empirical study applied the revised method to the corpus used in the pilot study which consisted of emotive tranunits from everyday language. The results also showed that the method produces results with face validity. The problems encountered in the pilot study were no longer apparent when the revised method was utilized. The third empirical study used the revised and refined method with a corpus that represented the following cases: pairs that are usually considered exact equivalents; tranunits which have a multiplicity of equivalents; verbs; and, adjectives.

The method developed, which has been revised and refined during the phases of the research seems to be workable: it indicated as equivalents pairs of potential equivalents for which there was a strong consensus and found differences where they could be expected. However, the analysis of the various corpora also uncovered some drawbacks and idiosyncrasies of the method which will be reviewed in Chapter 6.

Chapter 6: Conclusions

6.1. Plausibility of the results

The purpose of Chapter 5 was to test the hypothesis formulated in Chapter 4 that a method modelled on Harris's proposal for establishing synonymy (Harris 1973) could be effective in measuring the degree of equivalence existing between two tranunits belonging to two different languages (in this case French and English).

At the outset of the practical application (see 5.1.: the pilot study), the proposed method seemed to work as the results exhibited face validity - all expected equivalent pairs of tranunits turned out to be equivalent, and all expected non-equivalent pairs to be non-equivalent. The results of the second empirical study, which used the same corpus as the pilot study, confirmed those findings. The third empirical study consisted of two pairs of expected equivalents, which proved to be equivalents, and nine pairs of unclear cases, four of which were found to be non-equivalent, as their final semantic characterization differed by one, two or three semantic descriptions; these results still exhibited face validity. The thirty-nine pairs of tranunits composing the corpus of the first empirical study were expected to be equivalent as they belonged to a technical lexical field. As it turned out, nine pairs, that is 23%, were identified as non-equivalent because their semantic characterizations differed by one metalinguistic description. The latter findings raise one question: by how many metaliguistic descriptions

should a pair of semantic characterizations differ before they are deemed to be non-equivalent? In fact, it is not necessary to find a solution to this issue since, as stated in Chapter 1, the objective of the method in not to establish equivalence, but to measure its degree. To test the validity of the method it was important to verify whether it was usable, replicable and could yield useful results, and whether plausible explanations might be given for the differences ascertained. This is what was attempted in Chapter 5. There seems to be evidence for the hypothesis: that the method can measure the degree of equivalence between two potential equivalents. Notwithstanding, it also exhibits, both on the theoretical and practical levels, limitations that require further discussion.

6.2. Limitations of the method

6.2.1. Logistical limitations

Logistically, the amendments put forward in Chapter 5 have rendered the method much more manageable; however, it is still somewhat cumbersome for the investigator and also demanding for the informants. Further research would be necessary to determine whether the results and the applicability of the method warrant the time and effort involved.

6.2.2. Meaning discrimination

Another limitation of the method stems from the problem of meaning discrimination. The tranunits of the pair `beau / beautiful' emerge as close equivalents but there are several situations in which they are not (for instance, `beautiful' would not normally be used to describe a man while `beau' could be). It could be argued that, although this is not the stance that will be taken (cf. 6.4.), the equivalence measured by the method is an equivalence of meaning, not of use. Other factors - connotation, collocation, register - come into play at the next level of the exegetic process (cf. Delisle 1984:101-112)). First the semantic equivalence `beau / beautiful' is established; then the collocational restriction - men are `handsome' not `beautiful' - is applied and the contextual equivalent, `handsome', is used. Similarly, `bouffer' has the same meaning as `to eat' but considerations of language register suggest a more colloquial synonym (e.g. `to nosh'). Even in cases where the tranunits of a pair are found to be equivalent, the method will not necessarily provide the translator with an easy, ready-made solution. These remarks, however, seem to be symptomatic of an endemic problem, namely, the restricted degree of sensitivity of the method in terms of meaning discrimination as decided by the investigator and meaning discrimination as understood by the informants. The solution advocated in Chapter 3 (3.4.2.1.1.) was to provide the informants with

contextual parameters, as, for instance, in the case of `liking' (towards somebody) or `management' (people) / `management' (action). Thus to overcome the shortcomings mentioned above, contexts would have to be tighter and the tranunits compared would need to be, for instance, `beau' (*homme*) and `handsome' (man). This would require that meaning discrimination be more rigorous so that the necessity for the tranunit, stated in Chapter 3 (3.3.4.1.), to have a single meaning be ensured. The theoretical and practical implications of this limitation will be reviewed (6.3.) and a solution proposed (6.4.).

6.3. Critique of the method

6.3.1. Critique of the method in the light of the theory

As stated in Chapter 3 (3.4.2.1.), the meaning of a tranunit is the constant contribution it makes to the meaning of any sentence in which it occurs. In order to communicate that meaning to informants, it was therefore necessary to give them the data that would allow them to grasp the particular contribution. Since that contribution is context-specific in the sense that it manifests itself in a specific set of contexts, it was decided that this generic context should be represented by parameters [`liking' (for somebody)] that would act as meaning boundaries. While seemingly acceptable, this proved to be questionable on the practical level as the problems created by polysemy were obscured by the

theoretical commitment that a tranunit has one meaning.
The difficulty of applying the one unit-one meaning
criterion had been underestimated.

6.3.2. Practical problems created by polysemy

As stated in Chapter 3 (3.3.4.1.), equivalence
between tranunits requires a maximisation of homonymy,
which obviates the problem of deciding to what traneme
(family of tranunits - term coined on the model of
lexeme, see 3.3.4.1.) a certain tranunit should be
assigned. However, it does not remove the polysemous
nature of the traneme. While in practice it is possible,
in most cases and in a monolingual setting, to isolate
the discrete meanings of tranemes (see 3.4.2.1.7.), this
monolingual discrimination is not necessarily practical
or helpful in a bilingual analysis. First, such
discrimination is not always easy to establish and cannot
be based on the definition of a single dictionary since,
as explained in Chapter 2 (2.1.3.2.), no dictionary
definition can be exhaustive and definitions often vary
from one dictionary to another. Collins, for instance,
assigns five meanings to `management' while Webster lists
four, of which only three correspond to those given by
Collins. Secondly, even if this hurdle can be minimized
by recourse to several dictionaries or any other means
available to the investigator (discussed by Cruse
1986:71-74), a monolingual meaning discrimination is not
necessarily what is needed in a bilingual study.

Polysemy is determined by the native speaker's feeling of
relatedness which constitutes the principal evidence for
it (by distinguishing it from homonymy, see 3.3.4.1.).
The obvious polysemy which English speakers, for
instance, feel to be part of their linguistic knowledge
in a particular case often does not extend to the
equivalent tranemes in other languages. There are many
tranemes which native speakers regard as being
polysemous, but when rendered into other languages, they
result in a different tranunit for each of the senses,
which speakers of the other languages consider to be
totally unrelated. In English, for instance, one speaks
of a smooth surface, road, sea, stone, fabric, tyre,
hair, skin, sauce, flavour, voice, etc. In French, where
there is no one traneme which carries the distinct
connotations of `smooth' in all these contexts, each
connotation will be expressed by a different tranunit.
This shows clearly that the decision as to where to draw
the line between two discrete meanings of a given traneme
involves the other language of the pair. In other words,
the distinction, say, between `smooth fabric' and `smooth
sauce' will be reinforced by the fact that in French
`smooth' would be compared with `*soyeux*' when it
qualifies a fabric and with `*onctueuse*' when it is
associated with sauce. Indeed, it is quite possible,
although this would have to be verified, that the
existence of two different tranunits in the other
language might be a tight enough criterion for meaning

discrimination in the context of equivalence. If there were a French traneme like the English traneme `smooth' which could be applied to a fabric and a sauce, the need to separate these two context parameters might not be felt even if a meaning distinction were found on the monolingual level. A more clear-cut example might be `owl' / `hibou' / `chouette', as in this case there is no meaning discrimination on the monolingual level in English. In any event, even if it is not a sufficient criterion, it is a necessary one as the two tranunits compared are potential equivalents (3.3.6.). It is certainly a criterion which was used in the cases of `dessinateur' and `management' in the third empirical study.

In logical terms, two tranemes such as `smooth' and `soyeux' do not have the same extension. This means that the problem is compounded because it involves a chain reaction: each tranunit in the target language which translates one sense of the polysemic traneme belongs, in most cases, to a polysemic traneme too. Chapter 3 stated that the aim of the method was not to answer philosophical questions such as "Is extension part of the meaning of a tranunit?". It also stressed that each tranunit has one meaning (3.3.4.1.) and that the tranunits of a pair are potential equivalents (3.3.6.). While this removes problematic theoretical issues and makes translation possible, it does not solve all the practical aspects of a contrastive lexical analysis. The

method used does not eliminate the fact that the speakers

of, say, English, may have intuitions about the polysemy

of `smooth' which they cannot share with speakers of,

say, French. This is not a problem in itself and can

indeed be very informative as the anisomorphism

established between pairs of potential equivalents may

sometimes be accounted for in terms of non-sharing of

polysemy. While such a phenomenon may have consequences

for the effability principle, it does not affect the

comparison of tranunits as long as meaning

discrimination is rigorous. The problem the investigator

faces is not the philosophical question of whether the

polysemy of the traneme is part of the meaning which the

tranunit has for the informant, but whether, if polysemy

persists, it does so in regard to the sense being

compared at that point. In other words, should polysemy

persist because the common element of meaning is still

present, the investigator wants to know whether it does

so when `smooth' is associated with `fabric' if he is

comparing this tranunit with `*soyeux*'. It is not enough

to dismiss this problem by saying that only one meaning

is compared since the task must never involve comparison

by the informants. As pointed out in Chapter 4, to avoid

circularity the informants must never know that the

object of the exercise is to compare `smooth' with

`*soyeux*'. Unlike the investigator, then, the informants

cannot use the above mentioned criterion by taking into

account the way the different meanings are expressed in

the other language. The difficulty for the investigator, when the traneme is polysemic, is to ensure that the meaning analysed by the informants is the correct one, that they draw the line where they are expected to. It is not so much a question of finding a linguistic boundary to the meaning described (3.4.2.1.2.) but of establishing clearly the boundaries of one sense of the traneme. The contextual parameters mentioned in 6.2.2. could be sufficient for isolating the sense under scrutiny and the tranunit could be, for instance, `smooth' (fabric). This implies, however, that the investigator should think of all the collocations relevant to meaning discrimination before submitting a tranunit to the informants, which may be unrealistic especially when the traneme is highly polysemic, as is notably the case with adjectives. Another solution will be proposed below (6.4.).

6.3.3. Size of the tranunit

It was specified in Chapter 3 that the tranunit should be at least one word, word being taken in its pre-scientific sense of textual unit between two spaces (3.3.3.), and that if it is composed of more than one word, it should be an indivisible collocation (3.3.4.2.). The size of the tranunit was then determined by semantic cohesion on the monolingual level. While theoretically valid, this approach will not be sufficient because individual languages segment reality differently

(2.2.3.). In the same way that the meaning
discrimination has to be a bilingual decision (6.3.2.),
the fact that the tranunits compared are potential
equivalents has consequences for their length.
`Chauffard', for instance, is an interesting case to
analyse in this respect. Its potential equivalent is
usually considered to be `reckless driver' (e.g. Robert
and Collins 1993) as in "He was run over by a reckless
driver", "*Il a été renversé par un chauffard*". It could
also be `hit-and-run driver', as in "The police are
looking for a hit-and-run driver", "*La police est à la
recherche d'un chauffard*". This does not create any
practical problem. As was done for `designer' in the
third empirical study, the proposed method could analyse
two (or more) pairs of potential equivalents: `*chauffard
/ reckless driver*' and `*chauffard / hit-and-run driver*'.
It would establish, for instance, whether the decision
was justified not to include `*coupable de délit de fuite*'
to translate `run' in `hit-and-run' as being redundant in
the context. The question is whether `reckless driver'
or `hit-and-run driver' would be indivisible collocations
in the sense defined in Chapter 3 (3.3.4.2.), that is as
bound semantic wholes. They seem to belong more to the
category of endocentric collocations since their meaning
is determined by the meanings of the parts and by their
combination, like the meaning of Harris's example `red
roof' versus `white elephant' (3.3.4.2.). A reckless
driver is a driver who is literally reckless, and a hit-

and-run driver is a driver who hits (a pedestrian or a car) and runs (away from the scene of the accident). Furthermore, as the expression `hit and run accident' is used in the language, on a monolingual level there is evidence that `hit and run' can stand on its own. Now, it was stated in Chapter 3 (3.3.4.2.) that, in the context of equivalence, the criteria used to isolate relevant collocations are semantic in nature; that endocentric collocations would not be considered as a single tranunit and would not constitute data for analysis unless they were indivisible collocations. This statement ignored the fact that in a contrastive analysis the decision has to involve both languages. Indeed, there does not seem to be any reason to treat `reckless driver' or `hit-and-run driver' as tranunits other than the fact that their potential equivalent in French is a one-word tranunit, `*chauffard*'. The conditions for including an endocentric collocation in the analysis should therefore be modified and the following criterion added: that its potential equivalent be a tranunit as defined in Chapter 3 (a word or an indivisible collocation).

6.4. Generic context as a solution

The only way to solve the problem of meaning discrimination inherent to the method (cf. 6.2.2.) seems to be to provide the informants, at every stage of the process and for each tranunit, with a generic context –

several sentences found in untranslated texts and
containing the tranunit. This is consistent with the
theoretical issues discussed in Chapter 3 (6.4.1.) and
presents several practical advantages (6.4.2.). The
final method proposed will then include the following
stages:

(1) A set of sentences will be collected for each
tranunit to form the generic context which will be
provided to the informants at stages 2, and 3.

(2) A preliminary list of possible metalinguistic
descriptions extracted from monolingual dictionary
definitions will be compiled for each tranunit in both
languages. Monolingual informants will be asked to
delete from these lists the expressions that they would
not include in the meaning of the tranunits, as
exemplified in the generic contexts, and to add any that
they felt had been overlooked. From the responses, two
preliminary lists (one in each language) of all the
metalinguistic descriptions will be compiled for each
pair of tranunits.

(3) A bilingual list of metalinguistic descriptions
will be prepared for each tranunit. It will be formed of
all the metalinguistic descriptions contained in the two
lists compiled for each pair in stage (2) and a few
irrelevant ones. Then the test asking the bilingual
population of informants to delete the expressions that
they would not include in the meaning of the tranunits,

as exemplified in the generic contexts, will be carried
out.

(4) The new bilingual substantive semantic
characterizations will be compared for each pair of
potential equivalents and conclusions will be drawn.

6.4.1. Generic context in the light of the theory

6.4.1.1. Generic context and meaning of a tranunit

The proposed use of a generic context is consistent
with the definition given (3.4.2.1.) of the meaning of
the tranunit as being the contribution it makes to all
the sentences in which it occurs. It makes irrelevant
the question of whether it is possible to give the
meaning of a tranunit in isolation. Although
philosophical issues lie beyond the scope of this study,
it is worth noting in passing that this representation of
the meaning of tranunits coincides with the views of
several philosophers that the meaning of a word is
revealed in its use. Although they disagree on other
issues, Wiggins (1971) and Alston (1971), for example,
both state that to actualize their meaning, words have to
be included in sentences. According to Wittgentein
(1953), it is not correct to describe the meaning of a
word by starting from the thing or concept it is assumed
to designate; semantic analysis must start from the use
of the word. Following his reasoning, the problem of
expressions often considered as indefinable (e.g.

`justice', `moral value', etc.) is solved and there can
be no ineffable meanings in a language. Furthermore he
thinks that every significant expression in a language
that makes a non-trivial contribution to the contexts in
which it occurs is semantically non-empty and therefore
can be explained: even if there is no general explanation
of what they mean in isolation, for every context of
occurrence there is a complete explanation, and
explanation by example will express what the words mean.

6.4.1.2. Generic context and circularity

The proposal to use a generic context respects the
principle established in Chapter 3 (3.4.2.1.1.) that the
role of context should be limited to the monolingual
stage if the method is to be non-question-begging. At
the bilingual stage of the analysis, only one tranunit is
considered at a time and the generic context is in the
same language as the tranunit. This device does not
reintroduce the circularity present in the contextual
method rejected in Chapter 2 (2.3.3.) since at no stage
of the process are contexts compared across languages.
The informants consider one generic context at a time;
they do not equate contexts.

6.4.1.3. Linguistic versus contextual meaning

The proposed usage of a generic context is also in
accordance with what was stated in Chapter 2 (2.1.3.2.)
concerning the contrast often made between linguistic and

contextual meaning. The meaning of a tranunit is always linguistic as well as contextual. It is linguistic in the sense that it draws upon one shared potential meaning of the traneme, and it is contextual as actualization of the meaning in question occurs from a set of contexts in which the tranunit has that meaning. Although this set is theoretically infinite, for practical reasons it will be finite for the informants. Before it can be represented by metalinguistic descriptions, the latent meaning of a tranunit has to be exemplified in a generic context.

6.4.2. Practical advantages of the new proposed method

First of all, if informants are used in an empirical semantic analysis, it is imperative to give them all the available data. As mentioned in Chapter 3 (3.4.2.1.1.), context is part of that data. It is normally much easier to elicit meaning by making informants react to sentences rather than by trying to establish it out of context.

Secondly, and most importantly, the generic context helps both the investigator and the informants to discriminate meaning and to choose one meaning from the several which exist latently within a polysemous traneme, whether or not that meaning is recorded in dictionaries.

The generic context is also informative about the connotation and the collocational spread of a tranunit. As established in Chapter 3 (3.4.2.1.1.), these aspects may have to be considered when measuring equivalence.

While a connotation of a tranunit can be specific to one
language user, it is most often lexicalised and shared by
the linguistic community (Chuquet-Paillard 1989:219-221);
it is therefore part of the meaning of the tranunit in
the particular generic context, endowing it with its
distinct meaning. Connotation is usually expressed in
terms of oppositions (such as cognitive / emotive meaning
[night = opposite of day and night = death, etc.), the
most widely recognized of which is the appreciative /
derogatory opposition. Connotation plays a role in the
choice the investigator makes of a potential equivalent;
it will force him for example to compare `individual'
with `personne' if the context is neutral or positive, as
`individu' tends to have a pejorative connotation. On
the other hand, the method could be used to verify an
hypothesis such as that just presented. As regards
collocational spread, see, for instance what was said
about `smooth' (6.3.2.).

The use of a generic context might also help to
solve the problem of register. It is quite possible, for
instance, that `eat' and `bouffer' would be shown to have
the same meaning by the method, but it is not unlikely
that a generic context would stress for the informants
the contextual restriction due to the difference in
register and make them include familier / argot as a
metalinguistic description of `bouffer'.

Finally, if a particular generic context is given to
the informants, there is no longer any need for

contextual parameters and deciding whether they are
required becomes irrelevant.

6.5. Applications of the method

As the final method described in 6.4. is more
straight-forward both for the investigator and the
informants, it seems reasonable to suggest that it might
be replicable, of practical interest and useful to
translation and lexicology.

6.5.1. Contribution of the method to translation

As pointed out in Chapter 2 (2.1.2.), lexical
equivalence plays a key role in the translation process.
In translation, as in lexical equivalence, only one
meaning is involved at any one time, namely the meaning
in the context that is being considered. Within the
translation process, the information resulting from the
use of the method is useful in situations where the
syntax is preserved and an equivalent is needed, that is
where a tranunit in the target language is required to
translate a tranunit in the source language. Naturally,
if the two tranunits compared are found to be equivalent,
the translator can use one to translate the other. On
the other hand, the differences isolated between the two
tranunits of a pair provide information about the
differences in meaning that exist between the two
potential equivalents. This data can provide guidance to
the translator, who will decide whether it is relevant or

not in the context. According to lexicographical
sources, for instance, one of the causes of yawning for
French speakers is hunger (cf. definition in Petit
Robert), whereas English speakers do not associate
yawning with hunger (cf. Collins). It could be assumed
then, that the tranunit `bâiller' would have `faim' as
one of its metalinguistic descriptions while `to yawn'
would not. This difference in meaning alone would not
create any problem for the translator except when it is
crucial to the context, as in the sentence "Paul bâille
parce qu'il a faim" as "Paul is yawning because he is
hungry" would strike the native speaker as anomalous.
The translator would have to consider a larger context to
solve this difficulty (For a classification of the
solutions to such problems see Baker 1992). Although the
method would not provide him with an answer it could make
him aware of the problem. In the corpora studied, it was
found, for instance, that the metalinguistic description
`compréhension' is present in the semantic
characterization of `sympathie' while it is absent in
that of `liking'; therefore, according to these results,
in the sentence: "Je pense qu'ils éprouvent beaucoup de
sympathie l'un pour l'autre, ils se comprennent très
bien", `liking' would not be a possible translation of
`sympathie'. A possible translation could be: "They get
along very well, they understand one another". Likewise,
`four months' is a metalinguistic description found in
the semantic characterization of `term', which is not in

`trimestre'; as a consequence, `term', as in "She has
gone to France for one term", could be translated in
French by `trimestre' only if the term in question were
three months long; if it lasted four months and this
information were pertinent, it would be better to
translate it as "*pour une période de quatre mois*".
Finally in the case of `designer', as indicated in
Chapter 5, in the context of architecture it could be
translated by `*dessinateur*', while this would not be
possible in an artistic setting.

The method might also be helpful in instances where
it is difficult to find an exact equivalent in the target
language insofar as the answer could sometimes be found
in the metalinguistic descriptions of the tranunit in
question. For instance, to take one of Newmark's
examples cited in Chapter 3 (3.4.3.2.3.), if the method
were used to compare `*élancé*' with, say, `slender' , it
might be found that the metalinguistic description
`*grand*' contained in `*élancé*' gets eliminated in
`slender', in which case the translator would be
justified in adopting the equivalent `tall and slender'.

It seems, then, that differences between the
meanings of two tranunits revealed by the method could be
of some use to the translation process. Considering the
amount of work involved, it would be used only for
restricted problematic cases; in this regard, it might be
possible to use the method to construct specialized
dictionaries. Another potential application lies in

electronic bilingual dictionaries used in machine
translation, as the method would provide the computer
with an easy way of comparing the meaning of tranunits.

6.5.2. Contribution of the method to bilingual lexicography

Although it was not originally intended for that
purpose, the proposed method could also help in
establishing core meanings of polysemous tranemes, such
as smooth; the core meaning would be the different
metalinguistic descriptions that the tranunits share in
different generic contexts. This core meaning could be
schematically represented as follows:

Figure 23: Schematic Representation of Core Meaning
traneme: smooth
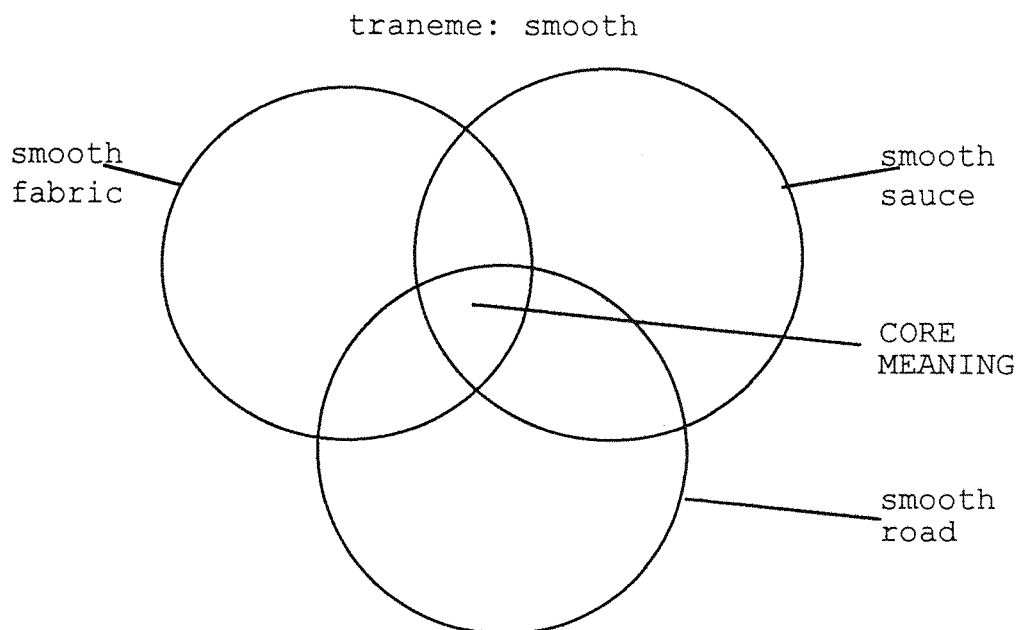
Note: circles = sets of metalinquistic descriptions

If the tranunit `smooth' (fabric) was compared with

`*soyeux*' (tissu) and the core meanings of the tranemes

`smooth' and `soyeux' were known, it would be possible to

decide whether any anisomorphism between the two

tranunits is due to a difference in polysemy, as it would

be feasible to see whether the metalinguistic

descriptions by which they differ belong to their core

meaning.

6.6. Possibility for further research

The objective of the research was to find a method
to measure equivalence. Now that this method has been
finalized, it would be of interest to apply it to a
corpus of problematic cases.

The starting point of the method was Harris's
proposal for establishing synonymy. The result of the
changes is a finalized proposed method consisting of a
somewhat different set of procedures from the ones
originally suggested by Harris. However, this does not
invalidate the analogy drawn in Chapter 4 between
synonymy and equivalence as the problems encountered
would have applied to synonyms had the method been put to
the test. In its new form, the method could also be
applied to synonyms - the bilingual stage being of course
replaced by an equivalent monolingual one - and might
yield interesting data for both the lexicographer and the
translator since the dictionary definition often does not
provide the appropriate answer.

Furthermore, while the `car' in the two examples
from Cruse cited in Chapter 3 (3.4.2.1.1.):

(1) The car needs servicing

(2) The car needs washing

would be considered as one tranunit and the two sentences
as belonging to the same generic context (in both cases
it is the whole car which is being referred to), in a
monolingual study it could be interesting to verify
whether the two contexts actually do make a difference to
the native speaker's intuitions about the meaning of
`car'. The method applied to synonymy could be used to
that end.

Finally, to measure the extent of the usefulness of
the method, it would be interesting to measure the
percentage of cases where literal translation is possible
between two languages, since a high percentage would
validate the comparison of tranunits. For example, one
way of doing this could involve taking a hundred or more
(the necessary sample size would have to be calculated
using principles of statistics) sentences at random from
English texts and translating them into French, using
plausibility as a criterion in the decision of whether or
not to preserve the syntax. This exercise would also
provide data that could be used in a sideline study of
the reasons why, in certain cases, word-for-word
translation is unsatisfactory or impossible. This
analysis would be useful for drawing generalisations that
would go beyond ad hoc solutions to isolated cases.

6.7. Conclusion

This study has shown that the answer to the question of whether it is possible to measure lexical equivalence with an empirical method seems to be affirmative. However, as mentioned before, considering how cumbersome the proposed method is, it would probably be used only for cases which present a grey area, and the scope of its usefulness would be measured in terms of quality rather than quantity.

APPENDICES

Appendix 1E: Stage 2 of Pilot Study (1) - Eliminating Metalinguistic Descriptions

Please cross out the expressions that you would not include in the meaning of the following words:

ANGER:

seeing red; seeing daggers; hot; red; violent; seething rage; look back in anger; explosive; jolly; smacking children; strike out in anger; wrath; scowl; frown; glare; passive; rampage; temper tantrum; aggravate; resentment; tranquil; stern; frustration; attack; scream; intimidate; frighten; fighting in streets; bullies at school; memories of people once loved; red faces; raised fists; bloody noses; bruises; broken bones; irritation; injustice; selfishness; short-sightedness; seeing people portray an "I'm all right Jack!" attitude; prejudice on the grounds of sex and/or colour; temporary emotion; sense of being wronged; built up of tension; difficult to control; culminating in abuse or violent action; extreme annoyance; irrational damaging action; fierce; fury; tears; upset; hit; shout; stamp; jealousy towards others; hurt.

LOVE:

happiness; sex; making love; flowers; togetherness; sadness; my children; women; enduring; fulfillment; affection; touch; uncaring; want; share; joy; desire; hope; passion; dislike; warmth; home; man; woman; child; tenderness; excite; care; friendship; mother-love; kindness; rapture; devotion; cherish; adore; respect; intimate; white weddings; mothers and newly-born babies; small fluffy animals; couples; sunsets over a calm sea; shady walk in forests; early morning; security; pleasure; mutual understanding; appreciation of someone; having fun; complex emotional feeling or mood towards others; desire; craving to be in company with; to comfort; take pleasure in being in physical contact with spouse, partner, children; compassion; need to give of oneself; overwhelming desire to help; protect; relieve suffering or anguish; to be needed and feel needed; to give protection and feel protected; families.

HATE:

oppression; distate; violence; cruelty; heart beats
strongly; despise; kindness; extreme dislike; awful
despair; venom; revulsion; loathe; warmth; bitterness;
aversion; animosity; spite; wars; fighting people; loosing
relations and friends; like towards somebody; dislike at
being left out; dentist; doctors; feeling ill; having
injections; suffering; ignorance or disregard particularly
from those who should know better; destruction for the
sake of it; acceptance of superficiality without looking
deeper; revulsion at the image or presence of a person;
mistrust taken to the extreme; destructive attitude;
examinations.

HAPPINESS:

joy; contentment; love; heaven; paradise; safe; warmth;
delight; exhiliration; relief; free from worries; relaxed;
despair; pleasure; glee; christmas time; birthdays; warm
summer day; end of a day's work; gloomy; parties; friends;
laughter; well-being; looking forward to the future with
pleasure; enjoying what you are doing now; making `fate'
work for you; foreboding; enjoying and appreciating the
world around you; being in the company of those you love;
excitement with pleasure; to feel in a pleasant mood; no
exhilarating high spots or lows

LIKING (towards somebody):

warmth; affinity; to like people in spite of their
personality; fondness; regard; respect; despise;
friendship; camaraderie; kindness; relaxed and happy in
the company of fellow; trust; understanding; day dreaming;
distrust; apprehension; love; togetherness; marriage;
families; best friends at school; admiration; disgust;
adoration; enjoying somebody's company; ease; comfort of
being in somebody's presence; pleasurable conversation;
enjoying somebody's personality; enjoying somebody's
visual appearance.

