

Translation as a Vantage Point for the Linguist: A Case Study from the Investigation of Lexical Complexity

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ABSTRACT

It is widely acknowledged that linguistic research can be relevant and useful in translation as it provides theoretical and practical instruments for translators. In this paper, I will invert the perspective and show how translation can become a privileged vantage point for the empirical observation of the dynamics at work in the lexicon of a linguistic system. In particular, I will focus on the role of translation as a heuristic tool in the investigation of Lexical Complexity, in that it highlights the non-linear mapping between words and concepts in different text types, the complex mapping between words belonging to different lexical systems, and also (and above all) the complex interplay between functions and meanings under the constraints imposed by culture-specificity to text-recontextualization. I will exemplify my claims with some considerations on the translation of an English verb of cognitive attitude into Italian.

KEYWORDS

Lexical complexity, epistemicity, evidentiality, verbs of cognitive attitude, attitudes, complex dynamical systems

1. Introduction

The relationship between linguistic research and translation theory and practice is not straightforward, nor is there universal agreement on the role that linguistics should play as regards translation. It is generally acknowledged, though, that theoretical and applied linguistic studies can (and often do) contribute to the progress of translation science (Fawcett 1997, Gutt 1991, Malone 1988, Schäffner 2002, House 1997, 2006, *forthcoming*). The debate between translation scholars who favour linguistic approaches and those who favour literary approaches is always very lively, and new disciplines belonging to the domain of social sciences are brought into the discussion (Gentzler 2001) as well.

The contribution of translation studies and practice to linguistics is — at least to my knowledge — not debated as much. And yet, translation can be a privileged vantage point for the observation of the dynamics at play in language, both at the semantic and pragmatic level.

The present analysis aims to provide a few observations from the perspective of the linguist who works to develop a theory of lexical complexity' (Bertuccelli Papi 2003, Bertuccelli Papi and Lenci *forthcoming*). In particular, I will present

a case study which clearly provides evidence for the way in which translation can contribute to theoretical and applied linguistic research by helping prove (or disprove) theoretical assumptions. Translation, as a heuristic tool in the investigation of lexical complexity (Bertuccelli Papi, Cappelli and Masi *forthcoming*), brings to the fore the non-linear mapping between words and concepts, the complex mapping of words belonging to different lexical systems and the complex interplay between functions and meanings under the constraints imposed by culture-specificity to text-recontextualization.

In what follows, I will discuss the contribution of translation to the research on a theory of the lexicon as a complex dynamic system through the analysis of the translation into Italian of an English verb of cognitive attitude: *think*. Because of their crucial role in communication and cognition, the correct translation of these verbs is essential and at the same time often problematic, as different linguistic systems do not generally share the same strategies for the rendering of evaluative functions (Merlini Barbaresi 1996). The attempt to find the best translation of certain construals of these lexical items forces the linguist to overcome the superficiality of an analysis which reaches its conclusions on the sole basis of the comparison between the syntactic and semantic systems of the two languages and to shift the focus of his attention on the principles at work in each of the two languages, in order to attain a translation which is truly *diagrammatic* (Merlini Barbaresi 1996:75), that is, in which the relationship between the form and content in the source language is the same as the relationship between the form and content in the target language.

I will first illustrate the theoretical issues relative to the nature of lexical semantics discussed within our research; I will then briefly introduce the special cognitive status of verbs of cognitive attitude and the way in which a theory of lexical complexity can be easily applied to this semantic domain. I will then move on to present the way in which translation is viewed within this framework of research as a form of second order lexical complexity and I will discuss some occurrences of *I think* and their translation into Italian in order to provide evidence for my claim that translation can be a privileged vantage point for the observation of the limits and of the successes of the linguistic study of meaning. In the concluding section, I will attempt to "close the circle", underlining how the conclusions reached through a case study in translation, besides improving the linguist's insight in the functioning of the system, can provide suggestions for further research in translation itself.

