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Evaluating Students' Translation Process in Specialised Translation: Translation Commentary

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ABSTRACT

The idea of commented translation, which in teaching has the aim of getting students to justify their translation decisions in writing, is not new; it has been dealt with by Holz-Mänttari (1984), Neubert (1984) and Gabrian (1986). Nevertheless, students are not used to describing their own line of reasoning and usually do not know how to lay the foundations for their arguments in an organised fashion. Establishing commentary with certain methodological guidelines that give students the skills to ground strategies in an organised way has helped to considerably improve students' ability to rationalise their own translation process. In this paper, an explanation will be given of these guidelines, which reflect both macro- and micro-strategies and help to establish a coherent basis for the translation process. Subsequently, a commentary, made by a student about her translation into Spanish of a scientific text written in German, will be presented. The aim will be to describe the interrelation of the guidelines with the student's rationale.

KEYWORDS

Translation teaching, translation process, evaluation in translation, specialised translation, methodology in translation

1. Evaluation: the Current State of Affairs

Many translation teachers limit themselves to evaluating the *product* of students' translations, without taking into account the *process*. However, the translation product per se only constitutes a mere surface manifestation of an entire dynamic array of conscious and unconscious mental processes that occur during the act of translation.

Using the product as the only barometer is no guarantee that the evaluation will have a given degree of objectivity. If we do not leave open the possibility of deciphering the *diagnostics* of translations by applying empirical-experimental models that study the process, we will be unable to posit the *therapy* that provides optimal solutions for students' translation problems (for a more in-depth treatment of the concepts of *Diagnose* and *Therapie*, see Hönig, 1997:121 and ff.). Repeated conversations with students about these issues reveal widespread dissatisfaction with the way in which teachers evaluate their translations, mainly in translation exams, in which they are not given the chance to explain the basis of their decisions.

Yet since 1986, the analysis of student translation processes has been performed by applying inductive empirical-experimental methods, with *think-aloud protocols* standing out as the predominant model in translation teaching (cf. Dancette, 1994; Jääskeläinen, 1993; Jääskeläinen

& Tirkkonen-Condit, 1991; Kiraly, 1995; Tirkkonen-Condit, 1989; Kussmaul, 1995; Lörscher, 1992).

The results obtained up to now show that when explaining their rationale, research subjects tend to overlook essential pragmatic references regarding the commission, target receptors, textual conventions and the communicative situation of the text type that is operative in the target culture, among other possible aspects. In addition to these results, and with regard to the background of the individuals under study, the application of *think-aloud protocols* has yielded interesting conclusions. It has been shown that professional translators grasp broader fragments in interpretative reflection than students; that is, they do so from a more holistic and global perspective, whereas students limit themselves to a linear interpretation of the ST (source text), focusing on just one part of the text. Likewise, professionals hone in more on the pragmatic-conceptual nature of the text, continually drawing on their knowledge of the world, whereas students are geared more towards textual form. Professional translators usually apply theoretical knowledge that channels and determines their translation strategies, which shows a greater degree of self-confidence, a greater awareness of the complexities of the translation process and greater responsibility and intellectual inquisitiveness.

By studying the TAPs (think aloud protocols) from the research conducted by the aforementioned scholars, we have been able to determine that the think-aloud protocols of the individuals under study *usually lack theoretical grounds*, and few references appear in conjunction with the communicative factors involved in choosing the proper strategies in the translation of a given text. Students usually state their arguments in the following terms: "this word sounds better than that one"; "my intuition tells me that the solution is...", "we don't think that's the way it's said...", etc., which indicate the use of translation strategies that are mainly bound up with formal textual concerns, without reference to extratextual factors and/or translation macro-strategies.

Many TAPs reveal a high degree of unconsciousness and insecurity in what students do during the process; nor are there references to translation theories, cognitive sciences, lexicography, terminology or any other interdisciplinary field of specialised translation. Students' reflections do not take into account the aforesaid *interdisciplinary declarative knowledge*, unlike what occurs in the reflections of professional translators and experts in the field.