Appendix 1F: Stage 2 of Pilot Study (1) - Eliminating Metalinguistic Descriptions

Veuillez rayer les expressions que vous n'incluriez pas dans le sens des mots suivants:

COLERE:

violence; agressivité; incompréhension; joyeux; frustration; insatisfaction; passivité; mauvaise conseillère; tranquilité; engendrée par le sentiment de l'échec; défoulement; enfer; emportement; perte de contrôle; tragédie; débordement; volcan; raz de marée; aveugle; sang; ouragan; tempête.

AMOUR:

passion; répulsion; espérance; espoir; dégoût; rêve; état de grâce; désaccord; euphorie; lien précaire; inexplicable; liane; chaleur; communion; complicité; fleuve; renoncement; regarder à deux dans la même direction; fusion du corps et de l'esprit; douceur; tendresse; folie; découverte; vivre; paradis; félicité; jardin fleuri; don de soi; beauté; pureté.

HAINE:

cruel; irrémédiable; douleur profonde; douceur; foudre; massacre; racisme; fraîcheur; intolérance; bêtise; violence; destruction; constructif; enfer; ver qui ronge; couteau; acier; froid; le foie et la bile; amour; saturne; moulin a café.

BONHEUR:

euphorie; félicité; paradis; avoir la foi en quelque
chose ou quelqu'un; jardin fleuri; odeur suave; calme;
sérénité; donner; savoir recevoir; musique; passé ou à
venir; jubilation; état de grâce; désespoir; amour;
rayonnement; douleur; rêve; liberté; chagrin; idéal;
possibilité de s'assumer en tout domaine; harmonie.

SYMPATHIE:

copains; manque de confiance; générosité; sociabilité;
réconfort; mépris; apprécier; rire; connaître; dégoût;
bien-être; compréhension; attirance; reconnaissance de
soi dans l'autre; miroir; frôlement; approche; esprit;
coup de foudre; le creux et le plein; élan.

Appendix 2E: Stage 2 of Pilot Study (2) - Disambiguation

Please answer the question for each sentence. The answer can quote one of the people named in the sentence or nobody.

1. John was full of anger and Fred was sad; I thought he was too violent. Question: To whom does `he' refer?

2. Joan was full of anger but Sally was happy; she was in a seething rage. Question: To whom does `she' refer?

3. Paul was full of anger and Patrick was in love; he was very explosive. Question: To whom does `he' refer?

4. Peter was working and Albert was full of anger; his wrath was obvious. Question: Whose wrath was obvious?

5. Alan and Alice were full of anger and David and Maureen were happy; they did not hide their temper. Question: To whom does `they' refer?

6. Byron was tall and full of anger; later, he was not any more. Question: What has Byron stopped being?

7. Fiona was full of anger and Sally was joyful; her tension was building up. Question: Whose tension was building up?

8. Francis was content and Robert was full of anger; he had difficulty controlling his emotion. Question: To whom does `he' refer?

9. Mary was full of anger and Kathy was sad; she became abusive. Question: To whom does `she' refer?

10.Michael was apprehensive and Erik was full of anger; his annoyance was extreme. Question: Whose annoyance was extreme?

11.Jessica was happy and Michelle was full of anger; her action was irrational and damaging. Question: Whose action was irrational and damaging?

12.Claire and Ron were worried and Peter and Sheila were in love with each other; their togetherness was apparent. Question: Whose togetherness was apparent?

13.Frank loved Sally and William hated Diana; he was full of tenderness for her. Question: To whom does `he' refer?

14.Joyce and Eddy were in love with each other and Jennifer and Chris were sad; she cared for him. Question: To whom does `she' refer?

15.Alan loved Jane and Peter and Shelley were sad; his devotion for her was touching. Question: Whose devotion was touching?

16.Vanessa loved Toby and Susan liked Fred; she cherished him. Question: To whom does `she' refer?

17.David was Karen's friend and Louis loved Linda; he adored her. Question: To whom does `he' refer?

18.Ken and Jane loved each other and John and Bernie hated each other; they understood each other. Question: To whom does `they' refer?

19.Dick was in love and Fred was calm; his emotion was complex. Question: Whose emotion was complex?

20.Hugh loved Susan and Derek disliked Mary; he was craving to be in her company. Question: To whom does `he' refer?

21.Vicky hated John and Louise loved Peter; she desired to comfort him. Question: To whom does `she' refer?

22.Alfred loved someone and Philip hated someone; he took pleasure in being in physical contact with that person. Question: To whom does `he' refer?

23.Kate was in love and Sue was angry; she needed to give of herself. Question: To whom does `she' refer?

24.Alan loved Claire and Paul disliked Mary; he wanted to protect her. Question: To whom does `he' refer?

25.John loves Linda and Louis hates Fiona; she feels needed. Question: To whom does `she' refer?

26.Jacqueline dislikes Ron and Maureen loves Chris; he feels protected. Question: To whom does `he' refer?

27.Albert loved Amy and John hated Kate; he could not hide his extreme dislike for her. Question: To whom does `he' refer?

28.Mary hates Hugh and Fiona is sad; she could not help feeling of revulsion. Question: To whom does `she' refer?

29.Alan hated Fred , David liked Joan and Fred hated Alan; they loathed each other. Question: To whom does `they' refer?

30.Peter is happy and Chris hates Toby; he feels a lot of bitterness. Question: To whom does `he' refer?

31.Her uncle loves Maureen but Philip hates her; his aversion is very obvious. Question: Whose aversion is obvious?

32.Jennifer hates David and Hector is in love with Ann; there is a lot of animosity between them. Question: To whom does `them' refer?

33.Helen hated Francine and Susan liked Vicky; she wanted to spite her. Question: To whom does `she' refer?

34.Fred was full of happiness and John was worried; there was joy in his life. Question: In whose life was there joy?

35.Patrick was tired and Alan was full of happiness; he was in a state of well being. Question: To whom does `he' refer?

36.Ann is full of happiness and Fiona is worried; she enjoys what she is doing now. Question: To whom does `she' refer?

37.John is sad and Derek is full of happiness; he is enjoying and appreciating the world around him. Question: To whom does `he' refer?

38.Mary is fat and Vicky is full of happiness; she is in the company of those she loves. Question: To whom does `she' refer?

39.Alan is sad and David is full of happiness; he is in a pleasant mood. Question: To whom does `he' refer?

40.Albert likes Fiona and Mark hates Louise; he has a lot of affinity for her. Question: To whom does `he' refer?

41.Sheila dislikes Erik but Ann likes Paul; she feels a lot of fondness for him. Question: To whom does `she' refer?

42.Ron liked Edward and Fred was angry with John; he had a lot of regard for him. Question: To whom does `he' refer?

43.Louis hates John and Ken likes Fred; their friendship is obvious. Question: To whom does `they' refer?

44.Fiona dislikes Ann and Mary likes Vicky; she is relaxed and happy in her company. Question: To whom does `she' refer?

45.Derek is worried about Mary and Peter likes Jennifer; he enjoys her company. Question: To whom does `he' refer?

46.Nancy is angry with Ron and Ann likes Paul; she feels the comfort of being in his presence. Question: To whom does `she' refer?

47.Donald fights with Jane but Henry likes Beatrice; he enjoys her personality. Question: To whom does `he' refer?

48.David likes Sheila and Peter hates Fiona; he enjoys her visual appearance. Question: To whom does `he' refer?

Appendix 2 F:Stage 2 of Pilot Study (2) - Disambiguation

Veuillez répondre aux questions suivantes. Vos réponses peuvent contenir un nom ou deux, ou tout simplement indiquer `personne'.

1. Jean était sous l'effet de la colère et Fred était triste; je pensais qu'il faisait preuve de trop d'agressivité. Question: A qui renvoie le pronom `il'?

2. La colère dictait les actions de Paul alors que la patience prédominait dans celles de Jacques; il n'aurait pas du écouter cette mauvaise conseillère. Question: A qui renvoie le pronom `il'?

3. Aline était sous l'effet de la colère et Geneviève rayonnait de bonheur; elle n'aurait pas du se laisser aller à un tel défoulement. Question: A qui renvoie le pronom `elle'?

4. Patrick était sous l'effet de la colère et Pierre était heureux; il n'aurait pas du se laisser aller à un tel emportement. Question: A qui renvoie le pronom `il'?

5. Michèle était sous l'effet de la colère et Pauline était triste; elle n'aurait pas du se permettre une telle perte de contrôle. Question: A qui renvoie le pronom `elle'?

6. Alain était sous l'effet de la colère et Marc était soucieux; il aurait du contrôler un tel débordement. Question: A qui renvoie le pronom `il'?

7. Albert était inquiet et Jean éprouvait un grand amour pour Marie; sa passion était apparente. Question: La passion de qui était apparente?

8. Fernande éprouvait un grand amour pour Eric mais Jocelyne le détestait; son espoir était sans bornes. Question: L'espoir de qui était sans bornes?

9. Francine était en colère et Annette éprouvait un grand amour pour Luc; elle vivait constamment dans un rêve. Question: A qui renvoie le pronom `elle'?

10.François était plein d'euphorie et Charles était soucieux; il éprouvait un grand amour pour Jeanne. Question: A qui renvoie le pronom `il'?

11.Un grand amour existait entre Serge et Charlotte mais Raoul et Pierrette se détestaient; il y avait un lien entre eux. Question: A qui renvoie le pronom `eux'?

12. Un grand amour existait entre Monique et Martin mais Danielle détestait Jacques; il y avait entre eux beaucoup de chaleur. Question: A qui renvoie le pronom `eux'?

13. Un grand amour existait entre Patricia et Philippe mais Francine et Albert se détestaient ; il y avait entre eux une grande complicité. Question: A qui renvoie le pronom `eux'?

14. Un grand amour existait entre Alice et Louis mais Linda et Olivier se détestaient; il y avait entre eux beaucoup de douceur. Question: A qui renvoie le pronom `eux'?

15. Cédric éprouvait un grand amour pour Claire et Guillaume détestait Diane; il était plein de tendresse pour elle. Question: A qui renvoie le pronom `il'?

16. Stéphane était jeune et Michel éprouvait un grand amour pour Louise; sa folie était apparente. Question: La folie de qui était apparente?

17. David était triste et Thomas éprouvait un grand amour pour Lise; c'était pour lui une découverte permanente. Question: A qui renvoie le pronom `il'?

18. Xavier éprouvait un grand amour pour Line mais Alain était malheureux; ceci pour lui revenait à vivre. Question: A qui renvoie le pronom `lui'?

19. Pierre éprouvait de la haine pour Paul mais Jean l'aimait bien; il ne pouvait s'empêcher d'être cruel. Question: A qui renvoie le pronom `il'?

20. Jeanne éprouvait de la haine pour Alain mais Monique ne le connaissait pas; sa douleur était profonde. Question: La douleur de qui était profonde?

21. Georges aimait bien Albert mais Adrien éprouvait de la haine pour lui; la foudre était présente dans leur rapport. Question: La foudre était présente dans le rapport de qui?

22. Bernard éprouvait de la haine pour Marie mais Jean l'aimait bien; il y avait toujours un massacre quand il la rencontrait. Question: A qui renvoie le deuxième pronom `il'?

23. Albert éprouvait de la haine pour Melissa mais Fred la connaissait à peine; il n'aurait pas du faire preuve de tant de bêtise. Question: A qui renvoie le pronom `il'?

24. Christian aimait bien Jacqueline mais Pierre éprouvait de la haine pour elle; sa violence était évidente. Question: La violence de qui était évidente?

25. Monique éprouvait de la haine pour Edouard mais Michelle l'aimait bien; la destruction qu'elle produisait était importante. Question: A qui renvoie le pronom `elle'?

26. Francine aimait bien Philippe mais Albertine éprouvait de la haine pour lui; son couteau était toujours prêt. Question: Le couteau de qui était toujours prêt?

27. Richard aimait bien Rachel mais Jim éprouvait de la haine pour elle; son sentiment évoquait l'acier. Question: Le sentiment de qui évoquait l'acier?

28. Un grand bonheur remplissait la vie de Marcel mais Jean était malheureux; il ne cessait de donner. Question: A qui renvoie le pronom `il'?

29. Annette vivait dans le bonheur mais Jeannette était triste; elle savait recevoir. Question: A qui renvoie le pronom `elle'?

30. Adrien nageait dans le bonheur mais Fred était soucieux; la musique faisait partie de sa vie. Question: La musique faisait partie de la vie de qui?

31. Monique vivait dans le bonheur mais Charlotte n'était pas heureuse; elle pensait que le bonheur était passé ou à venir. Question: A qui renvoie le pronom `elle'?

32. Patrick vivait un grand amour mais Pierre était solitaire; il rayonnait de bonheur. Question: A qui renvoie le pronom `il'?

33. Michèle vivait dans le bonheur mais Pauline était morose; son rayonnement était apparent. Question: Le rayonnement de qui était apparent?

34. Alain était soucieux mais Marc rayonnait de bonheur; il vivait constamment dans un rêve. Question: A qui renvoie le pronom `il'?

35. Albert vivait dans le bonheur et Jean était triste; il jouissait d'une grande liberté. Question: A qui renvoie le pronom `il'?

36. Francine n'avait pas de chance mais Annette vivait dans le bonheur; c'était là son idéal. Question: C'était là l'idéal de qui?

37. La vie de François était pleine d'harmonie mais celle de Charles ne l'était pas; il rayonnait de bonheur. Question: A qui renvoie le pronom `il'?

38. Hugues éprouvait de la sympathie pour Raoul mais Serge ne l'aimait pas; Raoul était son copain. Question: Raoul était le copain de qui?

39. Monique ne connaissait pas Daniel mais Charlotte éprouvait de la sympathie pour lui; elle faisait preuve d'une grande générosité. Question: A qui renvoie le pronom `elle'?

40. Bernard éprouvait de la sympathie pour Marie mais Jean ne la connaissait pas; il faisait preuve d'une grande sociabilité. Question: A qui renvoie le pronom `il'?

41. Georges détestait Jeannette mais Adrien éprouvait de la sympathie pour elle; il trouvait là un grand réconfort. Question: A qui renvoie le pronom `il'?

42. Jeanne éprouvait de la sympathie pour Alain mais Monique ne le connaissait pas; elle l'appréciait beaucoup. Question: A qui renvoie le pronom `elle'?

43. Pierre détestait Annie mais Paul éprouvait de la sympathie pour elle; il riait beaucoup. Question: A qui renvoie le pronom `il'?

44. Xavier connaissait bien Line mais Alain ne l'avait vue qu'une fois; il éprouvait de la sympathie pour elle. Question: A qui renvoie le pronom `il'?

45. David détestait Lise mais Thomas éprouvait de la sympathie pour elle; il avait un sentiment de bien-être. Question: A qui renvoie le pronom `il'?

46. Stéphane éprouvait de la sympathie pour Louise mais Michel ne la connaissait pas; son élan était évident. Question: L'élan de qui était évident?

47. Cédric détestait Claire mais Guillaume éprouvait de la sympathie pour elle; sa compréhension était apparente. Question: La compréhension de qui était apparente?

48. Diane éprouvait de la sympathie pour Louis mais Alice le détestait; son attirance était évidente. Question: L'attirance de qui était évidente?

49. Philippe détestait Patricia mais Albert éprouvait de la sympathie pour elle; son approche était maladroite. Question: L'approche de qui était maladroite?

50. Monique éprouvait de la sympathie pour Daniel mais Christiane ne le connaissait pas; elle avait de l'esprit. Question: A qui renvoie le pronom `elle'?

51. Richard détestait Rachel mais Jim éprouvait de la sympathie pour elle; il était entre le creux et le plein. Question: A qui renvoie le pronom `il'?

Appendix 3E:Stage 2 of Pilot Study - Lists of
Metalinguistic Descriptions drawn up after
stage 2 (1) and used as a basis for stage 2
(2)

ANGER:

violent; seething rage; explosive; wrath; temper;
temporary emotion; build up of tension; difficult to
control; culminating in abuse or violent action; extreme
annoyance; irrational damaging action.

LOVE:

togetherness; tenderness; care; devotion; cherish; adore;
mutual understanding; complex emotional feeling or mood
towards others; desire to comfort; craving to be in
company with; take pleasure in being in physical contact
with spouse, partner, children; need to give of oneself;
protect; to be needed and feel needed; to give protection
and feel protected.

HATE:

extreme dislike; revulsion; loathe; bitterness; aversion;
animosity; spite.

HAPPINESS:

joy; contentment; well-being; enjoying what you are doing
now; enjoying and appreciating the world around you;
being in the company of those you love; to feel in a
pleasant mood.

LIKING (towards somebody):

affinity; fondness; regard; friendship; relaxed and happy
in the company of; enjoying somebody's company; comfort
of being in somebody's presence; enjoying somebody's
personality; enjoying somebody's visual appearance.

Appendix 3F:Stage 2 of Pilot Study - Lists of Metalinguistic Descriptions drawn up after Stage 2 (1) and used as a basis for Stage 2 (2)

COLERE:

agressivité; mauvaise conseillère; défoulement; emportement; perte de contrôle; débordement.

AMOUR:

passion; espoir; rêve; euphorie; lien; chaleur; complicité; douceur; tendresse; folie; découverte; vivre.

HAINE:

cruel; douleur profonde; foudre; massacre; bêtise; violence; destruction; couteau; acier.

BONHEUR:

donner; savoir recevoir; musique; passé ou à venir; amour; rayonnement; rêve; liberté; idéal; harmonie.

SYMPATHIE:

copains; générosité; sociabilité; réconfort; apprécier; rire; connaître; bien-être; élan; compréhension; attirance; approche; esprit; le creux et le plein.

Appendix 4: Stage 4 of Pilot Study - Bilingual Lists of Metalinguistic Descriptions

Veuillez rayer les expressions que vous n'incluriez pas dans le sens des mots suivants. Veuillez considérer chaque mot isolément et suivre l'ordre des mots sans revenir en arrière. Merci.

Please cross out the expressions that you would not include in the meaning of the following words. Please consider each word on its own and follow the order without reviewing your preceding answers. Thank you.

COLERE:

violent; mauvaise conseillère; explosive; happiness; emportement; wrath; perte de contrôle; temper; débordement; temporary emotion; build up of tension; difficult to control; beauté; extreme annoyance.

LIKING (TOWARDS SOMEBODY):

affinity; copains; fondness; générosité; closed; regard; apprécier; friendship; attirance; relaxed and happy in the company of; enjoying somebody's company; vert; enjoying somebody's personality.

AMOUR:

togetherness; passion; tenderness; espoir; care; round; lien; devotion; complicité; cherish; douceur; adore; tendresse; craving to be in company with; découverte; take pleasure in being in physical contact with spouse, partner, children; oval; need to give of oneself; protect; to be needed and feel needed.

HAPPINESS:

joy; amour; thin; contentment; rayonnement; well-being; tristesse; rêve; enjoying and appreciating the world around you; harmonie.

HAINE:

extreme dislike; cruel; loathe; massacre; loose; bitterness; couteau; tendresse; aversion; acier; animosity.

LOVE:

to be needed and feel needed; découverte; protect;
tendresse; need to give of oneself; douceur; round; take
pleasure in being in physical contact with spouse,
partner, children; complicité; craving to be in company
with; lien; adore; oval; espoir; cherish; devotion;
passion; care; tenderness; togetherness.

SYMPATHIE:

enjoying somebody's personality; attirance; enjoying
somebody's company; closed; apprécier; relaxed and happy
in the company of; générosité; friendship; copains;
regard; vert; fondness; affinity.

ANGER:

extreme annoyance; débordement; difficult to control;
perte de contrôle; happiness; build up of tension;
emportement; temporary emotion; mauvaise conseillère;
temper; wrath; beauté; explosive; violent.

BONHEUR:

enjoying and appreciating the world around you; harmonie;
well-being; thin; rêve; contentment; tristesse;
rayonnement; joy; amour.

HATE:

animosity; acier; aversion; loose; couteau; bitterness;
massacre; tendresse; loathe; cruel; extreme dislike.

Appendix 5: Stage 4 of Pilot Study - Comparison of Bilingual Lists of Metalinguistic Descriptions

COLERE:

build up of tension; difficult to control; emportement; explosive; extreme annoyance; perte de contrôle; temper; temporary emotion; violent; wrath.

ANGER:

build up of tension; difficult to control; emportement; explosive; extreme annoyance; perte de contrôle; temper; temporary emotion; violent; wrath.

LIKING (TOWARDS SOMEBODY):

apprécier; attirance; copains; enjoying somebody's company; enjoying somebody's personality; fondness; friendship; regard; relaxed and happy in the company of.

SYMPATHIE:

affinity; apprécier; copains; fondness; friendship; regard; relaxed and happy in the company of.

AMOUR:

adore; care; cherish; craving to be in company with; devotion; lien; need to give of oneself; passion; take pleasure in being in physical contact with spouse, partner, children; tenderness; tendresse; to be needed and feel needed; togetherness.

LOVE:

adore; care; cherish; craving to be in company with; devotion; douceur; lien; need to give of oneself; passion; take pleasure in being in physical contact with spouse, partner, children; tenderness; tendresse; to be needed and feel needed; togetherness.

HAPPINESS:

amour; contentment; enjoying and appreciating the world around you; harmonie; joy; rayonnement; well-being.

BONHEUR:

amour; contentment; enjoying and appreciating the world around you; harmonie; joy; rayonnement; well-being.

HAINE:

animosity; aversion; bitterness; extreme dislike; loathe.

HATE:

animosity; aversion; bitterness; extreme dislike; loathe.

Appendix 6: Corpus of the First Empirical Study

academic advisor / conseiller pédagogique
academic year / année universitaire
admission requirements / conditions d'admission
advanced standing / équivalence
auditor / auditeur
bachelor's degree / baccalauréat
calendar / annuaire
campus / cité universitaire
credit / crédit
degree / grade
department / département
elective course / cours au choix
field of study / domaine d'études
final examination / examen final
final mark / note finale
full course / cours complet
full-time student / étudiant à plein temps
graduation / collation des grades
half course / demi-cours
honours degree / baccalauréat spécialisé
lecture course / cours magistral
major / majeure
mark / note
marking system / système de notation
minor / mineure
part-time student / étudiant à temps partiel
pass mark / note de passage
prerequisite course / préalable
required course / cours obligatoire
student / étudiant
take-home examination / examen à la maison
term / trimestre
transcript / relevé de notes
tuition fees / frais de scolarité
undergraduate degree / diplôme de premier cycle
undergraduate program / programme de premier cycle
undergraduate student / étudiant de premier cycle
university / université
university graduate / diplômé universitaire

Appendix 7: Definitions (DEF) and Preliminary Lists of Metalinguistic Descriptions (DES)

academic year   TERM
DEF the period covering the annual session (excluding the summer session) of an educational institution of university level; the total period is usually about 9 months.
DES annual session, university, 9 months

année universitaire   TERM
DEF temps qui s'écoule depuis l'ouverture des classes et des cours à l'automne jusqu'aux grandes vacances de l'été.
DES temps, de l'automne à l'été, université

admission requirements   TERM
DEF specifications of the educational and other experiences required of new students for admission to a college.
DES specifications, educational experiences required, admission, new students, other experiences required

conditions d'admission   TERM
DEF enoncé précis de la formation scolaire et autres expériences que les nouveaux étudiants doivent posséder pour être admis dans un établissement d'enseignement.
DES enoncé, expériences, doivent posséder pour être admis, formation scolaire, nouveaux étudiants

academic advisor   TERM
DEF faculty member who advises students regarding progress and course selection.
DES faculty member, advises, progress, course selection

conseiller pédagogique   TERM, EDUC 129
DEF personne qui fournit des renseignements sur les programmes d'études et qui apporte aux étudiants une aide pédagogique fréquente.
DES personne, renseignements sur les programmes d'études, aide pédagogique

bachelor's degree   HILL 169
DEF the first degree in arts and sciences or in certain professional and technical fields.
DES first degree

baccalauréat   FOPED 50
DEF   premier des grades délivrés par certaines facultés.
DES   premier grade

advanced standing   TERM
DEF   the status accorded a student who is admitted to an
      institution of higher education with educational
      attainment credited to him beyond the minimum
      required for admission.
DES   status, attainment credited, beyond minimum,
      admission

équivalence   TERM, LUCAL 329
DEF   statut accordé aux étudiants qui ont déjà suivi des
      cours universitaires du même niveau et qui ont un
      contenu semblable.
DES   statut, cours universtaires, du même niveau, contenu
      semblable

auditor   TERM
DEF   a person who attends a course as a listener only and
      does not receive college credit for the course.
DES   listener, not receive credit, course

auditeur   TERM
DEF   personne qui est inscrite et admise à la
      fréquentation de cours déterminés sans avoir droit
      aux crédits attachés à ces cours.
DES   personne, inscrite, sans avoir droit aux crédits

calendar   TERM
DEF   a university publication listing courses, degree
      requirements, faculty and university regulations,
      and faculty members.
DES   publication, courses, requirements, regulations,
      faculty members

annuaire   TERM
DEF   document qui présente tous les programmes d'études
      offerts à une université.
DES   document, programmes d'études, règlements,
      professeurs, conditions d'admission

credit   TERM
DEF a unit for expressing quantitatively the amount of
     content of a course of instruction, especially with
     reference to the total requirements for a degree or
     certificate.
DES unit, amount of content of a course, quantitatively

crédit   TERM
  DEF étalon servant à exprimer la valeur de chacune des
     composantes d'un programme d'études en attribuant à
     ces composantes, en vertu d'une convention, un
     certain nombre de points pouvant s'accumuler jusqu'à
     ce qu'ils atteignent le total fixé pour la
     délivrance d'un diplôme.
DES étalon, valeur des composantes, programme d'études

campus   HILL 77
DEF the grounds of a university or college on which the
     buildings of the institution are situated.
DES grounds, university or college, buildings

cité universitaire   EDUC 80
DEF ensemble des bâtiments destinés au logement,
     accueil, loisirs des étudiants d'une université.
DES ensemble, bâtiments, université

graduation   HILL 264
DEF the process of receiving formal recognition from the
     school or college authorities for completing a
     course of study.
DES process, recognition, completing a course of study

collation des grades   LEXIS 351
DEF action de conférer à quelqu'un un titre
     universitaire.
DES action, conférer, titre universitaire

department   TERM
DEF an administrative subdivision of a school or college
     giving instruction in a branch of study.
DES subdivision, school, branch of study, college,
     university

département   TERM
DEF subdivision d'une faculté ou d'une école, qui se
     consacre généralement à une seule discipline.
DES subdivision, école, une discipline, faculté,
     université

full course   TERM
DEF   courses which ordinarily run from September through
      April.
DES   courses, September through April

cours complet   TERM
DEF   cours qui se donnent d'ordinaire de septembre à
      avril.
DES   cours, de septembre à avril

degree   HILL 169
DEF   a title bestowed by a college or university as
      official recognition for the completion of a course
      of study or for a certain attainment.
DES   title, university, completion. course of
      study,college

grade   TERM, HOPED 143
DEF   un des degrés dans une hiérarchie universitaire de
      diplômes.
DES   degré, hiérarchie universitaire, diplôme

elective course   HILL 149, 208, PAGED 119
DEF   any number of studies from which the student is
      freely allowed to select.
DES   studies, student, allowed to select

cours au choix   TERM, HOPED 77
DEF   cours que doit choisir l'étudiant parmi un certain
      nombre qui lui sont proposés à ce titre dans le
      programme d'études.
DES   cours, doit choisir, étudiant

field of study   TERM
DEF   a principal subject of study in one department or
      field of learning, in which the student is required
      or elects to take a specified number of courses and
      credit hours as part of the requirements for
      obtaining a diploma or degree.
DES   principal subject, one department, degree

domaine d'études   TERM
DEF   partie d'un programme d'études composée de cours
      conduisant à des études plus poussées.
DES   cours, programme d'études, études plus poussées

final examination   HILL 223
DEF a test given at the conclusion of a course or at the
     end of a period of instruction such as a year, a
     semester or a quarter.
DES test, conclusion, course

examen final   TERM, EDUC 220
DEF épreuve portant sur l'ensemble des renseignements
     donnés au cours d'une année universitaire.
DES épreuve, ensemble des renseignements, année
     universitaire

final mark   TERM
DEF a mark, given to a student upon completion of study
     in a course, which represents an evaluation of the
     work done for the entire course.
DES mark, completion of study, entire course

note finale   TERM
DEF note déterminée à partir de l'ensemble des lettres
     obtenues sur chacune des épreuves de contrôle,
     compte tenu de leur valeur relative, telle que
     communiquée aux étudiants au début du cours.
DES note, ensemble des lettres

mark   HILL 350
DEF a rating of achievement assigned on the basis of
     some scale, such as a percentage scale.
DES rating, achievement, scale

note   HOPED 214
DEF estimation globale d'un travail, symbolisée par des
     lettres, des nombres.
DES estimation, travail, lettres, nombres

full-time student   TERM
DEF a student who is carrying a full course load.
DES student, full course load

étudiant à plein temps   TERM
DEF personne qui étudie à plein temps dans une
     université
DES personne, étudie, plein temps, université

half course   TERM
DEF college or university course in a particular
     subject, requiring classes to meet on a regular
     schedule but having only half as many class meetings
     as a full course and carrying only half the credit
     of such a course.
DES university, course, half, credit

demi-cours   TERM
DEF cours qui se donne d'ordinaire de septembre à
     décembre ou de janvier à avril.
DES cours, de septembre à décembre, de janvier à avril

honours degree   PAGED 165
DEF university or equivalent degree taken after
     intensive study to a higher level than for an
     ordinary university degree.
DES university degree, higher level, intensive

baccalauréat spécialisé   MINI 6
DEF baccalauréat qui n'est délivré qu'après quelques
     années d'études supérieures à la suite d'un premier
     grade universitaire.
DES baccalauréat, études supérieures, suite d'un premier
     grade

lecture course   HILL 150
DEF a course conducted by the lecture method, verbally
     with little class participation.
DES course, verbally, little class participation

cours magistral   FOPED 105
DEF enseignement qui consiste en conférences qui
     pourraient être ou même qui seront imprimées et que
     le professeur donne sans que l'auditeur intervienne.
DES enseignement, sans que l'auditeur intervienne,
     conférences

major   TERM
DEF a principal subject of study in one department.
DES principal subject, one department

majeure   TERM
DEF champ d'études principal d'un programme d'études
DES champ d'études principal, programme d'études

minor   TERM
DEF   subject of study in a department in which a student
      takes a smaller number of courses than required for
      a major field of study and with less intensive
      concentration.
DES   subject, department, smaller number of courses, less
      intensive

mineure   TERM
DEF   champ d'études secondaire d'un programme d'études.
DES   champ d'études secondaire, programme d'études

marking system   HILL 351
DEF   the method used for recording and reporting a
      student's achievement.
DES   method, recording, reporting, achievement

système de notation   TERM
DEF   système d'attribution des notes utilisé pour
      l'appréciation des travaux.
DES   système, attribution des notes, appréciation des
      travaux

pass mark   PAGED 260
DEF   cut-off point between failure and success in an
      assessement, examination or test.
DES   cut-off point between failure and success,
      assessement

note de passage   TERM
DEF   note minimale nécessaire à la réussite d'un examen
      ou   d'une épreuve.
DES   note minimale, nécessaire à la réussite, examen

part-time student   TERM
DEF   a student who is not carrying a full-time course
      load in terms of study and courses.
DES   student, not full-time course load

étudiant à temps partiel   TERM
DEF   personne qui étudie à temps partiel dans une
      université.
DES   personne, étudie, temps partiel, université

required course   TERM
DEF   any course or subject of study required of all
      students enrolled in a particular curriculum.
DES   course, required, curriculum

cours obligatoire   TERM
DEF   cours que doit suivre avec succès, en vue de la
      sanction des études, tout étudiant inscrit à un
      programme d'études.
DES   cours, étudiant, doit suivre avec succès, programme
      d'études

prerequisite course   HILL 434
DEF   a course that must be satisfactorily completed
      before enrollement will be permitted in an advanced
      or succeeding course.
DES   course, completed, before, succeeding course

préalable   TERM
DEF   cours qui doit précéder un autre dans le programme
      d'études.
DES   cours, doit précéder un autre

student   TERM
DEF   candidate for university degree or diploma
DES   candidate, university degree

étudiant   TERM
DEF   élève d'un établissement universitaire.
DES   élève, établissement universitaire

term   TERM
DEF   the division of an academic year or school year
      lasting 3 months.
DES   division, academic year, 3 months

trimestre   TERM
DEF   division de l'année scolaire ou universitaire d'une
      durée approximative de trois mois.
DES   division, année universitaire, trois mois

transcript   TERM
DEF   an official list of all courses taken by a student
      at a university, showing the final grade received,
      with definitions of the various grades given at the
      institution.
DES   list, courses, final grades, university

relevé de notes   TERM
DEF   ensemble des résultats des cours completés par un
      étudiant dans un établissement post-secondaire.
DES   ensemble, résultats, enseignement post-secondaire

tuition fees   TERM
DEF   the amount specified to be paid by students for
      instructional services of a college or university.
DES   amount, paid, university, college,instructional
      services

frais de scolarité   TERM
DEF   sommes exigées pour suivre un programme d'études au
      niveau collégial ou universitaire.
DES   sommes, pour suivre un programme d'études, collège,
      université

take-home examination   TERM
DEF   test given to a student to be completed outside of
      class using any sources available.
DES   test, completed outside of class, sources

examen à la maison   TERM
DEF   épreuve que l'étudiant, ayant droit aux sources sur
      la matière, doit faire hors de la classe.
DES   épreuve, droit aux sources, faire hors de la classe

undergraduate student   HIGH 522
DEF   a student who is pursuing studies leading to a first
      degree.
DES   student, pursuing studies, first degree

étudiant de premier cycle   TERM
DEF   candidat à un premier grade.
DES   candidat, premier grade

undergraduate degree   TERM
DEF   initial college/university degree usually taken
      after a 3- or 4-year course.
DES   initial, college/university degree, 3- or 4-year
      course

diplôme de premier cycle   TERM, FOPED 50
DEF   premier des grades délivrés par certaines facultés.
DES   premier grade

undergraduate program   HILL 628, 442
DEF   courses in one field of study leading to a first
      degree.
DES   courses, field of study, first degree

programme de premier cycle   BROPE 421
DEF études qui sont orientées vers l'approfondissement
     des connaissances acquises, avec une certaine
     spécialisation conduisant au diplôme universitaire.
DES études, spécialisation, diplôme universitaire

university graduate   TERM
DEF a person who has completed a programme of study at a
     university and has received a degree attesting to
     this fact.
DES person, completed, university programme, degree

diplômé universitaire   TERM
DEF personne qui a terminé un programme d'études
     universitaires et qui a reçu un grade.
DES personne, terminé, programme d'études, grade

university   PAGED 354
DEF institution of higher education usually with a high
     reputation in teaching and research.
DES institution, higher education, teaching, research

université   EDUC 449
DEF institution d'enseignement supérieur habilitée à
     enseigner et à délivrer des diplômes.
DES institution, enseignement supérieur, recherche

SOURCES

BROPE Brossier,P. et al.(eds.).(1972).La pédagogie.
           Paris:La bibliothèque du centre d'étude et de
           promotion de la lecture.