2. A theory of the lexicon as a complex dynamic system

The lexicon shares many features of the so-called complex dynamic systems studied by the natural sciences, in particular physics. For this reason, we can hypothesise that the lexicon of a language can itself be analysed as a complex dynamic system (Bertuccelli Papi 2003, Bertuccelli Papi and Lenci

forthcoming) characterized by complexity and organization and displaying emerging properties.

Bertuccelli Papi and Lenci (*forthcoming*) describe the lexicon as a complex dynamic system in that a high number of different types of dimensions are required for its description, as is the case with physical complex dynamic systems. Moreover, just like these, the lexicon of a language is dynamic, i.e. it changes over time both in a diachronic sense and in a synchronic sense, e.g. in text diachronicity³ (Merlini Barbaresi 1990); it displays emergent patterns of self-organization which reduce its complexity and determine the system's stability (Bertuccelli Papi and Lenci *forthcoming*, MacWhinney 2001, Elman 1995); it is non-linear as far as relations with conceptual structures and reactions to change in the system are concerned; it exhibits adaptivity, as it adapts itself to external pressures, and nestedness, as lexical items can in turn be seen as complex dynamic microsystems that differ in the degree of complexity and internal organization displayed.

The lexicon displays complexity at two different levels: on the one hand, it exhibits a first order of complexity in the relationship between words and concepts, and on the other hand, a second order of complexity can be envisaged in the cross-lingual mapping between word/concept pairs, i.e. in translation. Within the theory of lexical complexity, translation is seen as a mapping between complex systems, which can of course differ in terms of their degree of complexity and organization. As is evident, this mapping is never easy: translators are essentially faced with the extremely difficult task of dealing with second order complexity, which depends on the complexity of the source and target systems and on the complexity of the links between the two. If this is the case, various phenomena such as polysemy, vagueness or difficulty in translation could be seen as epiphenomena of complex lexical dynamics⁴. In particular, we could hypothesise that in most cases problems in translation derive from the fact that only expressive devices of the source and target systems are compared, i.e. from a reflection at the level of second order lexical complexity only, rather than on the principles at work at the level of first order lexical complexity, that is, on the mapping between words and concepts within each system for the mapping at the cross-linguistic level of corresponding intralinguistic mappings⁵.

These hypotheses are supported by a simple attempt to analyse the way in which a very common English verb belonging to the class of verbs of cognitive attitude (Cappelli 2005), *think*, is translated. Translation offers an excellent testing ground for the theory of lexical complexity: the more complex a system is, the more difficult the mapping with another system should be, even when we map basic and therefore presumably universal conceptual domains like epistemicity and evidentiality.

3. Verbs of cognitive attitude as a complex dynamic system

Verbs of cognitive attitude play a fundamental role in communication and cognition, as they lexicalise the interplay of several dimensions pertaining to the conceptual domains of epistemicity and evidentiality, which can reasonably be considered universal. Human beings need to record information in a sort of "belief box" (Schiffer 1991; Sperber 2000) in order to treat it as data and to use it as premises in inferences. Thus, it is reasonable to believe that the "existential status" of every chunk of information needs to be assessed in order to be stored in this database and then used in reasoning. Verbs of cognitive attitude in their qualificational use (Nuyts 2001) have the very important function of signaling the speaker's epistemological evaluation of a state of affairs, leaving to the hearer the choice of either trusting him as a reliable source and, consequently, of storing that piece of information in his "belief box", or else, of performing the verification process on his own in order to assess the status of the information retrieved against a number of variables (e.g. contextual and communicative clues, prior knowledge, values and attitudes, *etc.*).

If we apply the theory of lexical complexity to the study of verbs of cognitive attitude, we can define the latter as microsystems described through a low number of dimensions, but gradable and very abstract in nature, i.e. as highly complex dynamic microsystems. Verbs of cognitive attitude lexicalise the interplay of epistemicity and evidentiality. Epistemicity can be viewed as involving an evaluator and a state of affairs and, therefore, as developing along two different but overlapping and interacting dimensions: the evaluator's commitment and the likelihood of the state of affairs. In other words, an evaluator can be more or less certain that a state of affairs holds or doesn't hold. Evidentiality can be seen as bearing reference to "more or less objective or subjective evidence", that is, to perceptual, cognitive or affective evidence (Cappelli 2005, *forthcoming*). When the speaker uses a specific cognitive verb, with few exceptions, this follows from the need to lexicalise the various combinations and modulations of these complementary dimensions.