1.1. Problems when Evaluating the Process

Think-aloud protocols have met with their share of criticism, given that only conscious processes can be verbalised, while unconscious and

automatised processes of translation decision-making are left out. Despite the fact that many of these unconscious processes are indeed unobservable, the application of *think-aloud protocols* continues to be valid in my view, because this experimental model, used for years in cognitive psychology, at least allows us to analyse and evaluate our students' translation process, especially when their remarks are monitored.

Nevertheless, in my view the main problem with this method, regarding students' verbalisations, has to do with the rambling and disjointed nature of TAPs. If the process occurs without moderation or guidance from a teacher, students limit themselves to providing information about the mistakes or good choices made, always within the frame of *micro-strategical decisions* (cf. Risku, 1998:207). Students' micro-strategical decisions also tend to reflect a declarative knowledge of translation based on the prescriptive, fragmentary acquisition of certain "obsolete ideas" about translation (cf. Hönig, 1997).

If our aim is to help students achieve a mastery of translation, we will have to provide them with the necessary methodological-argumentative tools so that they know what they are doing when they translate a specialised text. Thus, students' verbalisations can be significantly enhanced when they are based on suitable theoretical grounds. This process of grounding strategies can be accomplished by means of *descriptive commentary*, which allows teachers to evaluate to what extent their students have acquired the skills involved in the act of translation. This experimental alternative, which is complementary to other inductive methods, makes it possible to draw other interesting conclusions about a student's "black box".

2. Translation Commentary

The idea of *commented translation*, in which students are given the chance to justify their decisions, was voiced by Holz-Mänttari (1984), Neubert (1984) and Gabrian (1986) in their critique of the predominant evaluative models in traditional teaching. In my view, commentary enables a reflection on certain strategies that do not get verbalised with *think-aloud protocols*, due to the fact that they are done orally, on the spur of the moment, and in an ongoing, dynamic and constructive unfolding of thought processes, in which there is a tendency to forget to evaluate strategies used in the previous phases of the process (cf. Kussmaul, 1995:49). When students write down their line of reasoning they have more time for reflection, allowing them to recall aspects occurring at a given moment in the translation process.

Taking as our starting point this idea of commentary as it has been posited by several scholars, it should be emphasised that expressing

translation decisions in writing also implies *evaluating the interaction of declarative knowledge with procedural knowledge* in the translation of a specific specialised text. Verbalising only declarative knowledge in a commentary, i.e. verbalising theoretical knowledge about translation, does not in and of itself ensure better strategic solutions. Indeed, traditional teaching has limited itself to conveying this theoretical knowledge in isolation from translation praxis, and therefore students do not know how to tie it together when the time comes to propose and put forward the proper strategies (cf. Risku, 1998:110). We must provide our students with professional arguments. Statements such as “it sounds better”, “I found it in the dictionary” are completely useless. Professionalism implies the ability to rationalise one’s decision-making processes in an objective manner, and the theoretical models offered by translation studies can provide the basis for acquiring this ability.

The next aim of this paper is to describe a series of methodological guidelines that can help students to ground their strategies in writing. The fundamental didactic purpose of written commentary is to provide an insight into how students balance declarative and procedural knowledge, and to see if giving suitable, conscious expression to the former helps to optimally achieve the latter during the translation process, or vice-versa. In fact, Risku (1998:112) corroborates the idea that meta-cognitive verbalisation, i.e., professional expert role playing verbalisation, constitutes an extremely important resource that not only contributes to the development and evaluation of the specific translation skills and strategies involved in the translation of a text, but also to the development of the social facet of expert activity.