EDUC   Mialaret,G. (1979).Vocabulaire de l'éducation.
           Paris:Presses universitaires de France.

FOPED Foulquié,P. (1971).Dictionnaire de la langue
           pédagogique. Paris:Presses universitaires de
           France.

HIGH   Knoules,A.S. et al. (eds.). (1977).The
           International Encyclopedia of Higher Education,
           Volume 1. London:Jossey-Bass Publishers.

HILL   Morgan,R. et al. (eds.).(1973).Dictionary of
           Education. New York:McGraw-Hill Inc.

HOPED   Hotyat,F. et al. (1973).<u>Dictionnaire
            encyclopédique de pédagogie moderne</u>. Paris:
            Editions Labor.

LEXIS   <u>Lexis, dictionnaire de la langue française</u>.
            (1975). Paris:Librairie Larousse.

LUCAL   Laurentian University Calendar.(1988).

MINI   <u>Vocabulaire de l'éducation au Québec</u>.(1968).
            Ministère de l'Education.

PAGED   Page,G.T. and J.B. Thomas.(1977).<u>International
            Dictionary of Education</u>. New York:Kogan Page
            Nichols Publishing Company.

ROB   Rey,A. (ed.). (1986).<u>Le petit Robert</u>.Paris:
            Les dictionnaires Robert.

TERM   TERMIUM, Terminology bank of the Secretary of
            State of Canada.

Appendix 8E:English Questionnaire used in the Unilingual Empirical Componential Analysis of the Tranunits

The purpose of this study is to determine the meaning of words. The meaning of any word can be defined by listing all the expressions that describe it. The following words have beneath them some expressions that may describe their meaning. Please delete from these lists the expressions that you would not include in the meaning of the words and add any that you feel have been overlooked. Please do not use any dictionary to perform this task. Thank you.

ACADEMIC YEAR

annual session
university
automobile
9 months

ADMISSION REQUIREMENTS

specifications
educational and other experiences required
new students
admission
gloves

ACADEMIC ADVISOR

faculty member
penguin
advises
progress
course selection

BACHELOR'S DEGREE

first degree
temperature
box

ADVANCED STANDING

status
attainment credited
rock
beyond minimum
admission

AUDITOR

listener
tree
not receive credit
course
seagull

CALENDAR

publication
courses
requirements
television
regulations
faculty members

CREDIT

unit
desk
quantitatively
amount of content of a course

CAMPUS

telephone
grounds
university or college
buildings

GRADUATION

process
recognition
garbage
completing a course of study

DEPARTMENT

subdivision
school
branch of study
apple
college
university

FULL COURSE

courses
concrete
September through April
letter

DEGREE

title
university
completion
course of study
sweater
college

ELECTIVE COURSE

studies
student
chair
allowed to select

FIELD OF STUDY

principal subject
meadow
one department
degree

FINAL EXAMINATION

horse
test
conclusion
course

FINAL MARK

mark
completion of study
entire course
dollar bill

MARK

rating
achievement
radio
scale

FULL-TIME STUDENT

student
sky
full course load
boat

HALF COURSE

blanket
university
course
half the credit
half as many meetings

HONOURS DEGREE

university degree
higher level
cloud
intensive

LECTURE COURSE

course
verbally
little class participation
shoes

MAJOR

window
principal subject
one department
nicely

MINOR

subject
wall
department
smaller number of courses
less intensive

MARKING SYSTEM

planet
method
recording
reporting
achievement

PASS MARK

cut-off point
stove
assessment
windy
between failure and success

PART-TIME STUDENT

student
nicely
not full-time course load
flag

REQUIRED COURSE

course
airplane
required
curriculum
fuel

PREREQUISITE COURSE

course
hat
completed
axe
before
succeeding course

STUDENT

candidate
paper clip
dairy farm
university degree
coat

TERM

poster
division
academic year
3 months

TRANSCRIPT

list
whale
sunlight
courses
final grades
university

TUITION FEES

black hole
amount
paid
college
university
bird
instructional services

TAKE-HOME EXAMINATION

test
river
completed outside of class
sources
mountain

UNDERGRADUATE STUDENT

student
pursuing studies
polar ice cap
first degree

UNDERGRADUATE DEGREE

initial
college/university degree
pillow
3- or 4-year course
thumb

UNDERGRADUATE PROGRAM

courses
field of study
dragon
first degree

UNIVERSITY GRADUATE

person
forest
completed
university program
truck
degree
universe

UNIVERSITY

institution
higher education
supermarket
teaching
research

The following questions are required in order to check the representativity of the sample. No individual responses will be revealed.

AGE: 18-19   ----
           20-29   ----
           30-39   ----
           40-49   ----
           50-59   ----
           60-69   ----
           70 +   ----

SEX: M ----   F ----

As some of your replies may require clarification, would you please indicate below your name and telephone number.

NAME:

TELEPHONE NUMBER:

Thank you very much for your assistance.

Appendix 8F: French Questionnaire used in the Unilingual Empirical Componential Analysis of the Tranunits

Cette étude a pour but de déterminer le sens de certains mots. Il est possible de définir le sens d'un mot par une liste de toutes les expressions qui le décrivent. Chacune des listes suivantes contient des expressions qui peuvent décrire le sens du mot qui la précède. Veuillez rayer de ces listes les expressions que vous n'incluriez pas dans le sens des mots en question et ajouter toutes celles qui ont été omises. Veuillez ne pas utiliser de dictionnaires pour effectuer cette tâche. Merci.

ANNÉE UNIVERSITAIRE

temps
université
plancher
de l'automne à l'été

CONDITIONS D'ADMISSION

enoncé
nouveaux étudiants
expériences
train
formation scolaire
doivent posséder pour être admis

CONSEILLER PEDAGOGIQUE

personne
renseignements sur les programmes d'études
aide pédagogique
boîte
camion

BACCALAURÉAT

franchement
premier grade
soleil
arbre

ÉQUIVALENCE

statut
neige
cours universitaires
même niveau
contenu semblable
tiroir

AUDITEUR

personne
inscrite
sans avoir droit aux crédits
noir

ANNUAIRE

document
poubelle
programmes d'études
règlements
professeurs
conditions d'admission

CRÉDIT

étalon
valeur des composantes
ours
programme d'études

CITÉ UNIVERSITAIRE

ensemble
produits chimiques
bâtiments
université
chien

COLLATION DES GRADES

action
rivière
conférer
titre universitaire
ciel

DÉPARTEMENT

chaise
subdivision
école
discipline
faculté
université

COURS COMPLET

cours
bureau
drapeau
de septembre à avril

GRADE

degré
température
hiérarchie universitaire
diplôme

COURS AU CHOIX

cours
rue
bibliothèque
doit choisir
étudiant

DOMAINE D'ÉTUDES

royaume
cours
programme d'études
chat
études plus poussées

EXAMEN FINAL

épreuve
montagne
ensemble des reseignements
sapin
année universitaire

NOTE FINALE

note
camion
ensemble des lettres
corde
porte

NOTE

estimation
travail
dictionnaire
lettres
nombres
brouillard

ÉTUDIANT A PLEIN TEMPS

personne
étudie
construction
plein temps
université

DEMI-COURS

beau
cours
de septembre à décembre
agrandir
de janvier à avril

BACCALAURÉAT SPÉCIALISÉ

baccalauréat
lune
solaire
études supérieures
suite d'un premier grade

COURS MAGISTRAL

enseignement
conférences
avion
sans que l'auditeur intervienne

MAJEURE

guerre
champ d'études principal
programme d'études
poulet

MINEURE

lumière
champ d'études secondaire
astre
programme d'études

SYSTEME DE NOTATION

système
léger
attribution des notes
métal
appréciation des travaux

NOTE DE PASSAGE

note minimale
colline
nécessaire à la réussite
examen
dos

ÉTUDIANT A TEMPS PARTIEL

personne
animal
étudie
temps partiel
université
bras

COURS OBLIGATOIRE

cours
circulation sanguine
étudiant
programme d'études
doit suivre avec succès

PRÉALABLE

cours
banque
doit précéder un autre
verser

ÉTUDIANT

élève
fort
tour
établissement universitaire

TRIMESTRE

division
année universitaire
fichier
trois mois

RELEVÉ DE NOTES

carte géographique
ensemble
résultats
enseignement post-secondaire
pillier

FRAIS DE SCOLARITÉ

sommes
collège
université
traverser
pour suivre un programme d'études

EXAMEN A LA MAISON

épreuve
conduire
droit aux sources
faire hors de la classe
cheval

ÉTUDIANT DE PREMIER CYCLE

bouteille
candidat
premier grade
mer

DIPLOME DE PREMIER CYCLE

premier grade
sac à main
nocturne
souliers

PROGRAMME DE PREMIER CYCLE

études
spécialisation
herbe
diplôme universitaire

DIPLOME UNIVERSITAIRE

personne
terminé
eau
programme d'études
grade

UNIVERSITÉ

institution
roue
enseignement supérieur
recherche
pluie

Les questions suivantes sont nécessaires pour s'assurer
que l'échantillon est représentatif. Les réponses
individuelles seront strictement confidentielles.

AGE: 18-19   - - - -
            20-29   - - - -
            30-39   - - - -
            40-49   - - - -
            50-59   - - - -
            60-69   - - - -
            70 +   - - - -

SEXE: M - - - -   F - - - -

Etant donné qu'il se peut que vos réponses nécessitent
certaines clarifications, auriez-vous l'obligeance
d'indiquer ci-dessous votre nom et votre numéro de
téléphone.

NOM:

NUMERO DE TÉLÉPHONE:

Merci infiniment de votre aide.

Appendix 9E:Final English List of Metalinguistic Descriptions

ACADEMIC YEAR:
annual session; university; 9 months; 8 months; school year; two semesters; terms; starts in september.

ADMISSION REQUIREMENTS:
specifications; educational and other experiences required; new students; admission; qualifications; subjects; percentages.

ACADEMIC ADVISOR:
faculty member; advises; progress; course selection; academic assistance.

BACHELOR'S DEGREE:
first degree; 3 or 4 years; university; post-secondary; required to continue; honor received after completion of requirements.

ADVANCED STANDING:
status; attainment credited; beyond minimum; admission; already has credits; already has a degree.

AUDITOR:
listener; not receive credit; course; exempt from evaluations; non-compulsory attendance; does not have to do assignments.

CALENDAR:
publication; courses; requirements; regulations; faculty members; dates to remember; information; university; annual; tuition; bursaries; administration; services; clubs/associations; course descriptions.

CREDIT:
unit; quantitatively; amount of content of a course; points granted for completion of course; certain number necessary to graduate.

CAMPUS:
grounds; university or college; buildings; residences; library; services; security; maintenance; enclosed; cafeteria; gymnasium; classrooms.

GRADUATION:
process; recognition; completing a course of study; degree; diploma; achievement; ceremony; formal affair.

DEPARTMENT:
subdivision; school; branch of study; college; university; faculty; various.

FULL COURSE:
courses; September through April; 6 credits; academic year.

DEGREE:
title; university; completion; course of study; college; diploma; certificate; achievement.

ELECTIVE COURSE:

studies; student; allowed to select; subject; based upon interest; related to concentration program.

FIELD OF STUDY:
principal subject; one department; degree; various subjects to choose from; concentration.

FINAL EXAMINATION:
test; conclusion; course; evaluation; weighted heavily.

FINAL MARK:
mark; completion of one's studies; entire course; grade; academic standing; pass or fail; percentage; results.

MARK:
rating; achievement; percentage; course; letter.

FULL-TIME STUDENT:
student; full course load; university; college; person.

HALF COURSE:
university; course; half the credit; half as many meetings; September to December; January to April; one semester; 3 credits.

HONOURS DEGREE:
university degree; higher level; intensive; 4 years.

LECTURE COURSE:
course; verbally; little class participation; speaker; take notes.

MAJOR:
principal subject; one department; concentration; majority of courses; field of study; intensive.

MINOR:
subject; department; smaller number of courses; less intensive.

MARKING SYSTEM:
method; recording; reporting; achievement; evaluation.

PASS MARK:
cut-off point; assessment; between failure and success; 50%.

PART-TIME STUDENT:
student; not full-time course load; university; college; person.

REQUIRED COURSE:
course; required; curriculum; prerequisite; needed for degree; mandatory.

PREREQUISITE COURSE:
course; completed; before; succeeding course; necessary; requirement.

STUDENT:
candidate; university degree; person enrolled in classes; to learn; attend learning institution.

list; courses; final grades; university; subjects; academic standing; academic record; course descriptions; official record.

TUITION FEES:
amount; paid; college; university; instructional services; cost of course.

TAKE-HOME EXAMINATION:
test; completed outside of class; sources; longer time; due date.

UNDERGRADUATE STUDENT:
student; pursuing studies; first degree not yet obtained; person.

UNDERGRADUATE DEGREE:
initial; college/university degree; 3- or 4-year course.

UNDERGRADUATE PROGRAM:
courses; field of study; first degree; 3 or 4 years.

UNIVERSITY GRADUATE:
person; completed; university program; degree.

UNIVERSITY:
institution; higher education; teaching; research; post-secondary; learning; studying.

**Appendix 9F: Final French List of Metalinguistic
Descriptions**

ANNÉE UNIVERSITAIRE:
temps; université; étude; de l'automne à l'été; études
postsecondaires; éducation; travail scolaire; semestre;
trimestre; livres.

CONDITIONS D'ADMISSION:
étudiants adultes; nouveaux étudiants; expériences;
exigences; formation scolaire; doivent posséder pour être
admis; spécifiques au domaine.

CONSEILLER PÉDAGOGIQUE:
personne; renseignements sur les programmes d'études;
aide pédagogique; direction; didactique; choix de cours;
horaire; conseils; utile; spécialiste.

BACCALAURÉAT:
15 cours; premier grade; diplôme; emploi;
accomplissement; succès; objectif; 90 crédits; document
officiel; mène à un emploi; bout de papier; 3 ou 4 ans;
université; permis pour faire une maîtrise.

ÉQUIVALENCE:
statut; crédits accordés; cours universitaires; même
niveau; contenu semblable.

AUDITEUR:
personne; inscrite; sans avoir droit aux crédits; qui
écoute; observateur; statut libre; étudiant; conditions
d'admission différentes.

ANNUAIRE:
document; cours offerts; programmes d'études; règlements;
professeurs; conditions d'admission; renseignements
généraux; contrat; livre; annuel.

CRÉDIT:
unité de mesure; valeur des composantes; accumuler;
programme d'études; moyen de quantifier un cours.

CITÉ UNIVERSITAIRE:
ensemble; salles de classe; bâtiments; université;
résidences; campus; lieu d'enseignement; regroupement;
bibliothèques.

COLLATION DES GRADES:
action; succès; conférer; titre universitaire;
accomplissement; fin des études; rassemblement; avenir;
fierté; diplôme; toges; fête; famille; auditorium.

DÉPARTEMENT:
appartenance; subdivision; école; discipline; faculté;
université; professeurs; programme; secrétaire.

COURS COMPLET:
cours; un an; 6 crédits; de septembre à avril; long.

GRADE:
degré; baccalauréat; hiérarchie universitaire; diplôme.

COURS AU CHOIX:

cours; choix multiples; nécessaire; doit choisir;
étudiant; intérêt particulier; domaines divers.

DOMAINE D'ÉTUDES:
spécialité; cours; programme d'études; concentration;
études plus poussées.

EXAMEN FINAL:
épreuve; stress; ensemble des renseignements; évaluation
des connaissances; étude; réussite; 25% de la note
finale; avril; décembre; passer; mémoire; défi;
soulagement; année universitaire.

NOTE FINALE:
note; résultat; ensemble des lettres; réussite; échec;
évaluation numérique; pourcentage; points; moyenne
générale; relevé de notes; degré de compétence; fin du
cours.

NOTE:
estimation; travail; examen; lettres; nombres; test;
degré de réussite; pourcentage; fraction; évaluation.

ÉTUDIANT A PLEIN TEMPS:
personne; étudie; minimum de cours; plein temps;
université; 5 cours complets.

DEMI-COURS:
3 crédits; cours; de septembre à décembre; court; de
janvier à avril; une session; souvent complété par un
autre.

BACCALAURÉAT SPÉCIALISÉ:
baccalauréat; domaine précis; étude approfondie; études
supérieures; suite d'un premier grade; 4 ans; emploi.

COURS MAGISTRAL:
enseignement; conférences; notes au tableau; passif;
théorie; sans que l'auditeur intervienne.

MAJEURE:
première concentration; champ d'études principal;
programme d'études; première spécialisation; plus de six
cours dans une matière.

MINEURE:
deuxième concentration; champ d'études secondaire;
deuxième spécialisation; 5 cours dans un domaine;
programme d'études.

SYSTEME DE NOTATION:
système; donné au début du cours; attribution des notes;
moyen d'évaluation; normes; notes; barème; appréciation
des travaux.

NOTE DE PASSAGE:
note minimale; C; nécessaire à la réussite; examen.

ÉTUDIANT A TEMPS PARTIEL:
personne; maximum de cours; étudie; temps partiel;
université; moins de 3,5 cours; travailleur; plus âgé;
souvent a un travail; souvent a un poste.

COURS OBLIGATOIRE:

cours; exigé dans la concentration; plusieurs; dans une discipline; étudiant; programme d'études; doit suivre avec succès.

PRÉALABLE:
cours; requis pour suivre un cours; doit précéder un autre; obligation; préparation.

ÉTUDIANT:
élève; suit des cours; paie des frais de scolarité; inscrit; étude; établissement universitaire.

TRIMESTRE:
division; année universitaire; session; période de temps; septembre à décembre; janvier à avril; trois mois.

RELEVÉ DE NOTES:
bulletin; ensemble; résultats; enseignement post-secondaire; officiel; cacheté; signé.

FRAIS DE SCOLARITÉ:
sommes; collège; université; obligatoires; coûts d'inscription; pour suivre un programme d'études; augmentent chaque année.

EXAMEN A LA MAISON:
épreuve; devoir; droit aux sources; faire hors de la classe; longue période; certaine limite de temps.

ÉTUDIANT DE PREMIER CYCLE:
après le secondaire; candidat; premier grade.

DIPLOME DE PREMIER CYCLE:
premier grade; formation de base; accomplissement; exigences complétées; suivi de la maîtrise; baccalauréat; fin des études; succès.

PROGRAMME DE PREMIER CYCLE:
études; spécialisation.

DIPLOME UNIVERSITAIRE:
personne; terminé; marché du travail; accomplissement; obtention; université; programme d'études;grade.

UNIVERSITÉ:
institution; spécialisation; enseignement supérieur; recherche; étudiants; programmes; cours; établissement postsecondaire; professeurs; édifice; livres.

Appendix 10E: Disambiguation of sentences

Please answer the question for each sentence. The answer can quote one or two of the people named in the sentence or nobody. Every effort should be made to provide a definite answer; however, as a last resort, the answer can be `nobody'.

1.   John had just begun his job as a manager while Mark had just begun his academic year; he was ready for this annual session. Question: To whom does `he' refer?

2.   Jane was preparing for her academic year, but Mary was practising her piano; she wished to do well at university. Question: To whom does `she' refer?

3.   Brian worked for his father although Scott was in the middle of his academic year; he would be glad when the 9 months were over. Question: To whom does `he' refer?

4.   Lynn was on vacation while Nancy was beginning her academic year; she was anxious to complete these next 8 months. Question: To whom does `she' refer?

5.   Steven was finishing his academic year, but Ron was working as a clerk; he was very glad to be completing his school year. Question: To whom does `he' refer?

6.   Christine had finished her academic year although Kathy had passed her driving test; she had completed the two semesters. Question: To whom does `she' refer?

7.   Frank was working in construction, but Don was preparing for the academic year; he was nervous about the upcoming terms. Question: To whom does `he' refer?

8.   Kerri dreamed of her summer job while Sandra thought about her academic year; she could not wait for it to start in September. Question: To whom does `she' refer?

9.   Kevin was examining the admission requirements while David was reading a magazine; he found the specifications very clear. Question: To whom does `he' refer?

10.   Janet was thinking of her summer vacation, but Mary was thinking of her university's admission requirements; she feared that she did not possess the educational and other experiences required. Question: To whom does `she' refer?

11.   George wanted to get a job, but Michael was looking over the admission requirements; he wanted to be one of the new students. Question: To whom does `he' refer?

12. Kelly was looking for a job while Heather had read the admission requirements; she was not certain that she would receive admission. Question: To whom does `she' refer?

13. Chris thought only of his trip to Europe, but Martin had read the admission requirements; he was sure he possessed the qualifications. Question: To whom does `he' refer?

14. Anne was busy working as a clerk while Pam was reading the admission requirements; she had difficulty finding the subject she wanted. Question: To whom does `she' refer?

15. Steven was looking over the admission requirements, but Robert helped his father at work; his percentages might not be high enough for university. Question: To whom does `his' refer?

16. Lisa went to see an academic advisor although Tracey went to see a class-mate; the faculty member helped her very much. Question: To whom does `her' refer?

17. Steve wished to consult an academic advisor while Gary wished only to go home for the weekend; he was certain that person would advise him well. Question: To whom does `he' refer?

18. Nadine went out to dinner, but Lori went to see her academic advisor; she was not sure her progress was adequate. Question: To whom does `she' refer?

19. Denis went skiing although David made an appointment with an academic advisor; he needed help in his course selection. Question: To whom does `he' refer?

20. Sara met with her academic advisor, but Mary went on vacation; she greatly needed academic assistance. Question: To whom does `she' refer?

21. Mark had received his bachelor's degree whereas Martin was still in secondary school; he now had his first degree. Question: To whom does `he' refer?

22. Shelley wanted to receive a bachelor's degree while Sandra wished to find a full-time job; this would take her 3 or 4 years. Question: To whom does `her' refer?

23. Tony was working as a salesclerk, but Ron would receive his bachelor's degree in June; he would leave university this summer. Question: To whom does `he' refer?

24. Although Jane was in public school, Lauren had received her bachelor's degree; she had completed her post-secondary studies. Question: To whom does `she' refer?

25. Kirk had a job, but Don had obtained his bachelor's degree; he was glad to possess what was required to continue his education. Question: To whom does `he' refer?

26. Caroline had received her bachelor's degree while Patricia had just begun her vacation; she was proud of this honor received after completion of the requirements. Question: To whom does `she' refer?

27. Charles was looking for a job, but Ray received advanced standing; he was glad to have this status. Question: To whom does `he' refer?

28. Darla obtained advanced standing while Linda looked for a job; she was quite pleased to have her attainment credited to her. Question: To whom does `she' refer?

29. Scott was on holiday while Wayne was accorded advanced standing; he had qualifications beyond the minimum. Question: To whom does `he' refer?

30. Marsha was given advanced standing, but Tina was working at a day-care centre; she was certain of receiving admission. Question: To whom does `she' refer?

31. Mark obtained advanced standing although Pat was eating his breakfast; he already had credits. Question: To whom does `he' refer?

32. Gina was working as a secretary while Anna was given advanced standing; she already had a degree. Question: To whom does `she' refer?

33. Carl was a salesman, but Jack was an auditor; he enjoyed being a listener. Question: To whom does `he' refer?

34. Diane was a manager although Joyce was an auditor; she did not receive any credits. Question: To whom does `she' refer?

35. Peter worked as a clerk while Joseph was an auditor; he attended two courses. Question: To whom does `he' refer?

36. Margaret was a receptionist although Kim was an auditor; she was exempt from evaluations. Question: To whom does `she' refer?

37. Craig was an auditor whereas Michael was a legal assistant; his attendance was non-compulsory. Question: To whom does `his' refer?

38. Pauline is an auditor, but Gloria is a regular student; she does not have to do assignments. Question: To whom does `she' refer?

39. John flew his kite while Paul read his calendar; he found this publication in the room. Question: To whom does `he' refer?

40. Lynn looked for a job, but Grace received her calendar; she wished to determine her courses for next year. Question: To whom does `she' refer?

41. Peter had read his calendar whereas John had gone to the library; he found the requirements very strict. Question: To whom does `he' refer?

42. Margaret went on vacation while Pam received her calendar; she considered the regulations too severe. Question: To whom does `she' refer?

43. Edward read the calendar although Lawrence played basketball; he found the names of all the faculty members. Question: To whom does `he' refer?

44. Heather received the calendar, but Janet worked in an office; she wrote down all of the dates to remember. Question: To whom does `she' refer?

45. Luke planned his vacation while Martin examined the calendar; he found the information quite useful. Question: To whom does `he' refer?

46. Erin worked full-time whereas Paula had received the calendar; she wanted to know more about university. Question: To whom does `she' refer?

47. Brian was looking for a full-time job although Scott had kept last year's calendar; he was anxiously awaiting the latest of these annual publications. Question: To whom does `he' refer?

48. Kathy had read the calendar, but Christina had gone out to dinner; she was surprised at the cost of tuition. Question: To whom does `she' refer?

49. Frank read the calendar while Fred went to a hockey game; he found the list of bursaries very interesting. Question: To whom does `he' refer?

50. Anne-Marie went to a movie, but Sandra read the calendar; she learned about the administration. Question: To whom does `she' refer?

51. John read his calendar whereas Jim cleaned his apartment; he considered the list of services to be quite extensive. Question: To whom does `he' refer?

52. Nancy planned her trip to Edmonton, but Roberta read her calendar; she found many clubs and associations listed. Question: To whom does `she' refer?

53. Steven watched television while Ron examined the calendar; he found the course descriptions very useful. Question: To whom does `he' refer?

54. Tracey was using a map, but Lisa understood the credit system; she knew the use of these units. Question: To whom does `she' refer?

55. Shawn understood the credit system while Robert was thinking only of spring break; he knew it was a way to measure quantitatively. Question: To whom does `he' refer?

56. Pam grasped the use of the credit while Ann dreamed of her summer job; she knew it was the amount of content of a course. Question: To whom does `she' refer?

57. Chris was still in hospital whereas Martin received all of his credits; he had been granted these points for the completion of a course. Question: To whom does `he' refer?

58. Janet was concerned with her sister's wedding, but Marie was worried about the number of credits she had; she knew that a certain number were necessary to graduate. Question: To whom does `she' refer?