The semantic space occupied by verbs of cognitive attitude can be said to show complexity at different levels. On the one hand, a remarkable degree of complexity is present at the *conceptual level* where we have two quite abstract conceptual domains operating at a higher cognitive level (Nuyts 2001) and which are internally articulated but which, presumably, have a weakly organised internal structure⁶. On the other hand, this complexity is inherited at the *level of the lexicalisation* of these conceptual domains, as the various degrees of a relatively limited number of dimensions are lexicalised in a relatively high number of lexical items showing very subtle differences in meaning. Therefore, at the level of the "semantic area", we observe a complex system with a fairly high internal organization⁷.

A further level of complexity is retrievable at the *level of the single lexical items*, where each item can be envisaged as a complex and dynamic sub-system which can reach a relatively stable state only if particular constraints act as organizing principles (Cappelli *forthcoming*), i.e. syntactic and grammatical constraints, linguistic contextual constraints, etc. And even when these constraints are at work, some of the verbs that occupy a more central position in the category show a remarkable semantic "instability", which bears evidence to somewhat loose organisation within the system. This behaviour could be traced back to the complexity of the conceptual system itself, in that the high density of the semantic area and the subtle differences among the semantic dimensions lexicalised make each of these micro-systems a complex system endowed with high adaptivity to external pressures, such as that of contextual variables, which can change the strength of the epistemic evaluation, weaken or strengthen the evidence or the reliability of the evaluator in the hearer's eyes, and "push" a verb into the semantic space of another verb of the class, thus creating overlaps in the semantic area.

4. Mapping two complex dynamic systems

As we already mentioned, since belief fixation, as a result of epistemic evaluation, is an essential process in human cognitive life, we can assume that the epistemic and evidential conceptual domains are universal and that they are rendered linguistically across languages, although through different means (Nuyts 2001). Italian and English seem to have two equivalent systems as far as the encoding of these essential domains is concerned. In Italian, as in English, there are modal verbs (*dovere* 'must'; *potere* 'can'), adjectives (*possibile*, 'possible'; *probabile*, 'probable'; *ovvio*, 'obvious'; *evidente*, 'evident'; etc.), adverbs (*chiaramente*, 'clearly'; *probabilmente*, 'probably'; *forse*, 'maybe', *veramente*, 'really'; etc.) and verbs of cognitive attitude (*credere*, 'believe'; *pensare*, 'think'; *supporre*, 'suppose'; etc.), which are organised in a very similar way to the lexical items of the English system. We could therefore hypothesize that translating from one language into the other would simply mean mapping two systems of comparable complexity and internal organization. If however we attempt to translate English verbs of cognitive attitude into Italian, it becomes immediately clear that the question is not so simple, and the complexity of these microsystems becomes evident immediately. And yet, translating these verbs as closely as possible to their original semantic and pragmatic function is fundamental, if we hope to respect the value they have in a culture in which, traditionally, "your word is your bond", and whose language has therefore developed such a refined system for the linguistic rendering of the speaker's commitment to the proposition expressed.

4.1 Translating *think*: the lack of pragmatic equivalence

Think is a very basic verb⁸ encoding a very generic semantic potential, basically identifying the rational *ego* of the human being. This basic nature makes it highly context dependent, thus it can be construed in many different senses all related to a central idea of cognitive activity. In the most "literal" case, *think* is construed as an action, the act of thinking, and in the most "metaphoric" case, it is construed as the subjective result of the act of thinking, an indicator of opinion. In between these two extremes, discourse can constrain many construals of the semantic potential of *think*, situated along the scales of commitment and likelihood of the state of affairs. This is done via contextual constraints, according to which certain semantic dimensions are brought to the foreground and other are relegated to the background or dropped (Croft and Cruse 2003, Carston 2002).