59. Steve had visited the campus while Gary was on vacation; he thought the grounds were beautiful. Question: To whom does `he' refer?

60. Nadine wanted to go to the movies, but Lori wished to see the campus; she had never been to a university or college. Question: To whom does `she' refer?

61. Denis watched television although David visited the campus; he was impressed by the size of the buildings. Question: To whom does `he' refer?

62. Sara went to the campus whereas Mary went for a ride on her bicycle; she found the residences to be very messy. Question: To whom does `she' refer?

63. Mark went to lunch while Martin saw the campus; he spent much of his time in the library. Question: To whom does `he' refer?

64. Shelley toured the campus, but Sandra visited her grand-mother; she found the services available to be useful. Question: To whom does `she' refer?

65. Ron visited the campus although Tony went to play golf; he liked the cafeteria. Question: To whom does `he' refer?

66. Lauren was out of town while Jane saw the campus; security allowed her to visit the various departments. Question: To whom does `her' refer?

67. Don visited the campus, but Pat went to look for an apartment; he thought the gymnasium was huge. Question: To whom does `he' refer?

68. Patricia was visiting a friend although Caroline toured the campus; she thought there must be a lot of maintenance to do. Question: To whom does `she' refer?

69. Ray went on vacation while Charles went to the campus; he thought the classrooms were quite large. Question: To whom does `he' refer?

70. Darla saw the campus although Linda was baby-sitting; she walked through the enclosed area. Question: To whom does `she' refer?

71. Robert was sleeping while Wayne went to his graduation; he enjoyed the whole process. Question: To whom does `he' refer?

72. Tina was busy working, but Marsha attended her graduation; she enjoyed the recognition immensely. Question: To whom does `she' refer?

73. Mark was going to his graduation although Andrew was looking for a summer job; he wanted to receive his reward for completing a course of study. Question: To whom does `he' refer?

74. Anna attended graduation whereas Gina was on vacation; she was very proud when she received her degree. Question: To whom does `she' refer?

75. Carl was away on business, but Jack went to his graduation; he was glad to finally receive his diploma. Question: To whom does `he' refer?

76. Diane attended graduation although Joyce was beginning her job training; she was proud of her achievement. Question: To whom does `she' refer?

77. Joseph went to his graduation, but Peter was on a trip to France; he thought the ceremony was beautiful. Question: To whom does `he' refer?

78. Kim was busy at home while Margaret attended graduation; she liked the formal affair. Question: To whom does `she' refer?

79. Craig was choosing a full-time job although Michael was choosing his department; he had to decide on a subdivision. Question: To whom does `he' refer?

80. Gloria was deciding on a vacation destination while Pauline had to choose her department; she was unsure of which school to choose. Question: To whom does `she' refer?

81. David chose his department whereas Robert went to visit his father; biology would be his branch of study. Question: To whom does `his' refer?

82. Mary went to the movies, but Nicole chose her department; she was anxious to begin college. Question: To whom does `she' refer?

83. George selected his department although Patrick needed to go shopping; he was anxious to begin university. Question: To whom does `he' refer?

84. Sheila had selected her department while Nancy went on summer vacation; she was enrolled in a faculty. Question: To whom does `she' refer?

85. Michael had gone to sleep, but Chris was now in a department; he had had the choice between various ones. Question: To whom does `he' refer?

86. Gloria has three full courses while Jane is a secretary; she enjoys her courses. Question: To whom does `she' refer?

87. Mark works for his father, but Glen takes only full courses; he goes to school from September through April. Question: To whom does `he' refer?

88. Ann is taking one full course whereas Sherry is a clerk; she will earn 6 credits. Question: To whom does `she' refer?

89. David is enrolled in three full courses, but Keith is weaving baskets; it will take him the whole academic year to complete them. Question: To whom does `him' refer?

90. Kim was a prisoner while Diane received her degree; she was proud of her title. Question: To whom does `she' refer?

91. Paul was on vacation although James received his degree; he was pleased with his university. Question: To whom does `he' refer?

92. Grace obtained her degree whereas Lynn was working at an office; this was the completion of her work. Question: To whom does `her' refer?

93. John worked for his father, but Peter received his degree; he had followed a course of study. Question: To whom does `he' refer?

94. Pam obtained her degree while Margaret was on vacation; she was leaving college. Question: To whom does `she' refer?

95. Edward received his degree, but Lawrence was working in construction; he was proud of his diploma. Question: To whom does `he' refer?

96. Heather worked as a labourer while Janet received her degree; she was proud of her certificate. Question: To whom does `she' refer?

97. Luke received his degree whereas Martin was still going to school; he was proud of his achievement. Question: To whom does `he' refer?

98. Erin was a secretary, but Paula took two elective courses; she was enjoying her studies. Question: To whom does `she' refer?

99. Brian takes several elective courses while Scott works as clerk; he likes being a student. Question: To whom does `he' refer?

100. Kathy has to choose her elective course although Christina is registering in a required course; she is allowed to select one. Question: To whom does `she' refer?

101. Frank has decided on his elective course while Fred is working at an office; he likes this subject. Question: To whom does `he' refer?

102. Anne-Marie chose a new dress, but Sandra chose her elective courses; her choice was based upon interest. Question: To whom does `her' refer?

103. John worked as a waiter although Jim took an elective course; it was related to his concentration program. Question: To whom does `his' refer?

104. Nancy chose her field of study while Roberta was looking for a job; her principal subject was chemistry. Question: To whom does `her' refer?

105. Steven was looking for an apartment, but Ron had to select his field of study; he needed to choose one department. Question: To whom does `he' refer?

106. Lisa chose her field of study although Tracey was looking for an apartment; she wanted to get a degree. Question: To whom does `she' refer?

107. Shawn was looking for a job whereas Robert had to decide on his field of study; he had various subjects from which to choose. Question: To whom does `he' refer?

108. Ann was looking for a job while Pam had to decide on her field of study; she chose her concentration. Question: To whom does `she' refer?

109. Janet had one final examination to write while Marie was sleeping; it was a conclusion for her. Question: To whom does `her' refer?

110. Chris was working full-time whereas Martin had to write a final examination; he wanted to be well prepared for his test. Question: To whom does `he' refer?

111. Steve had a final examination, but Gary had to find an apartment; he had taken a course. Question: To whom does `he' refer?

112. Nadine needed to find an apartment while Lori had to write a final examination; she wished to be well prepared for this evaluation. Question: To whom does `she' refer?

113. David had a final examination, but Dennis was working for a law firm; he knew it weighed heavily. Question: To whom does `he' refer?

114. John received his final mark, but James was working for his father; he was proud of his mark. Question: To whom does `he' refer?

115. Jane was sent a magazine while Mary was sent her final mark; she received it after the completion of her studies. Question: To whom does `she' refer?

116. Scott was planning his vacation although Brian obtained his final mark; it covered his entire course. Question: To whom does `his' refer?

117. Nancy was busy at work, but Lynn received her final mark; she was pleased with her grade. Question: To whom does `she' refer?

118. Craig obtained his final mark although Ron was working as a clerk; he had a very high percentage. Question: To whom does `he' refer?

119. Christine received her final mark while Kathy was on a trip with her parents; she was proud of her results. Question: To whom does `she' refer?

120. Don was looking for an apartment, but Frank was sent his final mark; he was pleased with his academic standing. Question: To whom does `he' refer?

121. Kerri had not yet received her final marks while Sandra had not yet telephoned her parents; she was unsure whether she would pass or fail. Question: To whom does `she' refer?

122. Kevin was sleeping, but David received his mark; he was proud of his rating. Question: To whom does `he' refer?

123. Janet was on vacation while Mary obtained her mark; she was pleased with her achievement. Question: To whom does `she' refer?

124. George was sent his mark although Michael was away on business; his percentage was quite high. Question: To whom does `his' refer?

125. Heather received her mark whereas Kelly was working as a clerk; she had taken a course. Question: To whom does `she' refer?

126. Martin received his mark, but Chris was on vacation; he was pleased with the letter he obtained. Question: To whom does `he' refer?

127. Pam was a clerk whereas Ann was a full-time student; she enjoyed being a student. Question: To whom does `she' refer?

128. Robert was a full-time student, but Shawn was a factory worker; he found a full course load very difficult. Question: To whom does `he' refer?

129. Tracey was a salesclerk while Lisa was a full-time student; she enjoyed university. Question: To whom does `she' refer?

130. Gary was a legal assistant although Steve was a full-time student; he liked college very much. Question: To whom does `he' refer?

131. Nadine's friend was a dog whereas Lori's was a full-time student; she liked this person very much. Question: To whom does `she' refer?

132. Denis was on vacation while David took three half courses; he enjoyed university. Question: To whom does `he' refer?

133. Sara has several half courses, but Mary works as a secretary; she enjoys all her courses. Question: To whom does `she' refer?

134. Mark is taking a half course whereas Martin is taking a full course; he is getting half the credit. Question: To whom does `he' refer?

135. Sandra is taking a full course, but Shelley is taking a half course; she has half as many meetings. Question: To whom does `she' refer?

136. Tony was a police officer while Ron took a half course; he was busy from September to December. Question: To whom does `he' refer?

137. Lauren takes three half courses, but Jane is a clerk; she is busy from January to April. Question: To whom does `she' refer?

138. Peter is taking a full course although Don is taking a half course; his course lasts one semester. Question: To whom does `his' refer?

139. Caroline takes a half course while Patricia is a salesclerk; she will receive 3 credits. Question: To whom does `she' refer?

140. Ray is studying for an honours degree, but Charles is working in construction; he cannot wait to receive his university degree. Question: To whom does `he' refer?

141. Linda is a secretary whereas Darla is studying for an honours degree; she enjoys studying at a higher level. Question: To whom does `she' refer?

142. Wayne is working towards an honours degree, but Scott is on holiday; he finds it very intensive. Question: To whom does `he' refer?

143. Tina is learning how to drive while Marsha is working towards an honours degree; it will take her 4 years. Question: To whom does `her' refer?

144. Mark has two lecture courses while Pat is looking for work; he enjoys his courses very much. Question: To whom does `he' refer?

145. Anna takes several lecture courses, but Gina is an office worker; she likes the fact that they are given verbally. Question: To whom does `she' refer?

146. Jack is taking a workshop whereas Carl has three lecture courses; little class participation is expected from him. Question: To whom does `him' refer?

147. Diane takes a few lecture courses, but Joyce is a ski-instructor; she always listens carefully to the speaker. Question: To whom does `she' refer?

148. Peter is working as a labourer while Joseph has several lecture courses; he always takes notes. Question: To whom does `he' refer?

149. James must choose his major while John must select a restaurant at which to go to dinner; he must decide on a principal subject. Question: To whom does `he' refer?

150. Mary has chosen her major, but Jane is working as a lawyer; she belongs to a department. Question: To whom does `she' refer?

151. Kevin went on vacation although David chose his major; he had a concentration. Question: To whom does the second `he' refer?

152. Ann chose her full-time job whereas Christine selected her major; she has to take a majority of courses in it. Question: To whom does `she' refer?

153. Mark chose his major while Fred was looking for an apartment; he found his field of study. Question: To whom does the `he' refer?

154. Tracey chose her major, but Tina took a holiday; it would be intensive for her. Question: To whom does `her' refer?

155. Frank selected his minor although Peter chose his car; he decided on his subject. Question: To whom does `he' refer?

156. Nicole was looking for a new boyfriend whereas Lisa chose her minor; she visited the various departments to help her decide. Question: To whom does `she' refer?

157. Joseph decided on his minor while Shawn went to see a hockey game; he had to take a smaller number of courses in this area. Question: To whom does `he' refer?

158. Lori chose her major, but Kelly chose her minor; she would take less intensive courses in this area. Question: To whom does `she' refer?

159. Steven was busy at work while Scott studied the marking system; he wished to understand this method. Question: To whom does `he' refer?

160. Kathy understood the marking system, but Carol understood the role of the seasons; she knew it was a way of recording results. Question: To whom does `she' refer?

161. Don understood the universe although Robert understood the marking system; he knew it was a way of reporting results. Question: To whom does `he' refer?

162. Heather understood the marking system whereas Lynn knew the fruit evaluation system; she was aware that it was a means of grading achievement. Question: To whom does `she' refer?

163. Philip understood the marking system while Craig was aware of the banking system; he knew that it was a means of evaluation. Question: To whom does `he' refer?

164. Sandra went for a walk, but Erin received a pass mark; she reached the cut-off point. Question: To whom does `she' refer?

165. Martin worked as a salesman while Greg obtained a pass mark; he was not pleased with this assessment. Question: To whom does `he' refer?

166. Margaret was working in a bank although Marie was given a pass mark ; she walked the fine line between failure and success. Question: To whom does `she' refer?

167. Fred had a pass mark whereas John failed his test; he received 50%. Question: To whom does `he' refer?

168. Denis was a part-time student while Brian was a doctor; he enjoyed being a student. Question: To whom does `he' refer?

169. Pauline is a part-time student whereas Janet is a lawyer; she does not carry a full-time course load.
   Question: To whom does `she' refer?

170. Tony is a construction worker, but Ron is a part-time student; he likes university. Question: To whom does `he' refer?

171. Elizabeth works full time although Grace is a part-time student; she likes college. Question: To whom does `she' refer?

172. Keith is a part-time student, but Chico barks all night; he is a person. Question: To whom does `he' refer?

173. Marsha has four required courses, but Brenda is a secretary; she likes all of her courses. Question: To whom does `she' refer?

174. Andrew prepares meals while William takes three required courses; each of them is required in his field. Question: To whom does `his' refer?

175. Diane has five required courses although Nancy has three children; they are in her curriculum. Question: To whom does `her' refer?

176. George has several cars, but Michael takes several required courses; he likes these prerequisites. Question: To whom does `he' refer?

177. Leanne has many required courses although Louise has many pets; they are needed for her degree. Question: To whom does `her' refer?

178. Henry takes four required courses while Alan has two jobs; they are mandatory for him. Question: To whom does `him' refer?

179. Sally has several prerequisite courses, but Cindy is working full time; she likes all of her courses. Question: To whom does `she' refer?

180. John has three cars whereas James takes five prerequisite courses; he has to have them completed. Question: To whom does `he' refer?

181. Mary has three prerequisite courses while Jane has two children; she must have them before going on. Question: To whom does `she' refer?

182. Ann has two jobs, but Christine has four prerequisite courses; she must have them in order to take succeeding courses. Question: To whom does `she' refer?

183. Mark has two prerequisite courses although Fred has two gold rings; they are necessary for him. Question: To whom does `him' refer?

184. Tina has two pictures, but Tracey takes five prerequisite courses; they are a requirement for her. Question: To whom does `her' refer?

185. Robert was a student, but Don worked in a restaurant; he was a candidate. Question: To whom does `he' refer?

186. Lynn was a social worker while Heather was a student; she was going to get a university degree. Question: To whom does `she' refer?

187. Philip is a student although Craig is a janitor; he is a person enrolled in classes. Question: To whom does `he' refer?

188. Erin is a student while Sandra is a waitress; she decided to learn. Question: To whom does `she' refer?

189. Martin is a doctor whereas Greg is a student; he attends a learning institution. Question: To whom does `he' refer?

190. Marie's year has two terms while Margaret's dress has two holes; she dislikes this division. Question: To whom does `she' refer?

191. Denis is half way through the term, but Brian is looking for work; he is in an academic year. Question: To whom does `he' refer?

192. Janet is retiring although Pauline is beginning her term; she will be very busy during the next 3 months. Question: To whom does `she' refer?

193. Ron is completing the term whereas Tony is completing his work; he has to finish this period. Question: To whom does `he' refer?

194. Elizabeth is preparing a dinner party, but Grace is beginning the term; she will be busy during the next 4 months. Question: To whom does `she' refer?

195. Keith received his transcipt, but Glen was away on vacation; he had a very impressive list. Question: To whom does `he' refer?

196. Marsha obtained her transcript while Brenda was working; she passed all of her courses. Question: To whom does `she' refer?

197. William was sent his transcript, but Andrew was working full time; his final grades were quite good. Question: To whom does the second `his' refer?

198. Nancy was working as a secretary whereas Diane received her transcipt; she had attended university. Question: To whom does `she' refer?

199. George was practising his piano although Michael obtained his transcript; he had done well in all his subjects. Question: To whom does `he' refer?

200. Leanne received her transcript, but Louise was on vacation; her academic standing was excellent. Question: To whom does `her' refer?

201. Alan was working for his father while Henry obtained his transcript; he had an outstanding academic record. Question: To whom does `he' refer?

202. Sally received her transcript, but Cindy was looking for work; she found all of the course descriptions listed. Quesiton: To whom does `she' refer?

203. John looked for a job while James obtained his transcript; he was proud of his official record. Question: To whom does `he' refer?

204. Jane was working as a secretary, but Mary paid her tuition fees; she found the amount excessive. Question: To whom does `she' refer?

205. David had tuition fees while Kevin worked full time; he would have to have them paid. Question: To whom does `he' refer?

206. Christine had tuition fees to pay, but Anne was going to daycare; she attended college. Question: To whom does `she' refer?

207. Mark had tuition fees while Fred worked as a clerk; he was going to university. Question: To whom does `he' refer?

208. Although Tina worked in an office, Tracey had tuition fees; she was receiving instructional services. Question: To whom does `she' refer?

209. Frank has tuition fees, but Peter has doctor's fees; they represent the cost of his course. Question: To whom does `his' refer?

210. Nicole is an office worker, but Lisa must do a take-home examination; she dislikes this type of test. Question: To whom does `she' refer?

211. Shawn must make a presentation while Joseph must write a take-home examination; it must be completed outside of his class. Question: To whom does `his' refer?

212. Kelly must write a take-home examination although Lori must play a game of chess; she has the right to use any sources available. Question: To whom does `she' refer?

213. Scott has two take-home examinations while Steven has two in-class tests; he does have a longer time to complete them. Question: To whom does `he' refer?

214. Carol is a nurse whereas Kathy has one take-home examination; she must respect the due date. Question: To whom does `she' refer?

215. Robert is an undergraduate student, but Don is a doctor; he enjoys being a student. Question: To whom does `he' refer?

216. Lynn is a lawyer while Heather is an undergraduate student; she enjoys pursuing her studies. Question: To whom does `she' refer?

217. Frida is a siamese whereas Debbie is an undergraduate student; she is a person. Question: To whom does `she' refer?

218. Greg is an undergraduate student, but Martin is a Ph.D. candidate; he has not yet obtained his first degree. Question: To whom does `he' refer?

219. Margaret is doing a Master's while Marie is pursuing an undergraduate degree; this is her initial step. Question: To whom does `her' refer?

220. Denis received an undergraduate degree whereas Brian received a telegramme; he had a college/university degree. Question: To whom does `he' refer?

221. Janet is an office worker although Pauline is pursuing an undergraduate degree; she is enrolled in a 3- or 4-year course. Question: To whom does `she' refer?

222. Ron is enrolled in an undergraduate program, but Tony is working for his father; he takes several courses. Question: To whom does `he' refer?

223. Grace is in an undergraduate program while Elizabeth is working in a factory; her field of study is French. Question: To whom does `her' refer?

224. Glen works full time whereas Keith is enrolled in an undergraduate program; he is pursuing his first degree. Question: To whom does `he' refer?

225. Marsha is in an undergraduate program, but Brenda is preparing her driving test; it will take her 3 or 4 years to   complete it. Question: To whom does `her' refer?

226. Boots is my pet while William is a university graduate; he is a person. Question: To whom does `he' refer?

227. Nancy is a secretary although Diane is a university graduate; she has completed her studies. Question: To whom does `she' refer?

228. George is a labourer whereas Michael is a university graduate; he has finished his university program. Question: To whom does `he' refer?

229. Louise is a cleaner, but Leane is a university graduate; she now has a degree. Question: To whom does `she' refer?

230. Henry attends university while Alan is a forester; he enjoys being at his institution. Question: To whom does `he' refer?

231. Sally goes to university whereas Cindy is a salesclerk; she likes getting a higher education. Question: To whom does `she' refer?

232. Although John is a mailman, James attends university; he likes the teaching methods used. Question: To whom does `he' refer?

233. Mary goes to university, but Jane is a waitress; she likes the research required. Question: To whom does `she' refer?

234. Kevin is an electrician while David attends university; he enjoys his post-secondary studies. Question: To whom does `he' refer?

235. Christine is enrolled in university although Anne is trained as a nurse; she is learning. Question: To whom does `she' refer?

236. Fred is a factory worker, but Mark is in university; he likes studying. Question: To whom does `he' refer?

Appendix 10F: Disambiguation of Sentences

Veuillez répondre aux questions suivantes. Vos réponses peuvent contenir un nom ou deux, ou tout simplement indiquer `personne'. Veuillez vous efforcer de donner une réponse précise et ce n'est qu'en dernier recours que votre réponse peut être `personne'.

1. Jean pense à l'année universitaire alors que Paul rêve à sa nouvelle bicyclette; il n'aime pas ce temps-là. Question: A qui renvoie le pronom `il'?

2. Francine se prépare pour l'année universitaire, Aline, par contre, a accepté un emploi; elle partira pour l'université jeudi prochain. Question: A qui renvoie le pronom `elle'?

3. Jeanne passe l'année universitaire en France alors que Marie y travaille comme secrétaire; elle aime vivre en Europe de l'automne à l'été. Question: A qui renvoie le pronom `elle'?

4. Pierre allait travailler dans une banque, mais pour Marc l'année universitaire recommençait; l'étude occuperait la majeure partie de son temps. Question: Le temps de qui?

5. Lise avait pris sa retraite tandis que Hélène avait terminé son année universitaire; elle avait fini ses études postsecondaires cette année. Question: A qui renvoie le pronom `elle'?

6. Jean travaillait dans un restaurant alors que Jacques se concentrait sur son année universitaire; pour lui l'éducation importait beaucoup. Question: A qui renvoie le pronom `lui'?

7. Guy doit travailler dans une banque, Paul doit faire une année universitaire; il trouve le travail scolaire très facile. Question: A qui renvoie le pronom `il'?

8. Francine faisait une année universitaire tandis que Jocelyne était coiffeuse; son temps était divisé en semestres. Question: Le temps de qui?

9. Alain avait bien du travail à faire au cours de l'année universitaire alors que Robert avait du temps libre dans son emploi; cela durerait deux trimestres pour lui. Question: A qui renvoie le pronom `lui'?

10. Pierre passait son année universitaire à faire des expériences en chimie, mais Paul était boucher; à la fin de l'année il avait lu beaucoup de livres. Question: A qui renvoie le pronom `il'?

11. Francine a satisfait les conditions d'admission de l'université alors que Marlène n'a pas été admise; elle fera partie du groupe de nouveaux étudiants. Question: A qui renvoie le pronom `elle'?

12. Anne a échoué à son examen tandis que Georges n'a pas satisfait les conditions d'admission; ses expériences étaient insuffisantes. Question: Les expériences de qui étaient insuffisantes?

13. Claudette aimait le violon alors que Monique trouvait que les conditions d'admission étaient trop sévères; elle avait une formation scolaire excellente. Question: A qui renvoie le pronom `elle'?

14. Paul était malheureux d'avoir perdu son chien tandis que Jean était triste après avoir lu les conditions d'admission; il n'avait pas les compétences qu'on doit posséder pour être admis. Question: A qui renvoie le pronom `il'?

15. Michèle était contente après avoir lu les conditions d'admission, mais Hélène aimait sa nouvelle robe; elle pourrait faire partie du groupe d'étudiants adultes. Question: A qui renvoie le pronom `elle'?

16. Marie lisait les conditions d'admission alors que Line pensait à ses vacances; elle était certaine qu'elle satisferait les exigences. Question: A qui renvoie le pronom `elle'?

17. Robert croyait que les conditions d'admission seraient les mêmes pour tout le monde alors que Richard pensait qu'elles seraient spécifiques au domaine; il avait raison. Question: A qui renvoie le pronom `il'?

18. Diane aimait bien son chien alors que Lucie aimait son conseiller pédagogique; elle pensait qu'il était une personne extrêmement gentille. Question: A qui renvoie le pronom `elle'?

19. Lucille va prendre un café, mais Marie va s'adresser à son conseiller pédagogique; elle va demander des renseignements sur les programmes d'études. Question: A qui renvoie le pronom `elle'?

20. Jean voulait devenir avocat alors que Serge voulait devenir conseiller pédagogique; il voulait apporter une aide pédagogique aux étudiants. Question: A qui renvoie le pronom `il'?

21. Christine est allée voir son conseiller pédagogique alors que Jeanne est allée chez le dentiste; il lui a fourni une direction didactique très utile. Question: A qui renvoie le pronom `il'?

22. Brigitte est allée chez le docteur, Andrée, par contre, est allée voir son conseiller pédagogique; il l'a aidée dans son choix de cours. Question: A qui renvoie le pronom `il''?

23. Charles est allé voir son conseiller pédagogique, mais Raymond est allé à la piscine; il avait besoin d'aide pour établir son horaire. Question: A qui renvoie le pronom `il'?

24. Michèle est allée voir son conseiller pédagogique
    alors que Jeanne est allée au cinéma; elle a reçu de
    bons conseils. Question: A qui renvoie le pronom
    `elle'?

25. Jean a vu le roi alors que Patrick a vu son
    conseiller pédagogique; il lui a été très utile.
    Question: A qui renvoie le pronom `lui'?

26. Raoul avait vu un ami, mais Maurice avait vu un
    conseiller pédagogique; il avait vu un spécialiste.
    Question: A qui renvoie le pronom `il'?

27. Marie a trouvé un poste alors que Diane a obtenu son
    baccalauréat; elle a reçu son premier grade.
    Question: A qui renvoie le pronom `elle'?

28. Luc voulait faire un baccalauréat tandis que Jacques
    allait chercher un emploi; il allait suivre quinze
    cours. Question: A qui renvoie le pronom `il'?

29. Nadine travaille dans une banque alors que Lise
    vient de finir son baccalauréat; elle recevra son
    diplôme dans trois semaines. Question: A qui
    renvoie le pronom `elle'?

30. Marc est toujours à l'école, mais Pierre a reçu son
    baccalauréat; il a pour intention de trouver un
    emploi. Question: A qui renvoie le pronom `il'?

31. Jeanne a obtenu son baccalauréat, Lucie, par contre,
    a atteint l'âge de la majorité; elle est fière de
    son accomplissement. Question: A qui renvoie le
    pronom `elle'?

32. Denis est rentré chez lui, mais Robert a fini son
    baccalauréat; il est très content de son succès.
    Question: A qui renvoie le pronom `il'?

33. Nathalie a obtenu son baccalauréat, mais Pierrette a
    écouté de la musique; elle est heureuse d'avoir
    atteint son objectif. Question: A qui renvoie le
    pronom `elle'?

34. Marc allait faire un baccalauréat alors que Martin
    allait chercher un emploi; il lui faudrait 90
    crédits. Question: A qui renvoie le pronom `lui'?

35. Paul vient de commencer sa deuxième année alors que
    Guy a terminé ses études menant au baccalauréat; il
    a reçu le document officiel il y a six semaines.
    Question: A qui renvoie le premier pronom `il'?

36. Anne s'est mariée, mais Jocelyne vient d'obtenir son
    baccalauréat; elle espère que cela mène à un
    emploi. Question: A qui renvoie le pronom `elle'?

37. Jean est allé en Floride tandis que Raymond a
    terminé son baccalauréat; il recevra son bout de
    papier dans quelques jours. Question: A qui renvoie
    le pronom `il'?

38. Lisette se préparait pour son permis de conduire,
    Chantal, par contre, venait de commencer un
    baccalauréat; elle espérait l'obtenir dans 3 ou 4
    ans. Question:A qui renvoie le pronom `elle'?

39. Pierre a trouvé un emploi, mais Richard veut faire
    son baccalauréat; il va entrer à l'université en
    automne. Question: A qui renvoie le pronom `il'?

40. Anne allait chercher un emploi tandis que Lynne
    voulait faire une maîtrise; pour elle, le
    baccalauréat était nécessaire. Question: A qui
    renvoie le pronom `elle'?

41. Raymonde a reçu une équivalence, mais Jeanne a reçu
    un télégramme; elle a bénéficé de ce statut.
    Question: A qui renvoie le pronom `elle'?

42. Alain n'a pas bénéficié d'équivalence alors qu'on en
    a accordé une en philosophie à Paul; il avait déjà
    suivi des cours universitaires. Question: A qui
    renvoie le pronom `il'?

43. Rachel n'a pas obtenu d'équivalence tandis que Marie
    en a reçu une; elle avait suivi des cours du même
    niveau. Question: A qui renvoie le pronom `elle'?

44. Jean n'avait pas d'équivalences, mais Marc en avait;
    il avait suivi des cours dont le contenu était
    semblable. Question: A qui renvoie le pronom `il'?

45. Diane n'a pas reçu d'équivalence, Aline, par contre,
    en a obtenu une; on lui a accordé des crédits.
    Question: A qui renvoie le pronom `lui'?

46. Bruno est auditeur alors que Médor est mignon; il
    est une personne. Question: A qui renvoie le pronom
    `il'?

47. Pauline voulait être secrétaire tandis que Jeanne
    voulait être auditrice; elle devait être inscrite.
    Question: A qui renvoie le pronom `elle'?

48. Luc était étudiant, mais Jacques était auditeur; il
    assistait aux cours sans avoir droit aux crédits.
    Question: A qui renvoie le pronom `il'?

49. Marie est institutrice alors que Françoise est
    auditrice; c'est elle qui écoute le professeur.
    Question: A qui renvoie le pronom `elle'?

50. Paul est auditeur tandis que Robert donne le cours;
    il n'est qu'un observateur. Question: A qui renvoie
    le pronom `il'?

51. Chantal est auditrice, mais Colette est étudiante;
    elle a un statut libre. Question: A qui renvoie le
    pronom `elle'?

52. Jean est professeur, Guy, par contre, est auditeur;
    il est un étudiant intelligent. Question: A qui
    renvoie le pronom `il'?

53. Nathalie était auditrice tandis que Lucie était étudiante; elle avait dû remplir des conditions d'admission différentes. Question: A qui renvoie le pronom `elle'?

54. Fernande a reçu l'annuaire de son université alors que Pauline a reçu un paquet; ce document lui a fourni beaucoup de renseignements. Question: A qui renvoie le pronom `lui'?

55. Jeanne a lu le journal, mais Michèle a lu son annuaire; elle connaît maintenant tous les programmes d'études de l'université. Question: A qui renvoie le pronom `elle'?

56. Alain a lu l'annuaire tandis que Patrick a lu un magazine; il connaît tous les règlements. Question: A qui renvoie le pronom `il'?

57. Nadine a examiné l'annuaire, Francine, par contre, a regardé la télé; elle connaît le nom des professeurs de son département. Question: A qui renvoie le pronom `elle'?

58. Fred a reçu son annuaire, mais Pierre a reçu un coup de téléphone; il a trouvé qu'il satisfaisait les conditions d'admission. Question: A qui renvoie le pronom `il'?

59. Chantal a lu un livre alors que Marie a lu l'annuaire; elle connaissait les cours offerts. Question: A qui renvoie le pronom `elle'?

60. Anne a lu son annuaire, mais Christine a lu le journal; elle a trouvé les renseignements généraux bien utiles. Question: A qui renvoie le pronom `elle'?

61. Jean-Pierre a reçu l'annuaire alors que Marc a reçu son magazine; il y a trouvé toutes les conditions du contrat. Question: A qui renvoie le pronom `il'?

62. Marie a reçu l'annuaire tandis que Lynne a reçu une lettre; ce livre lui est très utile. Question: A qui renvoie le pronom `lui'?

63. Raymond a gardé l'annuaire de l'année dernière, mais Paul pense que c'est inutile; il sait que l'annuaire est annuel. Question: A qui renvoie le pronom `il'?

64. Marie-Claude comprend bien l'arithmétique tandis que Claire comprend le système de crédits à l'université; elle sait qu'il s'agit de la valeur des composantes des cours. Question: A qui renvoie le pronom `elle'?

65. Pierre avait un emploi, mais Jean avait quelques credits; il avait commencé son programme d'études. Question: A qui renvoie le pronom `il'?

66. Stéphanie connaissait la valeur des crédits tandis que Monique savait conduire; elle utilise ces unités de mesure. Question: A qui renvoie le pronom `elle'?

67. Georges a reçu des fleurs, mais Bernard avait tous
    ses crédits; il en avait accumulé assez. Question:
    A qui renvoie le pronom `il'?

68. Alice connaissait l'usage des crédits alors que Lise
    connaissait la musique; elle savait qu'il s'agissait
    d'un moyen de quantifier un cours. Question: A qui
    renvoie le pronom `elle'?

69. Michel a visité la cité universitaire, mais Denis
    est allé au cinéma; il a trouvé que c'était un
    ensemble très impressionnant. Question: A qui
    renvoie le pronom `il'?

70. Josée a continué sa route alors que Marlène est
    allée voir la cité universitaire; les bâtiments
    l'ont frappée. Question: A qui renvoie le pronom
    `l''?

71. Stéphane vivait dans la cité universitaire tandis
    que Marc habitait en ville; il aimait passer tout
    son temps à l'université. Question: A qui renvoie
    le pronom `il'?

72. Aline est repartie tout de suite, mais Sylvie est
    allée à la cité universitaire; elle voulait voir les
    salles de classe. Question: A qui renvoie le pronom
    `elle'?

73. Pierre a visité la cité universitaire alors que Jean
    est parti jouer au tennis; il voulait choisir une
    des résidences. Question: A qui renvoie le pronom
    `il'?

74. Nicole vivait dans la cite universitaire tandis que
    Chantal habitait en ville; elle aimait vivre sur le
    campus. Question: A qui renvoie le pronom `elle'?

75. Alain aimait bien le théâtre, mais Jacques préférait
    la cité universitaire; il connaissait ce lieu
    d'enseignement. Question: A qui renvoie le pronom
    `il'?

76. Jeanne aimait bien la cité universitaire alors que
    Diane préférait la campagne; elle vivait dans ce
    regroupement. Question: A qui renvoie le pronom
    `elle'?

77. Martin n'aimait pas la cité universitaire, mais
    Robert détestait la mer; il pensait que les
    bibliothèques étaient mal situées. Question: A qui
    renvoie le pronom `il'?

78. Michèle devait assister à la collation des grades
    alors que Pauline devait être en vacances; elle
    attendait cette action. Question: A qui renvoie le
    pronom `elle'?

79. Pierre est allé au cinéma alors que Raoul a assisté
    à la collation des grades; on lui a conféré son
    grade. Question: A qui renvoie le pronom `il'?

80. Marie est partie en vacances tandis que Francine est
    allée à la collation des grades; elle a reçu son
    titre universitaire. Question: A qui renvoie le
    pronom `elle'?

81. Marc était allé au cinéma, mais Jean-Luc était allé
    à sa collation des grades; il était fier de son
    succès. Question: A qui renvoie le pronom `il'?

82. Michèle a rendu visite à sa tante alors que Nicole a
    assisté à sa collation des grades; on a reconnu son
    accomplissement. Question: L'accomplissement de qui
    a été reconnu?

83. Alain pensait à la collation des grades alors que
    Jacques pensait à sa voiture; pour lui, elle
    signalait la fin des études. Question: A qui
    renvoie le pronom `lui'?

84. Jeanne rêvait à la collation des grades, mais
    Monique ne pensait qu'à son emploi; elle avait hâte
    d'aller à ce rassemblement. Question: A qui renvoie
    le pronom `elle'?

85. Marcel rêvait à sa bicyclette alors que Bernard
    pensait à la collation des grades; pour lui c'était
    important pour son avenir. Question: A qui renvoie
    le pronom `lui'?

86. Aline a assisté à la collation des grades tandis que
    Marie est allée chez le médecin; sa fierté y était
    évidente. Question: La fierté de qui était
    évidente?

87. Hugues a assisté à la collation des grades, Pierre,
    par contre, est allé au théâtre; il a reçu son
    diplôme. Question: A qui renvoie le pronom `il'?

88. Jeanne est allée au concert alors que Monique est
    allée à la collation des grades; elle a vu tout le
    monde en toges. Question: A qui renvoie le pronom
    `elle'?

89. Joseph est allé chez le dentiste tandis que Marc a
    assisté à la collation des grades; il a aimé cette
    fête. Question: A qui renvoie le pronom `il'?

90. Diane est allée à la collation des grades alors que
    Michèle est allée à l'épicerie; toute sa famille
    était là aussi. Question: La famille de qui était
    là?

91. Albert est allé à la collation des grades tandis que
    Jean-Paul est allé chez son avocat; il est entré
    dans un auditorium. Question: A qui renvoie le
    pronom `il'?

92. Jeanne avait trouvé un emploi alors que Marie avait
    choisi son département; elle avait considéré les
    subdivisions. Question: A qui renvoie le pronom
    `elle'?

93. Jean connaissait son département tandis que Luc connaissait son usine; il venait de commencer dans cette école. Question: A qui renvoie le pronom `il'?

94. Rachel avait choisi son chapeau, mais Pierrette avait choisi son département; elle savait quelle discipline elle voulait étudier. Question: A qui renvoie le pronom `elle'?

95. Marc avait choisi avec soin son département alors que Pierre avait trouvé un emploi; il allait s'inscrire à la faculté des arts. Question: A qui renvoie le pronom `il'?

96. Diane avait choisi son département tandis que Lucie était allée nager; elle était certaine d'aller à l'université. Question: A qui renvoie le pronom `elle'?

97. Richard avait choisi un livre, mais Robert avait choisi son département; son appartenance était décidée. Question: L'appartenance de qui était décidée?

98. Micheline n'avait pas changé de département depuis trois ans tandis que Sylvie avait changé de métier; elle connaissait tous les professeurs. Question: A qui renvoie le pronom `elle'?

99. Guy avait sélectionné sa voiture alors que Pierre avait choisi son département; il avait un programme à suivre. Question: A qui renvoie le pronom `il'?

100. Lise a des difficultés dans ce magasin, mais Caroline a un problème dans son département; elle va voir la secrétaire. Question: A qui renvoie le pronom `elle'?

101. Denis travaillait dans une banque alors que Joseph suivait des cours complets; il parlait souvent de ses cours. Question: A qui renvoie le pronom `il'?

102. Aline suivait des cours complets tandis que Jocelyne travaillait dans une banque; elle était occupée de septembre à avril. Question: A qui renvoie le pronom `elle'?

103. Raymond n'avait que des cours complets, mais Pierre suivait des demi-cours; ses cours duraient un an. Question: Les cours de qui duraient un an?

104. Michèle suivait cinq cours complets alors que Josée en avait un; elle obtiendrait six crédits. Question: A qui renvoie le pronom `elle'?

105. Roger n'aimait pas suivre les cours complets tandis que Robert n'aimait pas les sports; il les trouvait trop longs. Question: A qui renvoie le pronom `il'?

106. Nina allait recevoir son grade en été, Anne, par contre, partait en vacances; elle voulait avoir son degré. Question: A qui renvoie le pronom `elle'?

107. Luc a reçu son grade alors que Michel a cherché du travail; il faisait partie de la hiérarchie universitaire. Question: A qui renvoie le pronom `il'?

108. Claudette suit des cours tandis que Marie-Claire a obtenu son grade; elle était fière de son diplôme. Question: A qui renvoie le pronom `elle'?

109. Claude a reçu son grade, mais Jean vient de commencer ses études; il a son baccalauréat. Question: A qui renvoie le pronom `il'?

110. Jeanne était secrétaire alors que Marie suivait des cours au choix; elle parlait souvent de ses cours. Question: A qui renvoie le pronom `elle'?

111. Jacques doit suivre des cours obligatoires tandis que Paul doit suivre des cours au choix; il doit choisir ces cours. Question: A qui renvoie le pronom `il'?

112. Christine suivait des cours au choix, Rachel, par contre, avait un emploi; elle était étudiante. Question: A qui renvoie le pronom `elle'?

113. Chantal aimait les cours obligatoires, mais Francine aimait les cours au choix; elle aimait pouvoir sélectionner parmi les choix multiples. Question: A qui renvoie le pronom `elle'?

114. Guy faisait des gâteaux alors que Jacques suivait des cours au choix; ils lui étaient nécessaires. Question: A qui renvoie le pronom `lui'?

115. Diane avait à suivre des cours au choix tandis que Brigitte devait suivre des cours obligatoires; elle allait suivre ceux qui présentaient un intérêt particulier pour elle. Question: A qui renvoie le pronom `elle'?

116. Marc n'avait que des cours au choix alors que Serge avait des cours obligatoires; il allait suivre des cours de domaines divers. Question: A qui renvoie le pronom `il'?

117. Michèle avait choisi son domaine d'études, mais Nicole avait choisi sa maison; elle avait choisi ses cours. Question: A qui renvoie le pronom `elle'?

118. Pierre avait choisi son domaine d'études alors que Roger avait choisi son sport; il avait choisi son programme d'études. Question: A qui renvoie le pronom `il'?

119. Raymonde avait changé d'emploi, mais Anne avait gardé le même domaine d'études; elle avait fait des études plus poussées. Question: A qui renvoie le pronom `elle'?

120. Jean avait choisi son domaine d'études tandis que Robert avait choisi son appartement; il avait choisi sa spécialité. Question: A qui renvoie le pronom `il'?

121. Andrée avait choisi son domaine d'études alors que Denise avait choisi sa tapisserie; sa concentration serait le français. Question: La concentration de qui serait le français?

122. Jacques a réussi sa sculpture, mais Alain a réussi à son examen final; cette épreuve était facile pour lui. Question: A qui renvoie le pronom `lui'?

123. Jeanne avait un examen final alors que Sylvie partait en vacances; elle avait à étudier l'ensemble des renseignements. Question: A qui renvoie le pronom `elle'?

124. Jocelyne avait un examen final alors que Lynn travaillait dans une banque; elle avait aimé l'année universitaire. Question: A qui renvoie le pronom `elle'?

125. Patrick allait passer un examen final tandis que Fred allait faire du ski; il obtiendra ainsi 25% de sa note finale. Question: A qui renvoie le pronom `il'?

126. Aline détestait les oranges, mais Rachel détestait les examens finals; elle n'aimait pas le stress. Question: A qui renvoie le pronom `elle'?

127. Raoul s'est préparé pour son match de hockey tandis que David s'est préparé pour l'examen final; il va le passer bientôt. Question: A qui renvoie le pronom `il'?

128. Chantal a passé son examen final, Diane, par contre, est allée au cinéma; sa réussite est presque garantie. Question: La réussite de qui était presque garantie?

129. Jacques allait travailler, mais Marc allait passer son examen final; il était prêt pour cette évaluation des connaissances. Question: A qui renvoie le pronom `il'?

130. Marie avait à passer un examen final, Lucie, par contre, devait apprendre à skier; elle le ferait au mois d'avril. Question: A qui renvoie le pronom `elle'?

131. Robert doit planter son jardin, mais Georges doit passer un examen final; il doit le faire au mois de décembre. Question: A qui renvoie le pronom `il'?

132. Jeanne a un examen final alors que Line a un emploi; elle a de l'étude à faire. Question: A qui renvoie le pronom `elle'?

133. Luc a un examen final tandis que Jean va en Espagne; il va utiliser sa mémoire. Question: A qui renvoie le pronom `il'?

134. Claudette allait regarder la télé alors que Francine allait passer un examen final; ce serait un défi pour elle. Question: A qui renvoie le pronom `elle'?

135. Jean avait passé son examen final, mais Jacques avait écouté la radio; son soulagement était visible. Quesiton: Le soulagement de qui était visible?

136. Pierrette avait reçu sa note finale alors que Françoise avait reçu un magazine; elle était très fière de cette note. Question: A qui renvoie le pronom `elle'?

137. Eric avait obtenu sa note finale tandis que Michel avait obtenu sa voiture; elle reflétait l'ensemble des lettres qu'il avait reçues. Question: A qui renvoie le pronom `il'?

138. Francine connaissait sa voisine, mais Charlotte connaissait sa note finale; elle était très contente de sa réussite. Question: A qui renvoie le pronom `elle'?

139. Albert vient de recevoir sa note finale, Patrick, par contre, vient de recevoir une carte postale; il s'attendait à cet échec. Question: A qui renvoie le pronom `il'?

140. Diane recevra sa facture alors que Lynne obtiendra sa note finale la semaine prochaine; elle espère avoir de bons résultats. Question: A qui renvoie le pronom `elle'?

141. Alain a reçu sa note finale tandis que Luc a reçu un télégramme;il était satisfait de cette évaluation numérique. Question: A qui renvoie le pronom `il'?

142. Lucie avait reçu sa note finale alors que Jeanne avait reçu une lettre; son pourcentage n'était pas très élevé. Question: Le pourcentage de qui n'était pas très élevé?

143. Bernard connaissait son rôle, mais Pierre connaissait sa note finale; il avait beaucoup de points. Question: A qui renvoie le pronom `il'?

144. Diane avait gagné son procès alors que Micheline avait reçu sa note finale; sa moyenne générale était très élevée. Question: La moyenne générale de qui était très élevée?

145. Alain était content de sa note finale, mais Cédric était satisfait de sa voiture; elle reflétait son degré de compétence. Question: Elle reflétait le degré de compétence de qui?

146. Marie a reçu ses notes finales tandis que Line a reçu un livre; elle a reçu son relevé de notes. Question: A qui renvoie le pronom `elle'?

147. Jean a reçu son journal, mais Georges a reçu sa note finale; il avait attendu la fin du cours. Question: A qui renvoie le pronom `il'?

148. Patricia était satisfaite de sa note alors que Lise était très contente de sa voiture; elle pensait que c'était une bonne estimation. Question: A qui renvoie le pronom `elle'?

149. Paul a reçu un télégramme tandis que Jean a reçu une note; il a fait du travail. Question: A qui renvoie le pronom `il'?

150. Monique a reçu sa note, mais Marie a reçu une carte postale; celle qu'elle a reçue est représentée par une lettre. Question: A qui renvoie le pronom `elle'?

151. Albert connaissait sa note, Alain, par contre, connaissait la Bible; il avait vu le nombre. Question: A qui renvoie le pronom `il'?

152. Lucie a reçu une note alors que Michèle a reçu un magazine; elle a passé un examen. Question: A qui renvoie le pronom `elle'?

153. Pierre a peint un tableau tandis que Stéphane a reçu une note; il avait passé un test. Question: A qui renvoie le pronom `il'?

154. Denise était en vacances, mais Jeanne avait reçu sa note; elle était fière de son degré de réussite. Question: A qui renvoie le pronom `elle'?

155. Richard a reçu sa note, Adrien, par contre, a obtenu un emploi; il est fier de ce pourcentage. Question: A qui renovoie le pronom `il'?

156. Annette connaissait sa note alors que Christine avait la permission de sortir; celle qu'elle avait reçue était représentée par une fraction. Question: A qui renvoie le pronom `elle'?

157. Fred avait sa bicyclette tandis que Patrick avait sa note; il était content de cette évaluation. Question: A qui renvoie le pronom `il'?

158. La chienne était contente, mais Francine était étudiante à plein temps; elle était une personne. Question: A qui renvoie le pronom `elle'?

159. Jacques travaille dans une usine, Philippe, par contre, est étudiant à plein temps; il étudie. Question: A qui renvoie le pronom `il'?

160. Françoise est étudiante à temps partiel alors que Brigitte est étudiante à plein temps; elle étudie à plein temps. Question: A qui renvoie le pronom `elle'?

161. Raoul travaille dans un restaurant tandis que Robert est étudiant à plein temps; il va à l'université. Question: A qui renvoie le pronom `il'?

162. Francine travaille dans un bureau mais Jeanne est toujours étudiante à plein temps; elle suit le minimum de cours requis. Question: A qui renvoie le pronom `elle'?

163. Louise est étudiante à plein temps, mais Michelle est vendeuse; elle suit cinq cours complets. Question: A qui renvoie le pronom `elle'?

164. Marc doit suivre un cours complet alors que Pierre doit suivre un demi-cours; son cours se donne de septembre à décembre. Question: Le cours de qui se donne de septembre à décembre?

165. Lucie doit suivre un demi-cours tandis que Diane a encore un cours complet à suivre; elle va le suivre de janvier à avril. Question: A qui renvoie le pronom `elle'?

166. Jacques suit des cours complets, mais Martin suit plusieurs demi-cours; chacun de ses cours vaut trois crédits. Question: Les cours de qui valent trois crédits?

167. Monique aimait les demi-cours tandis que Jeanne ne les aimait pas; elle préférait les cours courts. Question: A qui renvoie le pronom `elle'?

168. Georges aime bien les demi-cours, mais Luc ne les aime pas du tout; il préfère les cours qui ne durent qu'une session. Question: A qui renvoie le pronom `il'?

169. Anne ne suit que des cours complets alors que Christine ne suit que des demi-cours; elle aime ce type de cours qui sont souvent complétés par un autre. Question: A qui renvoie le pronom `elle'?

170. Philippe travaille dans une banque tandis que Jean suit des demi-cours; il aime ces cours. Question: A qui renvoie le pronom `il'?

171. Jacqueline va essayer de finir son baccalauréat spécialisé cette année tandis que Danielle va chercher un emploi; elle espère obtenir son baccalauréat. Question: A qui renvoie le pronom `elle'?

172. Bernard voudrait faire un baccalauréat spécialisé, mais Jean voudrait trouver un emploi; il aimerait faire des études supérieures. Question: A qui renvoie le pronom `il'?

173. Marlène voudrait quitter l'école secondaire, Jeanne, par contre, voudrait faire un baccalauréat spécialisé; elle a le faire à la suite de son premier grade. Question: A qui renvoie le pronom `elle'?

174. Stéphane a fait un baccalauréat spécialisé, mais Pierre est parti en Espagne; il a choisi un domaine précis. Question: A qui renvoie le pronom `il'?

175. Monique a fait un baccalauréat spécialisé alors que Lise quitté l'école; elle voulait faire une étude approfondie. Question: A qui renvoie le pronom `elle'?

176. Louise a passé son permis de conduire alors que Jeanette fait un baccalauréat spécialisé; il lui a fallu quatre ans pour le faire. Question: A qui renvoie le pronom `lui'?

177. Albert a fait un baccalauréat spécialisé, Alain, par contre, a acheté une carte géographique; il espérait que ça l'aiderait à trouver un emploi. Question: A qui renvoie le pronom `il'?

178. Michèle était secrétaire alors que Linda suivait cinq cours magistraux; elle aimait cette forme d'enseignement. Question: A qui renvoie le pronom `elle'?

179. Pierre travaillait dans un atelier, mais Patrick avait des cours magistraux; il assistait aux conférences. Question: A qui renvoie le pronom `il'?

180. Annette n'aime pas son cours magistral tandis que Diane déteste son cours de travaux pratiques; elle n'aime pas que le cours se donne sans que l'auditeur intervienne. Question: A qui renvoie le pronom `elle'?

181. Alain suivait un cours magistral, Michel, par contre, avait un atelier; il aimait le fait que le professeur donnait des notes au tableau. Question: A qui renvoie le pronom `il'?

182. Jeanne déteste l'heure de pointe alors que Michèle n'aime pas son cours magistral; elle n'aime pas son aspect passif. Question: A qui renvoie le pronom `elle'?

183. Jacques aime les cours magistraux tandis que Marc préfère les travaux pratiques; il aime la théorie. Question: A qui renvoie le pronom `il'?

184. Annette avait choisi sa robe, mais Monique avait choisi sa majeure; elle connaisait son champ d'étude principal. Question: A qui renvoie le pronom `elle'?

185. François avait sélectionné son sport alors que Richard avait choisi sa majeure; il avait établi son programme d'études. Question: A qui renvoie le pronom `il'?

186. Lucie a choisi sa majeure tandis que Christine a trouvé son appartement; sa première concentration sera le français. Question: La première concentration de qui sera le français?

187. Michel a déterminé sa majeure, Luc, par contre, a écrit à ses parents; sa première spécialisation sera la biologie. Question: La première spécialisation de qui sera la biologie?

188. Marie va suivre des cours comme auditrice alors que Patricia a déterminé sa majeure; elle suivra plus de six cours dans une matière. Question: A qui renvoie le pronom `elle'?

189. Francine avait choisi sa mineure tandis que Jeanne avait cherché un appartement; le commerce serait son champ d'études secondaire. Question: Le commerce serait le champ d'études secondaire de qui?

190. Jean avait sélectionné son sport alors que Marc avait choisi sa mineure; il avait déterminé son programme d'études. Question: A qui renvoie le pronom `il'?

191. Diane a trouvé un emploi, mais Lucille a sélectionné sa mineure; sa deuxième concentration sera le droit. Question: La deuxième concentration de qui sera le droit?

192. Alain a choisi sa mineure, Michel, par contre, a sélectionné sa majeure; l'allemand sera sa deuxième spécialisation. Question: L'allemand sera la deuxième spécialisation de qui?

193. Michèle avait choisi sa mineure, mais Christine avait choisi son appartement; elle suivrait cinq cours dans un domaine. Question: A qui renvoie le pronom `elle'?

194. Georges comprenait le système de notation tandis que Paul comprenait ses instructions; il approuvait ce système. Question: A qui renvoie le pronom `il'?

195. Jocelyne a examiné le système de notation, mais Francine regardé la télé; elle comprenait l'attribution des notes. Question: A qui renvoie le pronom `elle'?

196. Raoul connaissait le système de notation, Albert, par contre, connaissait le réseau de bus; il s'intéressait à l'appréciation des travaux. Question: A qui renvoie le pronom `il'?

197. Marie connaissait le terrain de jeu alors que Lynne s'était familiarisée avec le système de notation; on le lui avait donné au début du cours. Question: A qui renvoie le pronom `lui'?

198. Etienne connaît le moteur de sa voiture, mais Robert comprend le système de notation; il approuve ce moyen d'évaluation. Question: A qui renvoie le premier pronom `il'?

199. Anne aimait bien le système de notation tandis que Diane aimait sa résidence; elle était d'accord avec les normes utilisées. Question: A qui renvoie le pronom `elle'?

200. Patrick connaissait le système de notation, David, par contre, connaissait la caféteria; il comprenait ses notes. Question: A qui renvoie le pronom `il'?

201. Brigitte sait taper à la machine alors que Charlotte comprend le système de notation; elle connaît ce barème. Question: A qui renvoie le pronom `elle'?

202. Cédric a obtenu la note de passage alors que Serge a passé son permis de conduire; il a reçu cette note minimale. Question: A qui renvoie le pronom `il'?

203. Françoise a reçu une lettre, mais Marlène a reçu la note de passage; elle est contente parce que celle-ci était nécessaire à la réussite. Question: A qui renvoie le pronom `elle'?

204. Jacques a reçu un télégramme tandis que Raoul a reçu la note de passage; il avait passé un examen. Question: A qui renvoie le pronom `il'?

205. Annette a reçu la note de passage, Jeanne, par contre, a échoué; elle a obtenu un C. Question: A qui renvoie le pronom `elle'?

206. Médor était un chien, mais Jean était étudiant à temps partiel; il était une personne. Question: A qui renvoie le pronom `il'?

207. Line travaille à plein temps alors que Linda est étudiante à temps partiel; elle étudie la philosophie. Question: A qui renvoie le pronom `elle'?

208. Luc travaille à plein temps tandis que Bernard est étudiant à temps partiel; il aime le temps partiel. Question: A qui renvoie le pronom `il'?

209. Marie était étudiante à temps partiel, Monique, par contre, travaillait à plein temps; elle allait à l'université. Question: A qui renvoie le pronom `elle'?

210. Pierre était ouvrier alors que Georges était étudiant à temps partiel; il y avait un maximum de cours qu'il pouvait suivre. Question: A qui renvoie le deuxième pronom `il'?

211. Stéphanie est étudiante à temps partiel tandis que Louise est vendeuse; elle doit suivre moins de 3,5 cours. Question: A qui renvoie le pronom `elle'?

212. Xavier est étudiant à temps partiel, mais Jean est un clochard; il est travailleur. Question: A qui renvoie le pronom `il'?

213. Pierrette est étudiante à temps partiel, Lise, par contre, entre à l'école primaire; elle est plus âgée que ceux qui sont avec elle. Question: A qui renvoie le pronom `elle'?

214. Claire est ménagère, mais Lucie est étudiante à temps partiel; elle a un emploi. Question: A qui renvoie le pronom `elle'?

215. Richard a cinq cours obligatoires alors que Paul est avocat; il suit ces cours sérieusement. Question: A qui renvoie le pronom `il'?

216. Diane est secrétaire, mais Marie suit des cours obligatoires; elle est étudiante. Question: A qui renvoie le pronom `elle'?

217. Bernard suivait des cours obligatoires tandis que Georges travaillait dans une banque; il devait respecter son programme d'études. Question: A qui renvoie le pronom `il'?

218. Monique a des lettres à écrire, mais Linda a cinq cours obligatoires; elle doit les suivre avec succès. Question: A qui renvoie le pronom `elle'?

219. Marc a un cours obligatoire, Jean, par contre, a un poste à l'ambassade; il était exigé dans sa concentration. Question: Dans la concentration de qui?

220. Jeanne aime la couture alors que Claudette aime les cours obligatoires; elle est heureuse d'avoir à en suivre plusieurs. Question: A qui renvoie le pronom `elle'?

221. Marquis a plusieurs voitures, mais Marcel suit des cours obligatoires; il a dû les choisir dans une discipline. Question: A qui renvoie le pronom `il'?

222. Michèle suit des préalables alors que Patricia travaille la bibliothèque; en général elle aime ces cours. Question: A qui renvoie le pronom `elle'?

223. Alain suit un préalable, Martin, par contre, vend des livres; son cour doit précéder un autre cours. Question: Le cour de qui doit précéder un autre cours?

224. Jeanne devait suivre un cours obligatoire alors que Marie devait suivre un préalable; elle avait besoin d'un cours requis pour suivre un cours. Question: A qui renvoie le pronom `elle'?

225. Richard suit un préalable tandis que Michel part en vacances; il ne peut pas éviter cette obligation. Question: A qui renvoie le pronom `il'?

226. Rachel doit suivre un préalable, mais Francine doit suivre un cours obligatoire; son cours constitue une préparation. Question: Le cour de qui constitue une préparation?

227. Patrick était ouvrier alors que Paul était etudiant; il était un élève. Question: A qui renvoie le pronom `il'?

228. Marlène est étudiante tandis que Monique est secrétaire; elle aime bien fréquenter un établissement universitaire. Question: A qui renvoie le pronom `elle'?

229. Jacques est avocat, mais Marc est étudiant; il suit des cours. Question: A qui renvoie le pronom `il'?

230. Annette est étudiante, Jeanne, par contre, travaille à plein temps; elle paie des frais de scolarité. Question: A qui renvoie le pronom `elle'?

231. Albert était ouvrier, mais Richard était étudiant; il était inscrit. Question: A qui renvoie le pronom `il'?

232. Diane allait chercher un emploi alors que Francine allait être étudiante; elle s'intéressait à l'étude. Question: A qui renvoie le pronom `elle'?

233. Raymond avait un trimestre très dur tandis que David avait une entrevue sévère; il trouvait cette division dificile. Question: A qui renvoie le pronom `il'?

234. Nathalie aimait bien ce trimestre alors que Marie aimait bien son emploi; pour elle, l'année universitaire était agréable. Question: A qui renvoie le pronom `elle'?

235. Michel a hâte de commencer ce trimestre, mais Marquis a hâte de se marier; il attend beaucoup de ces trois mois. Question: A qui renvoie le pronom `il'?

236. Lynn rêvait à son trimestre, Brigitte, par contre, pensait à son nouvel emploi; elle allait commencer cette session. Question: A qui renvoie le pronom `elle'?

237. Luc avait des problèmes avec sa voiture, mais Paul trouvait son trimestre très difficile; c'était une période de temps dure pour lui. Question: A qui renvoie le pronom `lui'?

238. Michelle travaillait dans une banque alors que Monique suivait cinq cours ce trimestre; elle serait occupée de septembre à décembre. Question: A qui renvoie le pronom `elle'?

239. Edouard suit cinq cours ce trimestre tandis que Richard est avocat; il a de quoi faire de janvier à avril. Question: A qui renvoie le pronom `il'?

240. Marlène a reçu son relevé de notes, mais Anne a reçu un télégramme; elle est fière de cet ensemble. Question: A qui renvoie le pronom `elle'?

241. Marc a reçu son relevé de notes alors que Fred a reçu un coup de téléphone; ses résultats étaient très bons. Question: Les résultats de qui étaient très bons?

242. Jeanne avait gagné à la loterie, mais Christine avait obtenu son relevé de notes; elle avait tiré profit de son enseignement postsecondaire. Question: A qui renvoie le pronom `elle'?

243. Paul a hâte de recevoir son journal tandis que Marcel a hâte de recevoir son relevé de notes; il veut savoir si ce bulletin contient de bonnes nouvelles. Question: A qui renvoie le pronom `il'?