I will focus on the translation of *think* in the first person of the simple present tense. In English, *I think* can have several functions (Cappelli *forthcoming*, Simon-Vandenberg 2000, Aijmer 1997): it can signal epistemic evaluation or the speaker's viewpoint; it can function as a politeness strategic device (*corrective face-work, hedge or downtoner* — Goffman 1967), and even as a cognitive discourse marker (Chafe 1993).

If we examine the translations of the occurrences of *I think* retrievable from the English-Italian parallel corpus MultiSemcor⁹, we find that the translators have chosen *penso* and *credo*, which are generally given as dictionary entries as the translation of *think* and *believe*, two verbs that in English lexicalise two clearly distinct concepts (Cappelli *forthcoming*). The choice of *pensare* and *credere* does not seem to follow from the different functions of *I think*, as evidenced by the following examples:

1. *I think* the big thing about the game was that our kids for the third straight week stayed in there pitching and kept the pressure on.

Credo che la cosa importante nella partita sia stata che i nostri ragazzi per la terza settimana di seguito sono rimasti lì a lanciare *pitch* e hanno fatto pressione continua.

2. Assistant coach John Cudmore described victory as "a good feeling, *I think*, on the part of the coaches and the players".

L'assistente del coach John Cudmore ha descritto la vittoria come "una buona sensazione, *penso*, da parte degli allenatori e dei giocatori".

3. *I think* you stink, Tom Lord!

Io credo che tu sia un fetente, Tom Lord!

4. "*I think* you're wrong, Eddie", he said finally.

"*Penso* che tu ti sbagli, Eddie", disse finalmente.

Analysing the parallel corpus, *credo* seems to be more frequently chosen when both the commitment dimension and some sort of evaluative operation are lexicalised, whereas *penso* seems to be preferred when the personal responsibility of the evaluation is the more prominent dimension. *Credo* is, however, generally preferred. We could hypothesise that, when *I think* is used to signal the viewpoint of the speaker and this strengthens the assertion rather than mitigating it, it "inherits" from the context that sort of affective strength which is also typical of *I believe*, and that therefore, *credo* becomes the best choice. The higher frequency of *credere* in translations of *I think* could also be due to the fact that the former is generally more frequently used than the latter.

Interestingly, there are no occurrences of other very common Italian lexical items lexicalising the speaker's epistemological evaluation, such as *ritengo che*, or *secondo me*, which are very frequent in spoken and written Italian, even more frequent than *penso*, as was provided evidence for by a simple query of the European Parliament sessions and of the BADIP (*Banca Dati dell'Italiano Parlato 'Database of Spoken Italian'*)¹⁰.

The translation of *I think* is clearly more problematic when the verb occurs as a politeness strategic device or as a discourse marker. In these cases, the translator can choose to use the verb *credere* or *pensare*, sometimes conjugated in the *imperfetto indicativo* tense, which, in Italian, can have the function of hedge. Here is a case from the first *Bridget Jones* movie:

5. Well, *I just think* you should know that, um... there are lots of prospects here for a talented person
Pensavo dovessi sapere che ... che ci sono molte possibilità qui per...

This use of the verb in the *imperfetto* tense respects the pragmatic function of the verb in the original text and reveals one of the effects of second order lexical complexity. In order to respect the semantic, pragmatic and functional information encoded by the source text the translator is forced to map this lexical item of the source system onto a more complex form at the syntactic level in the target system.

Translation unveils even more clearly the effects of lexical complexity in cases in which, in order to respect the informational load of the source text, the translator is forced either to find solutions outside of the "equivalent" semantic and/or conceptual domain, or to renounce rendering all the information encoded in the source text, leaving the hearer/reader to recover them from some other part of the target text.

6. *I think* we should pack, shouldn't we?
Bene, dovremmo fare i bagagli no?
7. Come and look at your gravy, Pam. *I think* it's going to need sieving.
Dai un'occhiata alla salsa dell'arrosto Pam, bisogna filtrarla!