244. Hélène était très contente d'avoir obtenu son relevé de notes, Michèle, par contre, était heureuse d'avoir reçu une lettre; ce document officiel était important pour elle. Question: A qui renvoie le pronom `elle'?

245. Dennis a reçu son magazine alors que Fred a reçu son relevé de notes; le pli cacheté est arrivé chez lui hier. Question: A qui renvoie le pronom `lui'?

246. Linda a reçu un dépliant tandis que Nadine a reçu son relevé de notes; le document signé est arrivé chez elle il y a trois jours. Question: A qui renvoie le pronom `elle'?

247. Albert a cherché un emploi, mais Alain a payé ses frais de scolarité; il avait suffisamment d'argent pour payer cette somme. Question: A qui renvoie le pronom `il'?

248. Aline doit payer ses frais de scolarité alors que Denise doit payer son loyer; elle va au collège. Question: A qui renvoie le pronom `elle'?

249. Michel a des frais de scolarité tandis que Raoul a des frais de main-d'oeuvre; il doit payer ses frais d'université. Question: A qui renvoie le pronom `il'?

250. Sylvie doit payer ses frais de déplacement, mais Pierrette doit payer ses frais de scolarité; il lui faut les payer pour suivre un programme d'études. Question: A qui renvoie le pronom `lui'?

251. Patrick a payé ses frais de scolarité alors que Pierre a acheté des disques de Michael Jackson; ils étaient obligatoires pour lui. Question: A qui renvoie le pronom `lui'?

252. Jeanne a payé ses frais de scolarité tandis que Louise a payé ses frais d'habillement; elle a réglé ces coûts d'inscription. Question: A qui renvoie le pronom `elle'?

253. Stéphane a payé ses frais de scolarité, mais Jean acheté des ballons; il avait oublié qu'ils augmentent chaque année. Question: A qui renvoie le pronom `il'?

254. Michel doit partir en vacances alors que Patrick doit avoir un examen à la maison; il pense que cette épreuve sera difficile. Question: A qui renvoie le pronom `il'?

255. Geneviève travaille dans une banque, mais Jeanne a un examen à la maison; elle est contente d'avoir droit aux sources. Question: A qui renvoie le pronom `elle'?

256. Raoul doit finir ses cours tandis que Jacques doit finir des examens à la maison; il doit les faire hors de la classe. Question: A qui renvoie le pronom `il'?

257. Marie avait un examen à la maison, Francine, par contre, devait réparer sa robe; elle n'aimait pas ce genre de devoir. Question: A qui renvoie le pronom `elle'?

258. Pierre avait eu un test en classe tandis que David avait eu un examen à la maison; il avait disposé d'une longue période. Question: A qui renvoie le pronom `il'?

259. Michèle avait fait des examens à la maison alors que Paulette avait fait ses bagages; elle avait dû respecter une certaine limite de temps. Question: A qui renvoie le pronom `elle'?

260. Alain était professeur, mais Marc était étudiant de premier cycle; il était candidat à un diplôme. Question: A qui renvoie le pronom `il'?

261. Aline est étudiante de premier cycle alors que Charlotte est avocate; elle prépare son premier grade. Question: A qui renvoie le pronom `elle'?

262. Serge est élève à l'école primaire, mais Fred est étudiant de premier cycle; il l'est devenu après le secondaire. Question: A qui renvoie le pronom `il'?

263. Pierrette avait reçu son diplôme de premier cycle alors que Line avait reçu son permis de conduire; elle était fière d'avoir obtenu son premier grade. Question: A qui renvoie le pronom `elle'?

264. Bernard a obtenu son diplôme de premier cycle tandis que Georges a obtenu son congé; il a fini sa formation de base. Question: A qui renvoie le pronom `il'?

265. Linda avait reçu son diplôme de premier cycle, mais Diane avait regardé la télé; elle était contente de son accomplissement. Question: A qui renvoie le pronom `elle'?

266. Luc avait reçu son diplôme de premier cycle, Martin, par contre, venait de commencer ses études; il était heureux que toutes les exigences soient complétées. Question: A qui renvoie le pronom `il'?

267. Patricia est à l'école secondaire alors que Martine fait un diplôme de premier cycle; son grade sera suivi de la maîtrise. Question: Le grade de qui sera suivi de la maîtrise?

268. Cédric va recevoir son diplôme de premier cycle cet été alors que Jean est toujours à l'école secondaire; il est fier de son baccalauréat. Question: A qui renvoie le pronom `il'?

269. Claire vient de s'inscrire à l'université, mais Louise vient de recevoir son diplôme de premier cycle; elle est très heureuse d'arriver à la fin de ses études. Question: A qui renvoie le pronom `elle'?

270. Stéphane était à l'école secondaire tandis que Philippe avait obtenu son diplôme de premier cycle; il était fier de son succès. Question: A qui renvoie le pronom `il'?

271. Sylvie est secrétaire, mais Chantal fait son programme de premier cycle; elle aime ses études. Question: A qui renvoie le pronom `elle'?

272. David avait déterminé son programme de premier cycle alors que Jean avait décidé de partir en vacances; il avait choisi sa spécialisation. Question: A qui renvoie le pronom `il'?

273. Frida était tigrée, mais Aline était diplômée universitaire; elle était une personne. Question: A qui renvoie le pronom `elle'?

274. Guillaume est étudiant alors que Paul est diplômé universitaire; il a terminé ses études. Question: A qui renvoie le pronom `il'?

275. Jeanne est diplômée universitaire tandis que Marie est à l'école secondaire; elle a fini son programme d'études. Question: A qui renvoie le pronom `elle'

276. Jacques est ouvrier, Pierre, par contre, est diplômé universitaire; il a reçu son grade. Question: A qui renvoie le pronom `il'?

277. Danielle est à l'école secondaire tandis que Lucie est diplômée universitaire; elle examine le marché du travail. Question: A qui renvoie le pronom `elle'?

278. Georges était diplômé universitaire, mais Bernard était étudiant; il était très fier de son accomplissement. Question: A qui renvoie le pronom `il'?

279. Lise était secrétaire alors que Ginette était diplômée universitaire; elle était fière lors de l'obtention de son grade. Question: A qui renvoie le pronom `elle'?

280. Louis est ouvrier tandis que Luc est diplômé universitaire; il est allé à l'université. Question: A qui renvoie le pronom `il'?

281. Micheline va à l'université, mais Michèle est vendeuse; elle aime cette institution. Question: A qui renvoie le pronom `elle'?

282. Xavier est à l'école secondaire, mais Raoul va à l'université; il suit des cours d'enseignement supérieur. Question: A qui renvoie le pronom `il'?

283. Monique est secrétaire alors que Francine est à l'université; elle fait de la recherche. Question: A qui renvoie le pronom `elle'?

284. Marc va à l'université tandis que Jean travaille
     dans un bureau; il a choisi sa spécialisation.
     Question: A qui renvoie le pronom `il'?

285. Marie est vendeuse, Diane, par contre, va à
     l'université; elle fait partie des étudiants.
     Question: A qui renvoie le pronom `elle'?

286. Georges suivait des cours à l'université alors que
     Martin était ouvrier; il avait le choix entre
     plusieurs programmes. Question: A qui renvoie le
     pronom `il'?

287. Marie-Claude est infirmière tandis que Jacqueline va
     à l'université; elle suit cinq cours cette année.
     Question: A qui renvoie le pronom `elle'?

288. David va à l'université, mais Albert travaille à
     plein temps; il aime cet établissement post-
     secondaire. Question: A qui renvoie le pronom `il'?

289. Alice va à l'université alors que Paulette travaille
     à plein temps; elle connaît beaucoup de professeurs.
     Question: A qui renvoie le pronom `elle'?

290. Marc a visité l'université, mais Michel est allé à
     la plage; la grandeur des édifices l'a frappé.
     Question: A qui renvoie le pronom `l''?

291. Charlotte voulait aller à l'université, mais Alberte
     voulait trouver un emploi; elle s'intéressait aux
     livres. Question: A qui renvoie le pronom `elle'

Appendix 11E: Results from the Disambiguation of the English Sentences

The number between brackets indicates the number of misdisambiguations.

ACADEMIC YEAR:
annual session (2).

ADVANCED STANDING:
admission (1); already had a degree (1).

AUDITOR:
attendance non-compulsory (1).

CAMPUS:
library (1).

DEPARTMENT:
university (1).

HALF COURSE:
half as many meetings (1).

Appendix 11F: Results from the Disambiguation of the French Sentences

The number between brackets indicates the number of misdisambiguations.

ANNÉE UNIVERSITAIRE:
temps (1); de l'automne à l'été (1); études postsecondaires (1); travail scolaire (1); livres (2).

CONDITIONS D'ADMISSION:
expériences (1); formation scolaire (1); exigences (2).

BACCALAURÉAT:
emploi (2); faire une maîtrise (2).

ÉQUIVALENCE:
même niveau (1); contenu semblable (1).

AUDITEUR:
personne (1); conditions d'admission différentes (5).

ANNUAIRE:
conditions d'admission (1); cours offerts (1); renseignements généraux (1); contrat (3).

CITÉ UNIVERSITAIRE:
regroupement (1).

COLLATION DES GRADES:
action (1); diplôme (1).

DÉPARTEMENT:
discipline (1); appartenance (1).

COURS COMPLET:
un an (1); six crédits (1).

COURS AU CHOIX:
domaines divers (1).

EXAMEN FINAL:
ensemble des renseignements (1); avril (1); décembre (1).

NOTE FINALE:
ensemble des lettres (1).

NOTE:
lettre (1); nombre (1).

DEMI-COURS:
de janvier à avril (1); 3 crédits (1); court (1); session (2); souvent complété par un autre (1).

BACCALAURÉAT SPÉCIALISÉ:
quatre ans (1).

COURS MAGISTRAL:
conférence (1); sans que l'auditeur intervienne (1); notes au tableau (2); théorie (1).

MINEURE:

deuxième spécialisation (3).

SYSTEME DE NOTATION:
système (1); attribution des notes (1); barème (1).

NOTE DE PASSAGE:
note minimale (1); C (2).

ÉTUDIANT A TEMPS PARTIEL:
travailleur (1); plus âgé (2); emploi (3).

COURS OBLIGATOIRE:
cours (1).

PRÉALABLE:
requis pour suivre un cours (1).

TRIMESTRE:
division (1); trois mois (1).

RELEVÉ DE NOTES:
bulletin (1).

ÉTUDIANT DE PREMIER CYCLE:
candidat (1).

DIPLOME DE PREMIER CYCLE:
formation de base (1).

Appendix 12EF: Bilingual Questionnaire

Veuillez rayer les expressions que vous n'incluriez pas dans le sens des mots suivants. Veuillez considérer chaque mot isolément et suivre l'ordre des mots sans revenir en arrière. Merci.

Please cross out the expressions that you would not include in the meaning of the following words. Please consider each word on its own and follow the order without reviewing your preceding answers. Thank you.

(En.) = English word; (fr.) = mot français

BACCALAURÉAT SPÉCIALISÉ:
baccalauréat; domaine précis; university degree; higher suite d'un premier grade; cloud; level; étude approfondie; études supérieures; lune; 4 years; intensive; 4 ans; emploi.

ACADEMIC YEAR:
temps; université; étude; university; 8 months; de l'automne à l'été; voiture; études postsecondaires; 9 months; school year; 2 semesters; éducation; plancher; terms; travail scolaire; starts in September; semestre; livres; trimestre.

COURS MAGISTRAL:
course (En.); verbally; enseignement; conférences; avion; speaker; take notes; little class participation; shoes; passif; théorie; sans que l'auditeur intervienne.

ADMISSION REQUIREMENTS:
specifications; étudiants adultes; gomme; educational and other experiences required; new students; gloves; nouveaux étudiants; admission (En.); expériences; exigences; qualifications (En.); subjects; formation scolaire; compétences qu'on doit posséder; percentages; spécifiques au domaine.

MAJEURE:
première concentration; champ d'études principal; field of study; première spécialisation; plus de six cours dans une matière; concentration (En.); principal subject; one department; guerre; programme d'études; window; majority of courses; intensive.

ACADEMIC ADVISOR:
personne; faculty member; requin; renseignements sur les programmes d'études; aide pédagogique; direction didactique; academic assistance; camion; choix de cours; advises; horaire; conseils; progress; utile; spécialiste; course selection.

MINEURE:
department; fewer number of courses; 5 cours dans un domaine; wall; subject; lumière; deuxième concentration; champ d'études secondaire; less intensive; programme d'études.

BACHELOR'S DEGREE:
first degree; 15 cours; premier grade; temperature; diplôme; emploi; accomplissement; 3 or 4 years; soleil; succès; objectif; university; 90 crédits; document officiel; post-secondary; mène à un emploi; bout de papier; required to continue; 3 ou 4 ans; université; honor received after completion of requirements; permis pour faire une maîtrise.

SYSTEME DE NOTATION:
système; métal; moyen d'évaluation; normes; planet;donné au début du cours; attribution des notes; evaluation; method; recording; reporting; achievement; notes (fr.); barème; appréciation des travaux.

ADVANCED STANDING:
status; statut; neige; attainment credited; already has credits; crédits accordés; rock; cours universitaires; beyond minimum; admission (En.); même niveau; contenu semblable; already has a degree.

NOTE DE PASSAGE:
colline; cut-off point; between failure and success; nécessaire à la réussite; assessment; note minimale; stove; 50%; examen.

AUDITOR:
personne; listener; inscrit; noir; exempt from evaluations; sans avoir droit aux crédits; qui écoute; seagull; not receive credit; course; observateur; statut libre; étudiant; non-compulsory attendance; does not have to do assignments; conditions d'admission différentes.

ÉTUDIANT A TEMPS PARTIEL:
moins de 3,5 cours; travailleur; flag; college; person; student; university; personne; maximum de cours; étudie; not full-time course load; loup; temps partiel; université.

CALENDAR:
publication (En.); courses (En.); document (fr.); cours offerts; programmes d'études; règlements; requirements; dates to remember; information (En.); poubelle; professeurs; conditions d'admission; renseignements généraux; university; television; annual; tuition; contrat; bursaries; administration (En.); services (En.); livre; annuel; clubs/associations (En.); course descriptions; regulations; faculty members.

COURS OBLIGATOIRE:
cours; exigé dans la concentration; plusieurs; course (En.); airplane; prerequisite; needed for degree; mandatory; programme d'études; required; curriculum; circulation sanguine; dans une discipline; étudiant; doit suivre avec succès.

CREDIT:
unité de mesure; valeur des composantes; unit; points granted for completion of course; certain number necessary to graduate; ours (fr.); accumuler; programme d'études; moyen de quantifier un cours; desk; quantitatively; amount of content of a course.

PRÉALABLE:
banque; requirement; before; succeeding course; course
(En.); completed; necessary; cours; requis pour suivre un
cours; doit précéder un autre cours; obligation (fr.);
préparation; hat.

CAMPUS:
residences; library; ensemble; salles de classe;
bâtiments; telephone; services (En.); security;
maintenance; chien; université; résidences; enclosed;
cafeteria; campus (fr.); lieu d'enseignement; gymnasium;
classrooms; regroupement; bibliothèques; grounds;
university or college; buildings.

ÉTUDIANT:
attend learning institution; inscrit; étude;
établissement universitaire; candidate; university
degree; élève; cours; paie des frais de scolarité;
dairy farm; person enrolled in classes; learn; tour.

GRADUATION:
action (fr.); succès; process; rivière; conférer; titre
universitaire; recognition; garbage; accomplissement; fin
des études; degree; completing a course of study;
rassemblement; avenir; fierté; diploma; achievement;
diplôme; toges; fête; ceremony; formal affair; auditorium
(fr.); famille.

TRIMESTRE:
division (fr.); année universitaire; session (fr.);
period; septembre à décembre; academic year; 3 months;
janvier à avril; 4 months; division (En.); fichier;
période de temps; trois mois; poster (En.).

DEPARTMENT:
subdivision (En.) ; school; appartenance; subdivision
(fr.); école; apple; branch of study; discipline (fr.);
chaise; faculté; college; university; université;
professeurs; programme; faculty; various; secrétaire.

RELEVÉ DE NOTES:
résultats; academic record; course descriptions;
official record; enseignement post-secondaire; officiel;
courses (En.); list; subject; academic standing; carte
géographique; bulletin (fr.); ensemble; final grades;
university; sunlight; cacheté; signé.

DEGREE:
degré; title; university; sweater; baccalauréat;
hiérarchie universitaire; completion; course of study;
diploma; température; diplôme; certificate; achievement;
college.

FRAIS DE SCOLARITÉ:
somme; collège; obligatoires; coûts d'inscription; bird;
college; university; instructional services; pour suivre
un programme d'études; université; cost of course;
amount; paid; pomme; augmentent chaque année.

FULL COURSE:
courses (En.); academic year; cours; un an; 6 crédits;
drapeau; September through April; letter; de septembre à
avril; long; 6 credits.

EXAMEN A LA MAISON:
devoir; droit aux sources; sources; longer time; due date; test (En.); completed outside of class; mountain; épreuve; cheval; faire hors de la classe; longue période; certaine limite de temps.

ELECTIVE COURSE:
cours; choix multiples; studies; student; chair; nécessaire; doit choisir; subject; based upon interest; rue; étudiant; intérêt particulier; related to concentration program; allowed to select; domaines divers.

ÉTUDIANT DE PREMIER CYCLE:
leaves; candidat; premier grade; person; après le secondaire; bouteille; student; pursuing studies; not yet obtained first degree.

FIELD OF STUDY:
principal subject; spécialité; cours; meadow; various subjects to choose from; concentration (En.); programme d'études; concentration (fr.); royaume; one department; degree; études plus poussées.

DIPLOME DE PREMIER CYCLE:
exigences satisfaites; suivi de la maîtrise; 3- or 4-year course; baccalauréat; fin des études; pillow; premier grade; formation de base; sac à main; initial (En.); college/university degree; accomplissement; succès.

FINAL EXAMINATION:
épreuve; stress (fr.); ensemble des renseignements; evaluation; weighted heavily; sapin; évaluation des connaissances; étude; réussite; horse; test (En.); conclusion (En.); 25% de la note finale; avril; décembre; course (En.); passer; mémoire; défi; soulagement; année universitaire.

PROGRAMME DE PREMIER CYCLE:
courses; field of study; thumb; 3 or 4 years; herbe; études; spécialisation; first degree.

FINAL MARK:
mark; completion of study; note; résultat; ensemble des lettres; corde; entire course; grade; dollar; réussite; échec; évaluation numérique; percentage; results; academic standing; pourcentage; points (fr.); moyenne générale; relevé de notes; degré de compétence; pass or fail; fin du cours.

DIPLOME UNIVERSITAIRE:
forest; university program; degree; eau; accomplissement; person; completed; personne; terminé; marché du travail; obtention; université; programme d'études; grade.

MARK:
rating; estimation (fr.); travail; brouillard; achievement; percentage; flower; examen; lettres; nombres; test (fr.); course (En.); letter; degré de réussite; pourcentage; fraction (fr.); évaluation.

UNIVERSITÉ:
supermarket; learning; studying; pluie; recherche;
institution (En.); higher education; post-secondary;
institution (fr.); spécialisation; enseignement
supérieur; étudiants; programmes; teaching; research;
cours; établissement postsecondaire; professeurs;
édifice; livres.

FULL-TIME STUDENT:
personne; étudie; bâtiment; student; university; minimum
de cours; plein temps; sky; college; person; université;
full course load; 5 cours complets.

HALF COURSE:
September to December; 3 crédits; cours; January to
April; one semester; beau; de septembre à décembre;
court (fr.); blanket; 3 credits; university; course
(En.); de janvier à avril; une session; half the credit;
half as many meetings; souvent complété par un autre.

HONOURS DEGREE:
baccalauréat; domaine précis; university degree; higher
level; étude approfondie; études supérieures; lune; 4
years; suite d'un premier grade; cloud; intensive; 4
ans; emploi.

LECTURE COURSE:
course (En.); verbally; enseignement; conférences; notes
au tableau; avion; little class participation; shoes;
passif; théorie; speaker; take notes; sans que
l'auditeur intervienne.

DEMI-COURS:
blanket; 3 credits; university; course (En.); de janvier
à avril; half the credit; half as many meetings;
September to December; 3 crédits; cours; January to
April; one semester; beau; de septembre à décembre; court
(fr.); souvent complété par un autre.

MAJOR:
première concentration; champ d'études principal;
concentration (En.); principal subject; one department;
guerre; programme d'études; window; majority of courses;
field of study; première spécialisation; plus de six
cours dans une matière; intensive.

ÉTUDIANT A PLEIN TEMPS:
personne; plein temps; sky; college; person; université;
étudie; bâtiment; student; university; minimum de cours;
full course load; 5 cours complets.

MINOR:
subject; lumière; deuxième concentration; champ d'études
secondaire; department; smaller number of courses;
deuxième spécialisation; 5 cours dans un domaine; wall;
less intensive; programme d'études.

NOTE (fr.):
percentage; flower; examen; lettres; nombres; test (fr.);
course (En.); letter; degré de réussite; pourcentage;
rating; estimation (fr.); travail; brouillard;
achievement; fraction (fr.); évaluation.

MARKING SYSTEM:
système; donné au début du cours; attribution des notes; evaluation; method; métal; moyen d'évaluation; normes; planet; recording; reporting; achievement; notes (fr.); barème; appréciation des travaux.

NOTE FINALE:
mark; completion of study; note; résultat; ensemble des lettres; corde; entire course; grade; dollar; réussite; relevé de notes; degré de compétence; échec; évaluation numérique; percentage; results; academic standing; pourcentage; points (fr.); moyenne générale; pass or fail; fin du cours.

PASS MARK:
colline; cut-off point; assessment; note minimale; C; stove; 50%; between failure and success; nécessaire à la réussite; examen.

EXAMEN FINAL:
épreuve; stress (fr.); ensemble des renseignements; evaluation; weighted heavily; sapin; évaluation des connaissances; course (En.); passer; mémoire; défi; soulagement; étude; réussite; horse; test (En.); conclusion (En.); 25% de la note finale; avril; décembre; année universitaire.

PART-TIME STUDENT:
student; university; personne; maximum de cours; étudie; not full-time course load; loup; temps partiel; université; moins de 3,5 cours; travailleur; flag; college; person; plus âgé; souvent a un emploi.

COURS AU CHOIX:
intérêt particulier; related to concentration program; cours; choix multiples; studies; student; chair; nécessaire; doit choisir; subject; based upon interest; rue; étudiant; allowed to select; domaines divers.

DOMAINE D'ÉTUDES:
principal subject; spécialité; cours; meadow; various subjects to choose from; royaume; one department; degree; concentration (En.); programme d'études; concentration (fr.); études plus poussées.

REQUIRED COURSE:
cours; exigé dans la concentration; plusieurs; course (En.); required; curriculum; circulation sanguine; dans une discipline; étudiant; airplane; prerequisite; needed for degree; mandatory; programme d'études; doit suivre avec succès.

COURS COMPLET:
courses (En.); September through April; letter; de septembre à avril; academic year; cours; un an; 6 crédits; drapeau; long; 6 credits.

PREREQUISITE COURSE:
course (En.); completed; necessary; cours; requis pour suivre un cours; banque; requirement; before; succeeding course; doit précéder un autre cours; obligation (fr.); préparation; hat.

GRADE (fr.):
degré; title; university; sweater; baccalauréat; hiérarchie universitaire; certificate; achievement; completion; course of study; diploma; température; diplôme; college.

STUDENT:
candidate; university degree; élève; cours; paie des frais de scolarité; dairy farm; person enrolled in classes; learn; attend learning institution; inscrit; étude; établissement universitaire; tour.

COLLATION DES GRADES:
rassemblement; avenir; fierté; diploma; achievement; diplôme; toges; fête; ceremony; formal affair; auditorium (fr.); action (fr.); succès; process; rivière; conférer; titre universitaire; recognition; garbage; accomplissement; fin des études; degree; completing a course of study; famille.

DÉPARTEMENT:
subdivision (En.) ; school; appartenance; subdivision (fr.); faculty; école; apple; branch of study; discipline (fr.); chaise; faculté; college; university; université; professeurs; programme; various; secrétaire.

TERM:
division (fr.); année universitaire; session (fr.); period; 4 months; division (En.); fichier; période de temps; septembre à décembre; academic year; 3 months; janvier à avril; trois mois; poster (En.).

CITÉ UNIVERSITAIRE:
residences; library; ensemble; salles de classe; bâtiments; telephone; services (En.); security; maintenance; regroupement; bibliothèques; grounds; chien; université; résidences; enclosed; cafeteria; campus (fr.); lieu d'enseignement; gymnasium; classrooms; university or college; buildings.

TRANSCRIPT:
list; subject; academic standing; carte géographique; bulletin (fr.); ensemble; résultats; academic record; course descriptions; official record; enseignement post-secondaire; officiel; courses(En.); final grades; university; sunlight; cacheté; signé.

CRÉDIT:
ours (fr.); accumuler; programme d'études; moyen de quantifier un cours; desk; quantitatively; unité de mesure; valeur des composantes; unit; points granted for completion of course; certain number necessary to graduate; amount of content of a course.

TUITION FEES:
somme; collège; université; cost of course; amount; paid; pomme; obligatoires; coûts d'inscription; bird; collège; university; instructional services; pour suivre un programme d'études; augmentent chaque année.

ANNUAIRE:
publication (En.); courses (En.); document (fr.); cours
offerts; programmes d'études; règlements; requirements;
dates to remember; information (En.); poubelle;
professeurs; administration (En.); services (En.);
livre; annuel; conditions d'admission; renseignements
généraux; university; television; annual; tuition;
bursaries; clubs/associations (En.); course descriptions;
regulations; faculty members.

TAKE-HOME EXAMINATION:
test (En.); completed outside of class; mountain;
épreuve; devoir; droit aux sources; sources; longer time;
due date; cheval; faire hors de la classe; longue
période; certaine limite de temps.

AUDITEUR:
personne; listener; inscrit; noir; exempt from
evaluations; étudiant; non-compulsory attendance; does
not have to do assignments; sans avoir droit aux
crédits; qui écoute; seagull; not receive credit; course;
observateur; statut libre.

UNDERGRADUATE STUDENT:
après le secondaire; bouteille; student; pursuing
studies; leaves; candidat; premier grade; person; not yet
obtained first degree.

ÉQUIVALENCE:
status; statut; neige; attainment credited; beyond
minimum; admission (En.); même niveau; contenu semblable;
already has credits; crédits accordés; rock; cours
universitaires; already has a degree.

UNDERGRADUATE DEGREE:
pillow; premier grade; formation de base; sac à main;
initial (En.); college/university degree;
accomplissement; exigences satisfaites; suivi de la
maîtrise; 3- or 4-year course; baccalauréat; fin des
études; succès.

BACCALAURÉAT:
first degree; 15 cours; premier grade; temperature;
post-secondary; mène à un emploi; bout de papier;
required to continue; 3 ou 4 ans; université; honor
received after completion of requirements; diplôme;
accomplissement; 3 or 4 years; soleil; succès; objectif;
university; 90 crédits; document officiel.

CONSEILLER PÉDAGOGIQUE:
academic assistance; camion; choix de cours; advises;
personne; faculty member; requin; renseignements sur les
programmes d'études; aide pédagogique; direction
didactique; horaire; conseils; progress; utile;
spécialiste; course selection.

UNIVERSITY GRADUATE:
person; completed; personne; terminé; marché du travail;
forest; university program; degree; eau; accomplissement;
obtention; université; programme d'études; grade.

CONDITIONS D'ADMISSION:
specifications; étudiants adultes; gomme; educational and other experiences required; new students; gloves; nouveaux étudiants; formation scolaire; compétences qu'on doit posséder; admission (En.); expériences; qualifications (En.); subjects; percentages; spécifiques au domaine.

UNIVERSITY:
institution (En.); higher education; post-secondary; institution (fr.); spécialisation; enseignement supérieur; supermarket; learning; studying; pluie; recherche; étudiants; programmes; teaching; research; cours; établissement postsecondaire; professeurs; édifice; livres.

ANNÉE UNIVERSITAIRE:
annual session; temps; université; étude; university; 8 months; 9 months; school year; 2 semesters; éducation; plancher; terms; de l'automne à l'été; voiture; études postsecondaires; travail scolaire; starts in September; semestre; trimestre.

UNDERGRADUATE PROGRAM:
3 or 4 years; herbe; études; courses; field of study; thumb; spécialisation; first degree.

Appendix 13EF: Results from the Bilingual Questionnaires

Metalinguistic description	Number of informants who deleted the metalinguistic description in:		Difference E - F
	E: ACADEMIC YEAR	**F: ANNÉE UNIVERSITAIRE**	
temps	4	0	4
université	1	0	1
étude	0	0	0
university	0	0	0
8 months	0	0	0
de l'automne à l'été	0	0	0
études postsecondaires	0	0	0
9 months	1	1	0
school year	1	1	0
2 semesters	0	0	0
éducation	2	2	0
terms	2	1	1
travail scolaire	4	3	1
starts in September	0	0	0
semestre	0	1	1
trimestre	2	3	1

	E: ADMISSION REQUIREMENTS	**F: CONDITIONS D'ADMISSION**	
specifications	1	1	0
étudiants adultes	2	2	0
educational and other experiences required	0	1	1
new students	1	0	1
nouveaux étudiants	1	0	1
admission (En.)	0	0	0
expériences	4	2	2
qualifications (En.)	1	1	0
subjects	2	1	1
formation scolaire	1	0	1
compétences qu'on doit posséder	1	0	1
percentages	1	3	2
spécifiques au domaine	4	2	2

E: ACADEMIC ADVISOR   F: CONSEILLER PÉDAGOGIQUE

personne	0	0	0
faculty member	0	0	0
renseignements sur les programmes d'études	0	0	0
aide pédagogique	0	1	1
direction didactique	1	2	1
academic assistance	0	0	0
choix de cours	0	0	0
advises	0	0	0
horaire	2	1	1
conseils	0	0	0
progress	0	1	1
utile	3	3	0
spécialiste	2	1	1
course selection	0	0	0

E: BACHELOR'S DEGREE   F: BACCALAURÉAT

first degree	0	0	0
15 cours	2	1	1
premier grade	0	0	0
diplôme	0	0	0
accomplissement	2	0	2
3 or 4 years	0	0	0
succès	2	2	0
objectif	4	3	1
university	1	0	1
90 crédits	0	0	0
document officiel	0	0	0
post-secondary	0	0	0
mène à un emploi	3	4	1
bout de papier	2	1	1
required to continue	0	2	2
3 ou 4 ans	0	0	0
université	0	0	0
honor received after completion of requirements	1	1	0

E: ADVANCED STANDING   F: ÉQUIVALENCE

status	1	3	2
statut	1	3	2
attainment credited	0	1	1
already has credits	0	0	0
crédits accordés	0	0	0
cours universitaires	0	0	0
beyond minimum	1	4	3
admission (En.)	0	1	1
même niveau	2	0	2
contenu semblable	1	1	0
already has a degree	3	2	1

E: AUDITOR   F: AUDITEUR

personne	0	0	0
listener	2	1	1
inscrit	2	1	1
exempt from evaluations	1	0	1
sans avoir droit aux crédits	0	0	0
qui écoute	2	1	1
not receive credit	0	0	0
course	1	1	0
observateur	2	1	1
statut libre	1	1	0
étudiant	0	0	0
non-compulsory attendance	0	1	1
does not have to do assignments	0	0	0

E:CALENDAR   F: ANNUAIRE

publication (En.)	0	0	0
courses (En.)	0	1	1
document (fr.)	1	0	1
cours offerts	0	0	0
programmes d'études	0	1	1
règlements	0	0	0
requirements	0	0	0
dates to remember	0	0	0
information (En.)	0	0	0
professeurs	1	1	0
conditions d'admission	1	1	0
renseignements généraux	0	0	0
university	0	1	1
annual	0	1	1
tuition	1	1	0
bursaries	1	1	0
administration (En.)	1	1	0
services (En.)	1	1	0
livre	3	2	1
annuel	1	1	0
clubs/associations (En.)	3	2	1
course descriptions	0	0	0
regulations	0	0	0
faculty members	0	1	1

E: CREDIT   F: CRÉDIT

unité de mesure	1	1	0
valeur des composantes	3	3	0
unit	1	1	0
points granted for completion of course	0	0	0
certain number necessary to graduate	0	0	0
accumuler	1	4	3
programme d'études	1	1	0
moyen de quantifier un cours	0	0	0
quantitatively	1	0	0
amount of content of a course	3	2	1

E: CAMPUS F: CITÉ UNIVERSITAIRE

residences	0	0	0
library	0	0	0
ensemble	2	0	2
salles de classe	0	0	0
bâtiments	0	0	0
services (En.)	2	1	1
security	2	1	0
maintenance	2	1	1
université	0	1	1
résidences	0	0	0
enclosed	3	2	1
cafeteria	1	0	1
campus (fr.)	0	0	0
lieu d'enseignement	0	0	0
gymnasium	1	1	0
classrooms	0	0	0
regroupement	1	1	0
bibliothèques	0	0	0
grounds	0	0	0
university or college	0	0	0
buildings	0	0	0

E: GRADUATION F: COLLATION DES GRADES

action (fr.)	6	5	1
succès	0	1	1
process	4	3	1
conférer	1	0	1
titre universitaire	0	0	0
recognition	0	0	0
accomplissement	0	0	0
fin des études	1	0	1
degree	0	0	0
completing a course of study	0	1	1
rassemblement	4	1	3
avenir	2	4	2
fierté	3	3	0
diploma	0	0	0
achievement	0	0	0
diplôme	0	0	0
toges	0	0	0
fête	0	0	0
ceremony	0	0	0
formal affair	0	0	0
auditorium (fr.)	2	1	1
famille	1	0	1

E: DEPARTMENT F:DÉPARTEMENT

subdivision (En.)	1	0	1
school	0	0	0
appartenance	1	0	0
subdivision (fr.)	0	0	0
école	0	2	2
branch of study	4	3	1
discipline (fr.)	1	1	1
faculté	2	1	1
college	2	1	1
university	0	1	1
université	0	1	1
professeurs	0	1	1
programme	0	1	1
faculty	1	1	0
various	5	4	1
secrétaire	3	2	1

E: DEGREE   F: GRADE

degré	3	1	2
title	1	1	0
university	0	1	1
baccalauréat	0	1	1
hiérarchie universitaire	2	6	4
completion	1	2	1
course of study	2	2	0
diploma	1	1	0
diplôme	0	1	1
certificate	1	1	0
achievement	0	1	1
college	1	3	2

E: FULL COURSE   F: COURS COMPLET

courses (En.)	1	0	0
academic year	0	1	1
cours	0	0	0
un an	1	1	0
6 crédits	0	0	0
September through April	0	1	1
de septembre à avril	0	1	1
long	5	3	2
6 credits	0	0	0

E: ELECTIVE COURSE   F: COURS AU CHOIX

cours	0	0	0
choix multiples	2	3	1
studies	0	1	1
student	1	1	0
nécessaire	8	4	4
doit choisir	2	2	0
subject	1	1	0
based upon interest	0	0	0
étudiant	1	2	1
intérêt particulier	1	1	0
related to concentration program	0	1	1
allowed to select	0	0	0
domaines divers	0	0	0

E: FIELD OF STUDY	F: DOMAINE D'ÉTUDE	
principal subject	0	0	0
spécialité	0	0	0
cours	1	0	1
various subjects to choose from	2	1	1
concentration (En.)	0	0	0
programme d'études	0	1	1
concentration (fr.)	0	0	0
one department	3	2	1
degree	3	2	1
études plus poussées	3	2	1

E: FINAL EXAMINATION	F: EXAMEN FINAL	
épreuve	0	0	0
stress (fr.)	2	2	0
ensemble des renseignements	6	6	0
evaluation	0	0	0
weighted heavily	3	3	0
évaluation des connaissances	0	0	0
étude	0	1	1
réussite	2	2	0
test (En.)	1	0	1
conclusion (En.)	2	1	1
25% de la note finale	1	1	0
avril	2	1	1
décembre	2	1	1
course (En.)	1	1	0
passer	3	1	2
mémoire	4	4	0
défi	4	3	1
soulagement	5	5	0
année universitaire	3	2	1

E: FINAL MARK	F: NOTE FINALE	
mark	0	0	0
completion of study	2	1	1
note	0	0	0
résultat	0	0	0
ensemble des lettres	5	3	2
entire course	1	1	0
grade	0	2	2
réussite	4	2	2
échec	4	2	2
évaluation numérique	0	1	1
percentage	2	1	1
results	1	0	1
academic standing	1	0	1
pourcentage	2	1	1
points (fr.)	0	1	1
moyenne générale	1	2	1
relevé de notes	2	1	1
degré de compétence	1	0	1
pass or fail	2	1	1
fin du cours	2	0	2

	E: MARK	F: NOTE	
rating	0	0	0
estimation (fr.)	0	0	0
travail	3	3	0
achievement	0	0	0
percentage	2	1	1
examen	0	1	1
lettres	5	4	1
nombres	2	1	1
test (fr.)	0	1	1
course (En.)	0	0	0
letter	4	1	3
degré de réussite	0	0	0
pourcentage	2	1	1
fraction (fr.)	5	3	2
évaluation	0	0	0

	E: FULL-TIME STUDENT	F: ÉTUDIANT A PLEIN TEMPS	
personne	0	0	0
étudie	0	0	0
student	0	0	0
university	1	1	0
minimum de cours	1	1	0
plein temps	0	0	0
college	3	2	1
person	0	0	0
université	3	1	2
full course load	1	0	1
5 cours complets	1	0	1

	E: HALF COURSE	F: DEMI-COURS	
September to December	0	0	0
3 crédits	0	0	0
cours	0	0	0
January to April	0	0	0
one semester	0	0	0
de septembre à décembre	0	0	0
court (fr.)	6	3	3
3 credits	0	0	0
university	1	1	0
course (En.)	1	1	0
de janvier à avril	0	0	0
half the credit	2	1	1
half as many meetings	5	2	3
souvent complété par un autre	6	4	2

	E: HONOURS DEGREE	F: BACCALAURÉAT SPÉCIALISÉ	
baccalauréat	0	0	0
domaine précis	1	1	0
university degree	0	0	0
higher level	0	1	1
étude approfondie	1	1	0
études supérieures	4	2	2
4 years	0	0	0
suite d'un premier grade	5	4	0
intensive	4	1	3
4 ans	0	0	0
emploi	6	6	0

	E:LECTURE COURSE	F: COURS MAGISTRAL	
course (En.)	0	0	0
verbally	1	0	1
enseignement	0	0	0
conférences	1	0	1
little class participation	2	2	0
passif	4	3	1
théorie	3	0	3
speaker	1	1	0
take notes	1	1	0
sans que l'auditeur intervienne	2	2	0

	E: MAJOR	F: MAJEURE	
première concentration	0	0	0
champ d'études principal	0	0	0
concentration (En.)	0	0	0
principal subject	0	1	1
one department	3	2	1
programme d'études	0	1	1
majority of courses	1	1	0
field of sutdy	0	1	1
première spécialisation	0	0	0
plus de six cours dans une matière	1	1	0
intensive	3	3	0

	E: MINOR	F: MINEURE	
subject	0	0	0
deuxième concentration	0	0	0
champ d'études secondaire	0	0	0
department	3	2	1
smaller number of courses	1	1	0
5 cours dans un domaine	1	1	0
less intensive	2	3	1
programme d'études	0	1	1

	E: MARKING SYSTEM	F: SYSTEME DE NOTATION	
système	0	0	0
donné au début du cours	1	1	0
attribution des notes	0	0	0
evaluation	0	0	0
method	0	0	0
moyen d'évaluation	0	0	0
normes	0	0	0
recording	4	2	2
reporting	2	2	0
achievement	1	1	0
notes (fr.)	0	1	1
barème	1	0	1
appréciation des travaux	1	1	0

	E: PASS MARK	F: NOTE DE PASSAGE	
cut-off point	0	0	0
assessment	0	1	1
note minimale	1	0	1
50%	0	2	2
between failure and success	0	1	1
nécessaire à la réussite	0	0	0
examen	2	0	2

	E: PART-TIME STUDENT	F: ÉTUDIANT A TEMPS PARTIEL	
student	0	0	0
university	1	1	0
personne	0	0	0
maximum de cours	2	2	0
étudie	0	0	0
not full-time course load	0	0	0
temps partiel	0	0	0
université	1	0	1
moins de 3,5 cours	1	1	0
travailleur	3	2	1
college	2	2	0
person	0	0	0

	E: REQUIRED COURSE	F: COURS OBLIGATOIRE	
cours	0	0	0
exigé dans la concentration	1	0	1
plusieurs	4	1	3
course (En.)	1	0	1
required	0	0	0
curriculum	0	1	1
dans une discipline	0	2	2
étudiant	0	1	1
prerequisite	1	1	0
needed for degree	0	0	0
mandatory	0	0	0
programme d'études	1	0	1
doit suivre avec succès	0	0	0

	E: PREREQUISITE COURSE	F: PRÉALABLE COURSE	
course (En.)	0	0	0
completed	1	0	1
necessary	0	0	0
cours	0	0	0
requis pour suivre un cours	0	0	0
requirement	0	0	0
before	1	0	1
succeeding course	4	6	2
doit précéder un autre cours	0	0	0
obligation (fr.)	0	0	0
préparation	2	2	0

E: STUDENT   F: ÉTUDIANT

candidate	2	1	1
university degree	1	2	1
élève	1	1	0
cours	0	0	0
paie des frais de scolarité	2	2	0
person enrolled in classes	0	0	0
learn	0	0	0
attend learning institution	0	0	0
inscrit	0	0	0
étude	0	0	0
établissement universitaire	1	1	0

E: TERM   F: TRIMESTRE

division (fr.)	1	0	1
année universitaire	1	1	0
session (fr.)	0	0	0
period	1	1	0
4 months	0	5	5
division (En.)	1	0	1
période de temps	0	0	0
septembre à décembre	0	1	1
academic year	1	1	0
3 months	0	0	0
janvier à avril	0	1	1
trois mois	0	0	0

E: TRANSCRIPT   F: RELEVÉ DE NOTES

list	0	0	0
subject	2	2	0
academic standing	1	0	1
bulletin (fr.)	0	0	0
ensemble	1	0	1
résultats	0	0	0
academic record	0	0	0
course descriptions	3	3	0
official record	0	0	0
enseignement post-secondaire	5	2	3
officiel	0	0	0
courses (En.)	1	1	0
final grades	0	0	0
university	1	1	0
cacheté	5	4	1
signé	2	2	0

E: TUITION FEES	F: FRAIS DE SCOLARITÉ	
somme	0	0	0
collège	1	1	0
université	1	1	0
cost of course	0	0	0
amount	0	0	0
paid	0	0	0
obligatoires	0	1	1
coûts d'inscription	1	1	0
college	1	1	0
university	1	1	0
instructional services	1	1	0
pour suivre un programme d'études	0	0	0
augmentent chaque année	3	2	1

E: TAKE-HOME EXAMINATION	F: EXAMEN A LA MAISON	
test (En.)	0	2	2
completed outside of class	0	0	0
épreuve	0	0	0
devoir	0	0	0
droit aux sources	4	4	0
sources	4	4	0
longer time	2	2	0
due date	2	1	1
faire hors de la classe	0	0	0
longue période	2	2	0
certaine limite de temps	1	1	0

E: UNDERGRADUATE STUDENT	F: ÉTUDIANT DE PREMIER CYCLE	
après le secondaire	1	1	0
student	0	0	0
pursuing studies	0	0	0
candidat	1	1	0
premier grade	0	0	0
person	0	0	0
not yet obtained first degree	0	1	1

E: UNDERGRADUATE DEGREE	F: DIPLOME DE PREMIER CYCLE	
premier grade	0	0	0
formation de base	1	1	0
initial (En.)	1	0	1
college/university degree	0	0	0
accomplissement	2	1	1
exigences satisfaites	1	1	0
suivi de la maîtrise	2	2	0
3 or 4 year course	0	0	0
baccalauréat	0	0	0
fin des études	3	1	2
succès	2	0	2

E: UNIVERSITY F: DIPLOMÉ
GRADUATE UNIVERSITAIRE

person	0	0	0
completed	0	0	0
personne	0	0	0
terminé	0	0	0
marché du travail	4	4	0
university program	0	1	0
degree	0	0	0
accomplissement	1	0	1
obtention	1	0	1
université	0	0	0
programme d'études	0	0	0
grade	0	0	0

E: UNIVERSITY F: UNIVERSITÉ

institution (En.)	0	0	0
higher education	0	0	0
post-secondary	0	0	0
institution (fr.)	0	0	0
spécialisation	2	2	0
enseignement supérieur	0	0	0
learning	0	0	0
studying	0	0	0
recherche	0	0	0
étudiants	0	1	1
programmes	0	0	0
teaching	0	0	0
research	0	0	0
cours	0	0	0
établissement postsecondaire	0	0	0
professeurs	1	1	0
édifice	1	1	0
livres	1	1	0

E: UNDERGRADUATE F: PROGRAMME
PROGRAM DE PREMIER
CYCLE

3 or 4 years	0	0	0
études	0	0	0
courses	0	0	0
field of study	0	0	0
spécialisation	1	1	0
first degree	0	0	0

Appendix 14E: **English Questionnaire used in the Unilingual Empirical Componential Analysis of the Tranunits**

The purpose of this study is to determine the meaning of words. The meaning of any word can be defined by listing all the expressions that describe it. The following words have beneath them some expressions that may describe their meaning. Please delete from these lists the expressions that you would not include in the meaning of the words and add any that you feel have been overlooked. Please do not use any dictionary to perform this task. Thank you.

ANGER

feeling
annoyance
dog
antagonism
grievance
paper
rage
wrath

LOVE (for somebody)

attachment
affection
car
passionate desire
feeling
grass
emotion
warmth
fondness
regard

HATE (for somebody)

dislike
bicycle
distaste
aversion
kindness
feeling

HAPPINESS

feeling
joy
despair
gladness
contentment
delight
box

LIKING (for somebody)

fondness
inclination
disgust
affinity
regard
respect
despise

The following questions are required in order to check the representativity of the sample. No individual responses will be revealed.

AGE: 18-19   ----
             20-29   ----
             30-39   ----
             40-49   ----
             50-59   ----
             60-69   ----
             70 +   ----

SEX: M ----   F ----

As some of your replies may require clarification, would you please indicate below your name and telephone number.

NAME:

TELEPHONE NUMBER:

Thank you very much for your assistance.

Appendix 14F: French Questionnaire used in the Unilingual Empirical Componential Analysis of the Tranunits

Cette étude a pour but de déterminer le sens de certains mots. Il est possible de définir le sens d'un mot par une liste de toutes les expressions qui le décrivent. Chacune des listes suivantes contient des expressions qui peuvent décrire le sens du mot qui la précède. Veuillez rayer de ces listes les expressions que vous n'incluriez pas dans le sens des mots en question et ajouter toutes celles qui ont été omises. Veuillez ne pas utiliser de dictionnaires pour effectuer cette tâche. Merci.

COLERE

mécontentement
agressivité
courroux
blancheur
emportement
exaspération
fureur
fil
irritation
sentiment
rage
rogne

AMOUR (envers quelqu'un)

affection
attachement
sentiment
chariot
inclination
tendresse
livre
passion
désir sexuel

HAINE (envers quelqu'un)

sentiment
antipathie
amitié
aversion
détestation
exécration
avion
hostilité
répulsion

BONHEUR

bien-être
félicité
plaisir
sentiment
vache
contentement
enchantement
euphorie
extase
joie
crayon
ravissement
satisfaction

SYMPATHIE

affinité
sentiment
inclination
penchant
bureau
amitié
bienveillance
panier
cordialité

Les questions suivantes sont nécessaires pour s'assurer que l'échantillon est représentatif. Les réponses individuelles seront strictement confidentielles.

AGE: 18-19   - - - -
        20-29   - - - -
        30-39   - - - -
        40-49   - - - -
        50-59   - - - -
        60-69   - - - -
        70 +   - - - -

SEXE: M - - - -   F - - - -

Etant donné qu'il se peut que vos réponses nécessitent certaines clarifications, auriez-vous l'obligeance d'indiquer ci-dessous votre nom et votre numéro de téléphone.

NOM:

NUMERO DE TÉLÉPHONE:

Merci infiniment de votre aide.

Appendix 15E: Final English List of Metalinguistic Descriptions

ANGER

feeling; annoyance; emotion; antagonism; fury; ire; rage; wrath; irritation.

LOVE (for somebody)

attachment; affection; respect; passionate desire; feeling; union; emotion; warmth; fondness; regard; affinity; charity; tenderness.

HATE (towards somebody)

dislike; loathing; distaste; aversion; emotion; feeling; disgust.

HAPPINESS

feeling; joy; emotion; warmth; gladness; contentment; delight.

LIKING (towards somebody)

fondness; inclination; emotion; affinity; regard; respect; friendliness; feeling.

Appendix 15F: Final French List of Metalinguistic Descriptions

COLERE

mécontentement; agressivité; courroux; violence; emportement; exaspération; fureur; impulsion; irritation; sentiment; rage; rogne; perte de contrôle.

AMOUR (envers quelqu'un)

affection; attachement; sentiment; adoration; respect; tendresse; compréhension; passion; désir sexuel; jalousie; joie; partage; tolérance; confiance; complicité.

HAINE (envers quelqu'un)

sentiment; antipathie; aversion; détestation; exécration; hostilité; répulsion.

BONHEUR

bien-être; félicité; plaisir; sentiment; contentement; enchantement; euphorie; extase; joie; sérénité; ravissement; satisfaction.

SYMPATHIE

affinité; sentiment; inclination; penchant; compréhension; amitié; bienveillance; être à l'aise avec; cordialité.

Appendix 16E: Disambiguation of Sentences

Please answer the question for each sentence. The answer can quote one or two of the people named in the sentence or nobody.   Every effort should be made to provide a definite answer; however, as a last resort, the answer can be `nobody'.

1.   Cathy was playing tennis while Ann was full of anger; she was experiencing a feeling. To whom does `she' refer?

2.   Peter was angry with Mary while John was in love with her; he was not hiding his attachment for her. To whom does `he' refer?

3.   Albert was full of hate for Fiona but Mike loved her; his dislike for her was obvious. Whose dislike was obvious?

4.   Claudine was sleeping but Betty was full of happiness; she was experiencing a feeling. To whom does `she' refer?

5.   Fred hated Paul but Patrick felt a liking for him; he did not hide his fondness for him. To whom does `he' refer?

6.   Joan was full of anger but Sally was happy; she could not hide her annoyance. To whom does `she' refer?

7.   Alan and Alice were in love while David and Maureen were strangers; their affection for each other was obvious. Whose affection was obvious?

8.   Byron was in love with Jane but Francis was full of hate for her; he could not hide his loathing for her. To whom does `he' refer?

9.   Linda was full of happiness but Bernie was asleep; she was experiencing an emotion. To whom does `she' refer?

10.   Robert hated Claire but Erik had a liking for her; he felt an inclination for her. To whom does `he' refer?

11.   Jessica was full of anger but Michelle was skating; she could not hide her emotion. To whom does `she' refer?

12.   Ron hated Sheila but Frank was in love with her; he had a lot of respect for her. To whom does `he' refer?

13.   William was full of hate for Diana but Eddy loved her; his distate for her was apparent. Whose distate was apparent?

14.   Joyce was full of happiness while Jennifer was in a bad mood; she beamed with joy. To whom does `she' refer?

15.   Chris was asleep but Alan had a liking for Jane; he was experiencing an emotion. To whom does `he' refer?

16. Shelley liked Vanessa but Susan was full of anger against her; there was a lot of antagonism between them. To whom does `them' refer?

17. Toby was angry with Susan but Fred was in love with her; he felt a passionate desire for her. To whom does `he' refer?

18. David loved Karen but Louis was full of hate for her; he could not hide his aversion for her. To whom does `he' refer?

19. Ken was sad but Dick was full of happiness; he felt a lot of warmth. To whom does `he' refer?

20. Hugh hated Susan while Derek had a liking for her; he had a lot of affinity with her. To whom does `he' refer?

21. Vicky was full of anger but Louise was happy; her fury was obvious. Whose fury was obvious?

22. Alfred was in love but Philip was asleep; he was experiencing a feeling. To whom does `he' refer?

23. Kate was asleep but Sue was full of hate; she could not hide her emotion. To whom does `she' refer?

24. Jacqueline was sad but Ann was full of happiness; her gladness was visible. Whose gladness was visible?

25. Amy had a liking for Peter but Kate hated him; she had a lot of regard for him. To whom does `she' refer?

26. Mark was full of anger while Hector was calm; he could not hide his ire. To whom does `he' refer?

27. Albert and Fiona were in love while Felix and Fanny hated each other; we knew about their union. We knew about whose union?

28. Hugh was asleep while David was full of hate; he was experiencing a feeling. To whom does `he' refer?

29. Fiona was full of happiness but Mary was sad; her contentment was apparent. Whose contentment was apparent?

30. Charles had a liking for Michael but John did not like him; he had a lot of respect for him. To whom does `he' refer?

31. Karen was in love but Joan was full of anger; she could not hide her rage. To whom does `she' refer?

32. Francis was in love while Fred was asleep; he was full of emotion. To whom does `he' refer?

33. Peter was in love with Lucie but Paul was full of hate for her; he could not hide his disgust for her. To whom does `he' refer?

34. Claire was full of happiness but Susan was sad; she showed her delight. To whom does `she' refer?

35. Michelle hated Mike but Christine had a liking for him; she felt a kind of friendliness towards him. To whom does `she' refer?

36. Frank was in love but Jonathan was full of anger; he could not hide his wrath. To whom does `he' refer?

37. Max was in love with Alba while Hubert hated her; he felt a lot of warmth towards her. To whom does he refer?

38. Louis was asleep while John had a liking for Fiona; he was experiencing a feeling. To whom does `he' refer?

39. Charles was in love with Nicole but Karl hated her; his fondness for her was obvious. Whose fondness was obvious?

40. Helen hated Ron but Mary was in love with him; she had a lot of regard for him. To whom does `she' refer?

41. Kate was in love with Paul but Florence hated him; she had a lot of affinity with him. To whom does `she' refer?

42. Albert was full of anger while Hugh was happy; his irritation was visible. Whose irritation was visible?

43. Chris was full of love while Patrick was angry; he showed a lot of charity. To whom does `he' refer?

44. Maureen hated Arthur while Joan was in love with him; she had a lot of tenderness for him. To whom does `she' refer?

Appendix 16F: Disambiguation of Sentences

Veuillez répondre aux questions suivantes. Vos réponses peuvent contenir un nom ou deux, ou tout simplement indiquer `personne'. Veuillez vous efforcer de donner une réponse précise et ce n'est qu'en dernier recours que votre réponse peut être `personne'.

1. Jeanne était en colère alors que Marie était amoureuse; elle ne cachait pas son mécontentement.
   A qui renvoie le pronom `elle'?

2. Fabien était en colère alors que Didier éprouvait de l'amour; il faisait preuve d'affection.
   A qui renvoie le pronom `il'?

3. Catherine jouait au ping pong alors que Martine était pleine de haine; elle éprouvait un sentiment.
   A qui renvoie le pronom `elle'?

4. Annie était en colère alors qu'Elodie baignait dans le bonheur; elle ne cachait pas son bien-être.
   A qui renvoie le pronom `elle'?

5. Eric était en colère contre quelqu'un alors que Marc éprouvait de la sympathie pour quelqu'un; il avait une certaine affinité pour quelqu'un.
   A qui renvoie le pronom `il'?

6. Pierre était en colère alors que Jean était joyeux; il faisait preuve d'agressivité.
   A qui renvoie le pronom `il'?

7. Philippe était en colère contre Anne-Marie alors que David éprouvait de l'amour pour elle; il ne cachait pas son attachement pour elle.
   A qui renvoie le pronom `il'?

8. Nicole éprouvait de la haine pour Patrick alors que Jacqueline l'aimait; elle ne cachait pas son antipathie à son égard.
   A qui renvoie le pronom `elle'?

9. Yvonne croyait au bonheur alors que Lydie croyait aux fantômes; elle croyait à la félicité.
   A qui renvoie le pronom `elle'?

10. Michel éprouvait de la sympathie pour Suzanne alors que Francis faisait des courses pour elle; il ne cachait pas son sentiment.
    A qui renvoie le pronom `il'?

11. Albert était radieux alors que Cédric était en colère; ses mots exprimaient le courroux.
    Les mots de qui exprimaient le courroux?

12. Gaétan avait la nausée alors que Christian éprouvait de l'amour; son sentiment était évident.
Le sentiment de qui était évident?

13. Albertine était pleine de haine alors que Chantale était amoureuse; elle éprouvait de l'aversion.
A qui renvoie le pronom `elle'?

14. Félicien baignait dans le bonheur alors que Claude était malade; son plaisir était visible.
Le plaisir de qui était visible?

15. Frédéric était en colère contre Joelle alors que Frank éprouvait de la sympathie pour elle; il ne lui a pas caché son inclination.
A qui renvoie le pronom `il'?

16. Francine était en colère alors que Christiane était flattée; elle avait recours à la violence.
A qui renvoie le pronom `elle'?

17. Jacques éprouvait de l'amour pour Claudine alors que Ferdinand la trouvait sympathique; son adoration pour elle était évidente.
L'adoration de qui était évidente?

18. Albert était détendu alors que Georges était plein de haine; il avait de la détestation pour quelqu'un.
A qui renvoie le pronom `il'?

19. Le bonheur de Pauline était évident alors que Céline repassait du linge; elle éprouvait un sentiment.
A qui renvoie le pronom `elle'?

20. Paulette éprouvait de la sympathie pour Alfred mais Alice ne l'aimait pas; son penchant pour lui était visible.
Le penchant de qui était visible?

21. Evelyne était en colère alors que Jacqueline était en vacances; Albert a été témoin de son emportement.
De l'emportement de qui Albert a-t-il été témoin?

22. Paul éprouvait de l'amour pour Joelle alors que Pierre était en colère contre elle; son respect pour elle était évident.
Le respect de qui était évident?

23. Michel était plein de haine envers Patrice alors que Justin l'aimait bien; son exécration était exagérée.
L'exécration de qui était exagérée?

24. Martine était de mauvaise humeur mais Pascale rayonnait de bonheur; son contentement était visible.
Le contentement de qui était visible?

25. Philippe détestait Albert mais Jean éprouvait
    de la sympathie pour lui; il existait entre eux
    une certaine compréhension.
    A qui renvoie le pronon `eux'?

26. Jeanine était heureuse mais Hélène était en
    colère; elle ne cachait pas son exaspération.
    A qui renvoie le pronom `elle'?

27. Firmin éprouvait de l'amour pour Catherine mais
    Claude ne le trouvait pas sympathique; il avait
    pour elle beaucoup de tendresse.
    A qui renvoie le pronom `elle'?

28. Eric éprouvait de la haine pour Hubert mais
    Alice l'aimait bien; il existait entre eux une
    grande hostilité.
    A qui renvoie le pronom `eux'?

29. Félix nageait dans le bonheur alors que Max
    était malheureux; son enchantement faisait
    plaisir à voir.
    L'enchantement de qui faisait plaisir à voir?

30. Céline éprouvait de la sympathie pour Georges
    mais Ernestine ne l'aimait pas; elle avait de
    l'amitié pour lui.
    A qui renvoie le pronom `elle'?

31. Olivier était heureux mais Alex était en
    colère; sa fureur prenait des proportions
    ridicules.
    La fureur de qui prenait des proportions ridicules?

32. Patricia était en colère contre Paul mais
    Virginie éprouvait de l'amour pour lui; il
    existait entre eux beaucoup de compréhension.
    A qui renvoie le pronom `eux'?

33. Paulette éprouvait de la haine pour Pierre
    alors que Josiane l'aimait bien; elle ne
    cachait pas sa répulsion.
    A qui renvoie le pronom `elle'?

34. Christine rayonnait de bonheur alors qu'Anne-
    Marie était triste; son euphorie était
    apparente.
    L'euphorie de qui était apparente?

35. David éprouvait de la sympathie pour Diane
    alors que Henri ne l'aimait pas; il avait
    beaucoup de bienveillance pour elle.
    A qui renvoie le pronom `il'?

36. Albert était en colère mais Jean était pensif;
    il ne pouvait réprimer cette impulsion.
    A qui renvoie le pronom `il'?

37. Charles éprouvait de l'amour pour Joséphine
    mais Xavier était en colère contre elle; sa
    passion était évidente.
    La passion de qui était évidente?

38. Hélène était triste mais Anne rayonnait de
    bonheur; pour elle c'était l'extase.
    A qui renvoie le pronom `elle'?

39. Simone éprouvait de la sympathie pour Pierre
    mais Patricia ne l'aimait pas; elle était à
    l'aise avec lui.
    A qui renvoie le pronom `elle'?