These two cases, also from the first *Bridget Jones* movie, exemplify my claim. In the first case, though, the adverb *'bene'* (literally *'well'*) ensures diagrammaticity and preserves the original pragmatic function of the English *I think quite well* (Merlini Barbaresi 1996), even if it belongs to a different lexical area, in the second case the lack of pragmatic equivalence between the two systems makes it impossible to preserve the whole amount of information communicated by the simple choice of *I think* in the source language. This passage is taken from a crucial moment in the movie, in which the whole scene is played around an ambiguous situation. A friend of Bridget's mother (who is the utterer of this sentence) is trying to convince her to leave Bridget and the man she is chatting with alone. To do this, she invents an excuse, but the woman misunderstands her intentions and she ends up reacting as if it were actually a criticism, that is, she interprets this sentence in its "most literal meaning", as if *I think* were a politeness device concealing a mischievous remark by her "friend" about her gravy. In Italian, the attitude of the "friend", who is essentially questioning in public the woman's ability to prepare gravy (notably a remarkable flaw for an English woman!), is rendered by the irritated tone of the woman and the strong deontic character of the assertion. The result is that the woman comes across as a grumpy old lady rather than a dubious friend. There is a significant loss at the pragmatic level. The misunderstanding is not rendered and important information about Bridget's family is left out, which in the original version contributes significantly to the irony of the whole movie. Leaving out this pragmatic information, in the translation a number of inferences are blocked, the ambiguity is resolved with the choice of the translator and part of the information contributing to the portrait of the main character is lost, as an effect of second order lexical complexity.

Translation allows the linguist to test theoretical assumptions relative to the nature and organization of the lexicon. It clearly unveils the fact that if we take *think* as a lexeme, we can map it onto several areas of the system of Italian verbs of cognitive attitude, and this is the type of information that bilingual dictionaries generally try to provide. However, if we consider the verb in a particular form, as we did here, the number of possible successful mappings is reduced, as we are faced with a more precise set of "stable states" of a complex dynamical system and with the necessity of reproducing that dynamical system in that particular state. This is not always easy and dictionaries cannot always help the translator, because many contextualised meaning construals preserve little or nothing of the fundamental cognitive and epistemic information lexicalised by the verb in its prototypical uses. A simple study of translated occurrences of the verb shows clearly that in order to perform a correct mapping between the two complex systems, it is possible that we need to resort to other conceptual domains, such as, for instance, the deontic domain. Nevertheless, in some cases, it appears that certain pragmatic effects will be lost and, most importantly, so will the information we can derive from them.

5. Conclusions

This brief overview of the way in which translation can become a privileged vantage point for the observation of the dynamics at work in the lexicon, viewed here as a complex dynamic system, is part of a work still in progress. A similar study on the translation of the verb *assume* into Italian (Cappelli *forthcoming*), which has no exact semantic equivalents for this verb, has confirmed that translation can be an extremely useful heuristic testing ground for the linguist.

As a matter of fact, such an approach to the study of meaning brings about various considerations which, if on the one hand help the linguist to refine his theory of lexical complexity, on the other hand, can offer new stimuli to the research in translation itself. Translation confirms that different languages organise even apparently equivalent lexical areas in different ways. Several questions emerge from this reflection, such as the desire to define the principles of lexical organization that reduce the "entropy" of the system, that is, the constraints and the principles which favour different meaning construals (Croft and Cruse 2003) of the same lexical items in different contexts of use.

A detailed study of the system organisation and of the principles regulating it would be extremely useful for translators too, in that it would favour a more faithful rendering of the *markers* (Nord 1997) or *communicative clues*, that is "the properties that the communicator builds into his text and that will lead the audience to the intended interpretation" (Gutt 1991:127). In particular, even a very simple case study in translation shows the importance of a serious study of the relationship between words and concepts, i.e. of first order lexical complexity, if we want to understand how meaning is construed in a linguistic system. Only when we have a clear idea of how two systems work can we map them successfully onto each other.

The particular verb class used in this analysis to provide evidence for my claim, i.e. verbs of cognitive attitude, has been chosen for the very important role of these verbs as communicative clues: the choice of one over the other, as well as the occurrence in particular contexts, are important clues that reveal the intentions of the communicator and that guide the intended interpretation. It is self-evident that, most of the time, rendering the exact cognitive attitude of the speaker is crucial if we hope to respect the intended meaning and guide the hearer to the intended interpretation of the original ostensive stimulus (Sperber and Wilson 1986/1995).