40. Lise était indifférente mais Carla était en
    colère; son irritation était visible.
    L'irritation de qui était visible?

41. Bertrand éprouvait de l'amour pour Juliette
    mais Germain était en colère contre elle; il ne
    pouvait réprimer son désir sexuel.
    À qui renvoie le pronom `il'?

42. Alice était triste mais Paulette nageait dans
    le bonheur; elle rayonnait de joie.
    A qui renvoie le pronom `elle'?

43. Claudine éprouvait de la sympathie pour Alex
    mais Fernande ne l'aimait pas; sa cordialité
    envers lui était compréhensible.
    La cordialité de qui était compréhensible?

44. Pierre dormait mais Marc éprouvait de la
    colère; ce sentiment le dominait.
    A qui renvoie le pronom `le'?

45. Pierrette éprouvait de l'amour pour François
    mais Annette ne le trouvait pas sympathique;
    elle ne pouvait cacher sa jalousie.
    A qui renvoie le pronom `elle'?

46. Christian rayonnait de bonheur mais Adrien
    était triste; il était plein de sérénité.
    A qui renvoie le pronom `il'?

47. Alain était amoureux mais Patrick était en
    colère; il ne pouvait contrôler sa rage.
    A qui renvoie le pronom `il'?

48. Catherine éprouvait de l'amour mais Michelle
    était sans attaches; elle rayonnait de joie.
    A qui renvoie le pronom `elle'?

49. Jeanine rayonnait de bonheur mais Josette était
    triste; son ravissement était évident.
    Le ravissement de qui était évident?

50. Félix était en colère mais Alexandre était
    amoureux; il était en rogne.
    A qui renvoie le pronom `il'?

51. Odile était en colère mais Germaine éprouvait
    de l'amour; pour elle le partage était naturel.
    A qui renvoie le pronom `elle'?

52. Céline rayonnait de bonheur mais Odile était
    triste; sa satisfaction était apparente.
    La satisfaction de qui était apparente?

53. Paulette était heureuse alors que Christine
    était en colère; sa perte de contrôle était
    inévitable.
    La perte de contrôle de qui était inévitable?

54. Lucie éprouvait de l'amour pour Paul alors que
    Béatrice ne pouvait le souffrir; elle était
    capable de beaucoup de tolérance.
    A qui renvoie le pronom `elle'?

55. Michel éprouvait de l'amour pour Marie alors
    que Jean ne l'aimait pas; il lui faisait
    confiance.
    A qui renvoie le pronom `il'?

56. David était en colère contre Marie alors
    qu'Olivier éprouvait de l'amour pour elle; il y
    avait une grande complicité entre eux.
    A qui renvoie le pronom `eux'?

Appendix 17E: **Results from the Disambiguation of the English Sentences**

The number between brackets indicates the number of misdisambiguations.

ANGER:
feeling (3); annoyance (2); emotion (1).

LOVE:
union (4); attachment (3); affection (2); emotion (1); tenderness (2); respect (1); warmth (1); affinity (1).

HATE:
dislike (1); loathing (1).

HAPPINESS:
feeling (2).

LIKING (towards somebody):
emotion (1); respect (4); feeling (1); regard (1).

Appendix 17F: **Results from the Disambiguation of the FrenchSentences**

The number between brackets indicates the number of misdisambiguations.

COLERE:
impulsion (1).

AMOUR:
adoration (2); partage (2); affection (1); sentiment (1); respect (1); jalousie (4); confiance (1); désir sexuel (1); compréhension (1); tolérance (5).

HAINE:

BONHEUR:
sentiment (1); sérénité (1).

SYMPATHIE:
cordialité (1); sentiment (2); être à l'aise avec (1); inclination (1).

Appendix 18EF: Bilingual Questionnaire

Veuillez rayer les expressions que vous n'incluriez pas dans le sens des mots suivants. Veuillez considérer chaque mot isolément et suivre l'ordre des mots sans revenir en arrière. Merci.

Please cross out the expressions that you would not include in the meaning of the following words. Please consider each word on its own and follow the order without reviewing your preceding answers. Thank you.

(En.) = English word; (fr.) = mot français

COLERE:
mécontentement; agressivité; feeling; courroux; annoyance; voiture; emotion (En.); violence (fr.); emportement; exaspération; antagonism; fury; fureur; ire; rage (En.); impulsion (fr.); irritation (fr.); sentiment (fr.); wrath; rage (fr.); rogne; irritation (En.); perte de contrôle.

LIKING (towards somebody):
fondness; inclination (En.); affinité; sentiment (fr.); chicken; inclination (fr.); emotion (En.); penchant; affinity; regard (En.); compréhension; amitié; respect (En.); bienveillance; être à l'aise avec; friendliness; feeling; cordialité.

AMOUR:
attachment; affection (fr.); attachement; affection (En.); respect (En.); sentiment (fr.); adoration (fr.); soleil; respect (fr.); passionate desire; feeling; union (En.); tendresse; compréhension; passion (fr.); emotion (En.); warmth; fondness; désir sexuel; jalousie; regard (En.); affinity; charity; joie; partage; tolérance; tenderness; confiance; complicité.

HAINE(envers quelqu'un):
sentiment (fr.); vache; antipathie; dislike; loathing; distate; aversion (fr.); détestation; aversion (En.); exécration; emotion (En.); hostilité; répulsion; feeling; disgust.

HAPPINESS:
feeling; bien-être; félicité; joy; emotion (En.); plaisir; sentiment (fr.); contentement; warmth; gladness; enchantement; euphorie; poisson; extase; contentment; delight; joie; sérénité; ravissement; satisfaction (fr.).

ANGER:
exaspération; antagonism; fury; fureur; ire; rage (En.); mécontentement; agressivité; feeling; courroux; annoyance; voiture; emotion (En.); violence (fr.); emportement; rage (fr.); rogne; irritation (En.); perte de contrôle; impulsion (fr.); irritation (fr.); sentiment (fr.); wrath.

SYMPATHIE:
chicken; inclination (fr.); emotion (En.); penchant; fondness; inclination (En.); affinité; sentiment (fr.); feeling; cordialité; affinity; regard (En.); compréhension; amitié; respect (En.); bienveillance; être à l'aise avec; friendliness.

LOVE:
confiance; complicité; attachment; affection (fr.); attachement; affection (En.); respect (En.); sentiment (fr.); adoration (fr.); soleil; respect (fr.); passionate desire; feeling; union (En.); tendresse; compréhension; jalousie; regard (En.); affinity; charity; joie; partage; tolérance; tenderness; passion (fr.); emotion (En.); warmth; fondness; désir sexuel.

HATE (towards somebody):
distate; aversion (fr.); détestation; aversion (En.); exécration; emotion (En.); hostilité; répulsion; feeling; disgust; sentiment (fr.); vache; antipathie; dislike; loathing.

BONHEUR:
enchantement; euphorie; poisson; extase; contentment; feeling; bien-être; félicité; joy; emotion (En.); plaisir; sentiment (fr.); contentement; warmth; gladness; delight; joie; sérénité; ravissement; satisfaction (fr.).

Appendix 19EF: Results from bilingual questionnaires

Metalinguistic description	Number of informants who deleted the metalinguistic description in:		Difference E - F
	E: ANGER	**F: COLERE**	
emotion (En.)	3	1	2
violence (fr.)	2	1	1
emportement	1	1	0
exaspération	1	4	3
antagonism	5	5	0
fury	1	0	1
fureur	1	1	0
ire	2	1	1
rage (En.)	0	0	0
impulsion (fr.)	3	5	2
mécontentement	4	4	0
agressivité	0	1	1
feeling	3	5	2
courroux	3	4	1
annoyance	3	4	1
irritation (fr.)	4	4	0
sentiment (fr.)	3	5	2
wrath	2	3	1
rage (fr.)	0	0	0
rogne	3	4	1
irritation (En.)	3	2	1
perte de contrôle	2	2	0
	E: HAPPINESS	**F: BONHEUR**	
feeling	2	1	1
bien-être	1	0	1
félicité	1	1	0
joy	0	0	0
emotion (En.)	2	2	0
plaisir	1	1	0
sentiment (fr.)	0	2	2
contentement	1	0	1
warmth	2	1	1
gladness	0	1	1
enchantement	0	2	2
euphorie	5	4	1
extase	5	5	0
contentment	0	2	2
delight	0	0	0
joie	0	0	0
sérénité	3	1	2
ravissement	2	2	0
satisfaction (fr.)	2	1	1

E: HATE   F: HAINE
(towards somebody) (envers quelqu'un)

détestation	0	0	0
aversion (En.)	2	3	1
exécration	2	3	1
emotion (En.)	3	2	1
sentiment (fr.)	2	3	1
antipathie	0	1	1
dislike	1	2	1
loathing	0	0	0
distaste	3	2	1
aversion (fr.)	1	2	1
hostilité	2	2	0
répulsion	1	1	0
feeling	2	3	1
disgust	4	4	0

E: LIKING   F: SYMPATHIE
(towards somebody)

fondness	0	2	2
inclination (En.)	0	4	4
affinité	3	1	2
sentiment (fr.)	1	0	1
inclination (fr.)	1	2	1
emotion (En.)	3	2	1
penchant	0	1	1
affinity	3	2	1
regard (En.)	4	1	3
compréhension	8	1	7
amitié	1	3	2
respect (En.)	5	3	2
bienveillance	4	5	1
être à l'aise avec	2	7	5
friendliness	0	2	2
feeling	3	2	1
cordialité	2	3	1

	E: LOVE	**F: AMOUR**	
passionate desire	3	2	1
feeling	1	1	0
union (En.)	2	1	1
tendresse	0	1	1
attachment	1	3	2
affection (fr.)	0	0	0
attachement	1	2	1
affection (En.)	0	1	1
respect (En.)	4	4	0
sentiment (fr.)	2	0	2
adoration (fr.)	2	2	0
respect (fr.)	5	4	1
compréhension	4	5	1
passion (fr.)	2	2	0
emotion (En.)	1	0	1
warmth	3	3	0
charity	5	6	1
joie	3	3	0
partage	5	4	1
tolérance	8	8	0
tenderness	1	1	0
confiance	4	2	2
fondness	2	1	1
désir sexuel	3	4	1
jalousie	8	8	0
regard (En.)	3	6	3
affinity	4	5	1
complicité	2	4	2

**Appendix 20E: English Questionnaire used in the
                  Unilingual Empirical Componential Analysis
                  of the Tranunits**

The purpose of this study is to determine the meaning of
words. The meaning of any word can be defined by listing
all the expressions that describe it.   The following
words have beneath them some expressions that may
describe their meaning. Please delete from these lists
the expressions that you would not include in the
meaning of the words and add any that you feel have been
overlooked. Please do not use any dictionary to perform
this task. Thank you.

THE SUN

star
source of heat
source of light
solar system
gaseous body
stockings
compressed core
energy
thermonuclear reactions

COMPUTER

electronic device
processes data
stores data
wood
arithmetical operations
logical operations
high speed

MANAGEMENT (people)

members of the executive
organization
bicycle
business run

TO WORK

to exert effort
to do
to make
to flatter
to perform
to be employed

BEAUTIFUL

possessing beauty
aesthetically pleasing
gravity
enjoyable
pleasant

DESIGNER

devises designs
executes designs
works of art
rolls
clothes
machines

MANAGEMENT (action)

technique
practice
to ski
science
to control

The following questions are required in order to check
the representativity of the sample. No
individual responses will be revealed.

AGE: 20-29   ----
              30-39   ----
              40-49   ----
              50-59   ----
              60-69   ----
              70 +   ----

SEX: M ----   F ----

OCCUPATION: (Please be as specific as possible)

Thank you very much for your assistance.

**Appendix 20F: French Questionnaire used in the
                Unilingual Empirical Componential Analysis
                of the Tranunits**

Cette étude a pour but de déterminer le sens de certains
mots. Il est possible de définir le sens d'un mot par
une liste de toutes les expressions qui le décrivent.
Chacune des listes suivantes contient des expressions
qui peuvent décrire le sens du mot qui la précède.
Veuillez rayer de ces listes les expressions que vous
n'incluriez pas dans le sens des mots en question et
ajouter toutes celles qui ont été omises. Veuillez ne
pas utiliser de dictionnaires pour effectuer cette
tâche. Merci.

LE SOLEIL

astre
donne lumière
chaussettes
donne chaleur
rythme la vie

ORDINATEUR

calculatrice électronique
mémoires à grande capacité
traitement des informations
grande vitesse
bois
résoudre des problèmes arithmétiques
résoudre des problèmes logiques
programmes enregistrés

CADRES (personnes)

personnel
catégorie supérieure
bicyclette
employés
entreprise

TRAVAILLER

agir d'une manière suivie
effort
résultat utile
flatter
exercer une activité professionnelle
exercer un métier

BEAU, BELLE

qui plaît a l'oeil
qui répond à certains canons de beauté
admiration
gravité
satisfaction
réussi

DESSINATEUR

dessins industriels
dessins d'architecture
louer
dessins décoratifs

CONCEPTEUR

idées nouvelles
publicité
lecteur
mise en scène
qui élabore des projets

GESTION

action de gérer
administration
direction
organisation
gérance
skier
entreprise
orientation à long terme
décisions courantes

ADMINISTRATION (action)

action de gérer
manière de gérer
participer à la direction
location
participer à la gestion
entreprise

DIRECTION (action)

action de diriger
action de conduire
alluvion
organisation
entreprise
gestion

MANAGEMENT

techniques d'organisation
techniques de gestion
entreprise
administration
fleurs
direction
exploitation

Les questions suivantes sont nécessaires pour s'assurer
que l'échantillon est représentatif. Les réponses
individuelles seront strictement confidentielles.

AGE: 20-29   - - - -
                   30-39   - - - -
                   40-49   - - - -
                   50-59   - - - -
                   60-69   - - - -
                   70 +   - - - -

SEXE: M - - - -   F - - - -

PROFESSION: (Veuillez donner une réponse aussi précise
que possible)

Merci infiniment de votre aide.

**Appendix 21E: Final English List of Metalinguistic
Descriptions**

THE SUN

star
source of heat
source of light
solar system
gaseous body
compressed core
energy
thermonuclear reactions
bleacher
ultraviolet rays
tanning
radiant
bright
source of life
harmful rays
illuminates
affecting weather
affecting seasons

COMPUTER

electronic device
processes data
stores data
arithmetical operations
logical operations
high speed
hardware
memory
calculator
machine
efficient

MANAGEMENT (people)

members of the executive
organization
business
run
non-union employees
decision-makers
planners
responsibility
authority
bosses
administrators
superiors
employers
policy-makers
directors
guides
motivate

TO WORK

to exert effort
to do
to make
to perform
to be employed
to use energy
to contribute
to achieve success
to obtain satisfaction
to accomplish something
to earn money
physical process
mental process

BEAUTIFUL

possessing beauty
aesthetically pleasing
enjoyable
pleasant
lovely
attractive
special
appealing
model

DESIGNER

devises designs
executes designs
works of art
clothes
machines
drafter
artist
makes model
creator
innovative

MANAGEMENT (action)

technique
practice
science
to control
method
model
performance
implementation
planning
direction
administration
running

**Appendix 21F: Final French List of Metalinguistic
Descriptions**

LE SOLEIL

astre
donne lumière
donne chaleur
rythme la vie
illumine
aube
aurore
énergie

ORDINATEUR

calculatrice électronique
mémoires à grande capacité
traitement des informations
grande vitesse
résoudre des problèmes arithmétiques
résoudre des problèmes logiques
programmes enregistrés
confère un ordre

CADRES (personnes)

personnel
catégorie supérieure
employés
entreprise
directeurs

TRAVAILLER

agir d'une manière suivie
effort
résultat utile
exercer une activité professionnelle
exercer un métier
gagner sa vie
effectuer une tâche

BEAU, BELLE

qui plaît a l'oeil
qui répond à certains canons de beauté
admiration
satisfaction
réussi
joli(e)

DESSINATEUR

dessins industriels
dessins d'architecture
dessins décoratifs
créateur d'images

CONCEPTEUR

idées nouvelles
publicité
mise en scène
qui élabore des projets

GESTION

action de gérer
administration
direction
organisation
gérance
entreprise
orientation à long terme
décisions courantes
orientation à court terme

ADMINISTRATION (action)

action de gérer
manière de gérer
participer à la direction
participer à la gestion
entreprise

DIRECTION (action)

action de diriger
action de conduire
organisation
entreprise
gestion

MANAGEMENT

techniques d'organisation
techniques de gestion
entreprise
administration
direction
exploitation

Appendix 22EF: Bilingual Questionnaire

Veuillez rayer (à l'aide d'un crayon feutre) les expressions que vous n'incluriez pas dans le sens des mots suivants. Veuillez considérer chaque mot isolément et suivre l'ordre des mots sans revenir en arrière. Merci.

Please cross out (with a marker) the expressions that you would not include in the meaning of the following words. Please consider each word on its own and follow the order without reviewing your preceeding answers. Thank you.

(En.) = English word; (fr.) = mot français

THE SUN

star; brillant; source of heat; astre; donne lumière; source of light; solar system; gaseous body; rayons; stockings; donne chaleur; chaussettes; compressed core; energy; thermonuclear reactions; rythme la vie; bleacher; illumine; été; ultraviolet rays; tanning; aube; radiant; aurore; bright; source of life; énergie; harmful rays; illuminates; affecting weather; affecting seasons; brûlant; éternité.

ADMINISTRATION (action; fr.)

action de gérer; technique (En.); practice; to ski; manière de gérer; participer à la direction; science (En.); to control; location (fr.); method; participer à la gestion; model; échelons; bureaucratie; performance (En.); entreprise; implementation; planning; direction (En.); administration (En.); running; organisation.

TRAVAILLER

to exert effort; agir d'une manière suivie; effort (fr.); to do; to make; to use energy; exercer une activité professionnelle; exercer un métier; to contribute; sueur; épanouissement; to achieve success; to obtain satisfaction; to flatter; résultat utile; to perform; flatter; to be employed; gagner sa vie; esclavage; to accomplish something; to earn money; physical process; effectuer une tâche; mental process; abrutissement.

COMPUTER

electronic device; processes data; calculatrice électronique; stores data; mémoires à grande capacité; traitement des informations; wood; grande vitesse; arithmetical operations; logical operations; high speed; bois; résoudre des problèmes arithmétiques; hardware; memory; robotisation; résoudre des problèmes logiques; programme enregistrés; calculator; informatique; machine (En.); efficient; confère un ordre; impersonnel.

DIRECTION (action; fr.)

technique (En.); contrôle; action de diriger; practice; to ski; action de conduire; alluvion; science (En.); to control; method; organisation; model; entreprise; gestion; performance (En.); implementation; planning; direction (En.); administration (En.); running; être à la tête de.

MANAGEMENT (people)

members of the executive; personnel (fr.); catégorie supérieure; organization; bicycle; employés; business; encadrement; entreprise; bicyclette; run; non-union employees; directeurs; decision-makers; responsabilité; planners; responsibility; authority; bosses; administrators; superiors; supervision; employers; policy-makers; directors; guides (En.); motivate.

LE SOLEIL

solar system; brillant; gaseous body; stockings; donne chaleur; chaussettes; compressed core; rayons; energy; thermonuclear reactions; star; source of heat; astre; été; donne lumière; source of light; harmful rays; illuminates; brûlant; affecting weather; affecting seasons; rythme la vie; bleacher; éternité; illumine; ultraviolet rays; tanning; aube; radiant; aurore; bright; source of life; énergie.

MANAGEMENT (fr.)

technique (En.); practice; techniques d'organisation; to ski; science (En.); to control; techniques de gestion; entreprise; method; administration (fr.); fleurs; model; performance (En.); direction (fr.); implementation; exploitation (fr.); planning; direction (En.); administration (En.); running.

TO WORK

to exert effort; agir d'une manière suivie; effort (fr.); to do; to make; sueur; to flatter; résultat utile; to perform; flatter; to be employed; épanouissement; to use energy; exercer une activité professionnelle; esclavage; exercer un métier; to contribute; to achieve success; abrutissement; to obtain satisfaction; gagner sa vie; to accomplish something; to earn money; physical process; effectuer une tâche; mental process.

BEAU, BELLE

possessing beauty; plaisant(e); aesthetically pleasing; harmonieux(euse); gravity; qui plaît à l'oeil; lovely; admiration (fr.); équilibré(e); classique; attractive; gravité; satisfaction (fr.); special; qui répond à certains canons de beauté; enjoyable; subjectif; pleasant; appealing; model; réussi(e); joli(e).

MANAGEMENT (En.)

technique (En.); practice; techniques d'organisation; to ski; action de gérer; manière de gérer; participer à la direction; science (En.); échelons; bureaucratie; to control; techniques de gestion; entreprise; organisation; gérance; orientation à long terme; action de diriger; action de conduire; alluvion; gestion; method; administration (fr.); fleurs; model; contrôle; performance (En.);location (fr.); participer à la gestion; direction (fr.); implementation; exploitation (fr.); planning; être à la tête de; direction (En.); administration (En.); running; décisions courantes; orientation à court terme.

DESIGNER

devises designs; executes designs; idées nouvelles; publicité; works of art; rolls; inventeur; clothes; machines (En.); drafter; lecteur; dessins industriels; créateur; dessins d'architecture; louer; mise en scène; artist; makes model; artiste; creator; qui élabore des projets; dessins décoratifs; créateur d'images; innovative.

ORDINATEUR

hardware; memory; résoudre des problèmes logiques; robotisation; stores data; mémoires à grande capacité; traitement des informations; informatique; electronic device; processes data; calculatrice électronique; impersonnel; wood; grande vitesse; arithmetical operations; logical operations; high speed; bois; résoudre des problèmes arithmétiques; programme enregistrés; calculator; machine (En.); efficient; confère un ordre.

BEAUTIFUL

possessing beauty; aesthetically pleasing; harmonieux(euse); gravity; qui plaît à l'oeil; qui répond à certains canons de beauté; équilibré(e); enjoyable; classique; pleasant; lovely; subjectif; admiration (fr.); attractive; gravité; satisfaction (fr.); plaisant(e); special; appealing; model; réussi(e); joli(e).

CONCEPTEUR

devises designs; executes designs; idées nouvelles; publicité; works of art; rolls; inventeur; clothes; machines (En.); drafter; lecteur; mise en scène; artist; makes model; creator; qui élabore des projets; créateur; innovative.

CADRES (personnes)

members of the executive; personnel (fr.); catégorie
supérieure; bicyclette; run; non-union employees;
directeurs; encadrement; decision-makers; responsabilité;
organization; bicycle; employés; business; supervision;
entreprise; planners; responsibility; authority; bosses;
administrators; superiors; employers; policy-makers;
directors; guides (En.); motivate.

DESSINATEUR

dessins industriels; devises designs; executes designs;
dessins d'architecture; works of art; louer; inventeur;
rolls; clothes; machines (En.); dessins décoratifs;
créateur d'images; artiste;drafter; artist; makes model;
creator; innovative.

GESTION

technique (En.); practice; action de gérer;
administration (fr.); direction (fr.); to ski; science
(En.); organisation; to control; method; model; gérance;
skier; performance (En.); implementation; entreprise;
orientation à long terme; planning; direction (En.);
administration (En.); décisions courantes; running;
orientation à court terme.

Appendix 23EF: Results from the Bilingual Questionnaires

Metalinguistic description	Number of informants who deleted the metalinguistic description in:		Difference E - F
	E: SUN	**F: SOLEIL**	
star	1	0	1
brillant	0	0	0
source of heat	0	0	0
astre	1	0	1
donne lumière	0	0	0
source of light	0	0	0
solar system	0	0	0
gaseous body	1	0	1
rayons	0	0	0
donne chaleur	0	0	0
compressed core	3	2	1
energy	0	0	0
thermonuclear reactions	2	2	0
rythme la vie	3	2	1
bleacher	8	7	1
illumine	0	0	0
été	1	1	0
ultraviolet rays	0	0	0
tanning	0	0	0
aube	5	4	1
radiant	0	0	0
aurore	3	3	0
bright	0	0	0
source of life	0	0	0
énergie	0	0	0
harmful rays	0	0	0
illuminates	0	0	0
affecting weather	2	1	1
affecting seasons	1	0	1
brûlant	0	0	0
éternité	6	4	2

E: MANAGEMENT F: ADMINISTRATION
(action)   (action)

action de gérer	0	1	1
technique (En.)	1	2	1
practice	4	4	0
manière de gérer	0	1	1
participer	0	1	1
à la direction			
science (En.)	4	5	1
to control	0	0	0
method	0	1	1
participer	1	1	0
à la gestion			
model	2	4	2
échelons	1	1	0
bureaucratie	2	0	2
performance (En.)	1	3	2
entreprise (fr.)	0	1	1
implementation	1	1	0
planning	0	0	0
direction (En.)	2	0	2
administration (En.)	0	0	0
running	3	3	0
organisation	0	0	0

E: COMPUTER   F: ORDINATEUR

electronic device	0	0	0
processes data	0	0	0
calculatrice	1	1	0
électronique			
stores data	0	0	0
mémoires à	0	0	0
grande capacité			
traitement des	0	0	0
informations			
grande vitesse	1	1	0
arithmetical	0	0	0
operations			
logical operations	0	0	0
high speed	1	1	0
résoudre des problèmes	0	0	0
arithmétiques			
hardware	0	0	0
memory	0	0	0
robotisation	0	0	0
résoudre des	0	0	0
problèmes logiques			
programme	0	0	0
enregistrés			
calculator	1	1	0
informatique	0	0	0
machine (En.)	0	0	0
efficient	0	0	0
confère un ordre	4	5	1
impersonnel	2	0	2

	E: MANAGEMENT (action)	F: DIRECTION (action)	
technique (En.)	1	6	5
contrôle	0	0	0
action de diriger	0	0	0
practice	1	4	3
action de conduire	2	3	1
science (En.)	4	7	3
to control	0	1	1
method	0	2	2
organisation (fr.)	0	0	0
model	2	2	0
entreprise (fr.)	0	1	1
gestion	0	0	0
performance (En.)	1	2	1
implementation	1	2	1
planning	0	0	0
direction (En.)	2	0	2
administration (En.)	0	0	0
running	3	1	2
être à la tête de	1	2	1

	E: MANAGEMENT (people)	F: CADRES (personnes)	
members of the executive	0	1	1
personnel (fr.)	2	2	0
catégorie supérieure	1	0	1
organization	0	1	1
employés	0	0	0
business	0	0	0
encadrement	1	2	1
entreprise (fr.)	0	0	0
run	3	4	1
non-union employees	0	0	0
directeurs	0	1	1
decision-makers	0	1	1
responsabilité	0	1	1
planners	0	0	0
responsibility	0	0	0
authority	0	0	0
bosses	0	1	1
administrators	0	0	0
superiors	0	0	0
supervision	0	0	0
employers	0	0	0
policy-makers	0	0	0
directors	0	0	0
guides (En.)	1	3	2
motivate	1	2	1

E: MANAGEMENT   F: MANAGEMENT
(action)

technique (En.)	1	2	1
practice	1	1	0
techniques d'organisation	0	0	0
science (En.)	4	4	0
to control	0	0	0
techniques de gestion	0	0	0
entreprise (fr.)	0	0	0
method	0	1	1
administration (fr.)	0	0	0
model	2	2	0
performance (En.)	1	0	1
direction (fr.)	0	0	0
implementation	1	1	0
exploitation (fr.)	3	3	0
planning	0	0	0
direction (En.)	2	1	1
administration (En.)	0	0	0
running	3	3	0

E:TO WORK   F: TRAVAILLER

to exert effort	0	0	0
agir d'une manière suivie	1	2	1
effort (fr.)	0	0	0
to do	0	1	1
to make	0	0	0
sueur	0	1	1
résultat utile	1	1	0
to perform	0	0	0
to be employed	0	0	0
épanouissement	2	3	1
to use energy	0	2	2
exercer une activité professionnelle	1	1	0
esclavage	6	6	0
exercer un métier	0	0	0
to contribute	0	3	3
to achieve success	1	2	1
abrutissement	8	7	1
to obtain satisfaction	0	1	1
gagner sa vie	0	0	0
to accomplish something	1	1	0
to earn money	0	0	0
physical process	1	3	2
effectuer une tâche	0	0	0
mental process	0	1	1

E: BEAUTIFUL F: BEAU, BELLE

possessing beauty	1	1	0
aesthetically pleasing	0	0	0
harmonieux(euse)	0	0	0
qui plaît à l'oeil	0	0	0
qui répond à certains canons de beauté	1	2	1
équilibré(e)	3	3	0
enjoyable	0	1	1
classique	3	3	0
pleasant	0	0	0
lovely	0	0	0
subjectif	0	1	1
admiration (fr.)	1	1	0
attractive	1	0	1
satisfaction (fr.)	4	3	1
plaisant(e)	0	0	0
special	1	2	1
appealing	0	0	0
model	3	4	1
réussi(e)	4	4	0
joli(e)	0	0	0

E: DESIGNER F: CONCEPTEUR

devises designs	1	1	0
executes designs	3	2	1
idées nouvelles	0	1	1
publicité	3	3	0
works of art	1	2	1
inventeur	1	0	1
clothes	0	2	2
machines (En.)	3	4	1
drafter	3	2	1
mise en scène	2	2	0
artist	0	1	1
makes model	0	0	0
creator	0	0	0
qui élabore des projets	3	1	2
créateur	0	0	0
innovative	0	0	0

E: DESIGNER F: DESSINATEUR

dessins industriels	2	0	2
devises designs	1	1	0
executes designs	3	3	0
dessins d'architecture	3	0	3
works of art	1	4	3
inventeur	1	2	1
clothes	0	1	1
machines (En.)	3	3	0
dessins décoratifs	2	1	1
créateur d'images	1	1	0
artiste	0	0	0
drafter	3	0	3
artist	0	0	0
makes model	0	1	1
creator	0	0	0
innovative	0	1	1

E: MANAGEMENT F: GESTION

technique (En.)	1	3	2
practice	1	2	1
action de gérer	0	0	0
administration (fr.)	0	0	0
direction (fr.)	0	0	0
science (En.)	4	4	0
organisation	0	0	0
to control	0	0	0
method	0	1	1
model	2	1	1
gérance	1	1	0
performance (En.)	1	5	4
implementation	1	0	1
entreprise	0	0	0
orientation à long terme	1	1	0
planning	0	0	0
direction (En.)	2	1	1
administration (En.)	0	0	0
décisions courantes	0	0	0
running	3	3	0
orientation à court terme	3	1	2

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