Translation, by unveiling problems in the mapping between two systems, prompts the linguist to investigate lexical complexity and the functioning of the systems in search of patterns of regularity with the hope to identify principles and properties, even at the textual level, functioning as "markers" or "communicative clues". Hopefully, such an effort will lead to an advance

in theoretical and applied linguistics — and of course in translation science as well — as we could then hope to map these properties of the source system more precisely with similar properties of the target system, without increasing the target audience's processing effort by choosing unnatural expressions or structures and with the hope of helping the target audience retrieve the originally intended meaning thanks to the diagrammaticity of this sort of translation.

Much work still needs to be done, because this will require a good understanding of the principles that organize the "form" of the system, but this certainly represents a field in which translation can contribute to linguistic research.

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¹ A theory of Lexical Complexity is presently being investigated by the research group of the University of Pisa within the wider national interuniversity project named "CoFin 2004: Glossari, dizionari, corpora: lessicologia e lessicografia delle lingue europee".

² Merlini Barbaresi (1996:78-79) draws a distinction between epistemic evaluation, indicating the speaker's commitment, and the evaluation of the degree of acceptability of a hypothesis (*valutazione della misura di accettabilità della tesi*), the speaker's prediction about the receiver's possible inferential process. Merlini Barbaresi underlines the importance of a translation that preserves the stability and the internal coherence or these functions in order to avoid problems in translation.

³ Merlini Barbaresi (1990) talks of "text diachronicity" to underline how texts are themselves complex systems, characterised by internal dynamics and "diachronicity", i.e. internal development. This is relevant to our theory of the lexicon in that each

construed meaning can be viewed as a particular state of the micro-system at a time t_1 , which the internal development of the text contributes to constrain. Textual diachronicity brings about certain meaning construals which are not always predictable on the sole basis of the conceptual material which constitutes the semantic purport of the lexical item.

- ⁴ In our approach, complexity is not equated to difficulty (Masi 2003) and it does not belong to a specific level of linguistic analysis.
- ⁵ Merlini Barbaresi (1996:82) underlines this same idea talking about diagrammatic translation. She writes that "[...] translation should ensure diagrammaticity, that is, we should be able to find in the target text the same relationship between signans and signatum that we find in the source text" (*my translation — in original Italian in the*).
- ⁶ The evidential domain, made up of few discrete dimensions, probably contributes to the organization of the system stabilising the more "nebulous" epistemic conceptual domain, which involves few very abstract and scalar dimensions and is capable in theory of combining in infinite ways.
Certain areas within the system itself present a competing internal organization, due to the relatively high number of lexical items sharing very few dimensions and having as their only distinctive feature the different ranking on the scales of the dimensions lexicalised.
- ⁸ Lexical items like *think* make the distinction between difficulty and complexity clear-cut. *Think* cannot be defined as a difficult verb as evidenced by research in language acquisition (Tommasello 2003). It is however quite complex, since the dimensions necessary to describe all its stable states at a time t_1 are numerous.
- ⁹ MultiSemCor is an English/Italian parallel corpus developed by the *ITC-irst*, a centre for scientific and technological research of the Autonomous Province of Trento, Italy.
- ¹⁰ In the transcripts of the European Parliament sessions there are 6008 occurrences of *penso*, 3745 of which are followed by the complementiser *che*, versus 16000 occurrences of *credo*, of which 10748 are followed by *che*. *Ritengo che* is also more frequent than *penso che*, with 7231 occurrences of the 12544 total occurrences of *ritengo*. This could be because *pensare* is more informal than *credere* and therefore less suited to formal oral contexts. However, even in the BADIP (*Banca Dati dell'Italiano Parlato*), *credo* occurs 389 times and *penso* 233 times. What is interesting is that, in spoken Italian, the expression *secondo me* is also used more frequently than *penso*: in the BADIP it occurs 316 times.