Although we are aware that this idea of written translation commentary may currently be in use in some translation classes, our specific contribution is based on the need of teachers to establish an organised methodology to guide the nature of the arguments made. Our experience in teaching commentary, mainly at the outset before guidelines were established (roughly nine years ago), showed us that students meandered a great deal in their arguments. Lacking a series of preliminary guidelines covering top-down and bottom-up processes, many students limited themselves to describing their strategies mainly within the framework of bottom-up processes (problems with syntactic collocations in the TT (target text), stylistic problems, problems with consulting certain terms in bilingual dictionaries, etc.). These findings clearly showed that students were not used to describing their process, and that they did not know how to ground their strategies in a coherent way. Their arguments centred on highly superficial aspects of the TT that had little to do with considerations about the prospective macro-strategy and the situational, communicative and cognitive parameters of the process. This again revealed certain facts about the initial way in which students were used to performing their evaluation, based on arguments about merely formal corrections of the

TT, taking a markedly retrospective approach towards the description of micro-linguistic aspects of the ST and regarding the *product* as the only evaluative focus. It was therefore necessary to bolster the evaluative process with certain guidelines that would lead to a *global view of the translation process in a general and organised way*, enabling students to ground their strategies without losing sight of the holistic, dynamic nature of the process; that is, the aim was to achieve the interaction of macro-strategies and micro-strategies based on well-founded arguments, putting emphasis on both declarative and procedural knowledge.

2.1. Methodology for Writing a Translation Commentary

In order for students to freely choose how to ground their translation strategies and teachers to more clearly observe students' thought processes, it bears mentioning that the guidelines stated below should only be used for the purpose of *student orientation* that helps in the planning, organisation and development of translation commentary. If students decide not to adhere to the commentary guidelines established herein but want to follow their own, teachers should regard this as perfectly valid, since each subject, in the learning process, acquires the declarative and procedural knowledge that best suits them based on their personal idiosyncrasies. This flexibility of commentary allows teachers to observe where the methodology applied in translation classes fails and where it succeeds. The cognitive models on which the process is based can always be improved, and therefore their postulates should be left open to all types of criticism, revision and enhancement. When teaching translation, we should not only analyse and evaluate students' thought processes, but we should also consider and evaluate our own introspection as teachers, with our hits and misses. In this regard, learning and enrichment is mutual, based on constructive cooperation and dialogue, in light of the idiosyncrasies and knowledge of the subjects involved.

What follows will be an overview of translation commentary, before moving on to discuss each one of the guidelines. This commentary model constitutes just one of the many possible models for evaluating students' processes in translation exams or individual/group translation assignments. Its main aim is to evaluate students' macro- and micro-strategies in relation to the *functionally necessary degree of differentiation* (Hönig & Kussmaul, 1982) between both texts on different textual levels. However, when used in conjunction with a translation exam or an individual/group translation exercise, it should be presented along with the translation commission and a set of instructions, as per the functionalist didactic model (cf. Reiss & Vermeer, 1984; Nord, 1988).

TRANSLATION COMMENTARY:

In order to evaluate your translation as objectively as possible, please write a general descriptive commentary in which you outline the chief difficulties

encountered along with the solutions proposed, using the following guidelines as you see fit to structure your answer. You do not need to include every one of the guidelines. You can support your arguments in any way you wish; these guidelines are suggested for the *purpose of orientation* in order to help you to plan and organise your line of reasoning and decisions in a coherent fashion (time for writing your commentary: 1 hour):

1. On the basis of translation instructions of the commission (translation norms, textual norms, etc.)
2. On the basis of the macro-purpose sought with the TT (possible differences with respect to the macro-purpose of the ST)
3. On the basis of ideological, cultural and informative considerations and/or differences between the receptors of the TT and the ST
4. On the basis of the textual conventions of the TT (norms according to its typology, what it allows and what it doesn't, differences with those of the ST, etc.)
5. Possible defects in the ST
6. Date and place of TT publication (possible temporal/situational differences with the ST if applicable)
7. Possible problems in expression and any other types of problems bound up with the intentionality of the TT, and possible differences in relation to the intentions of the ST (persuasive, informative, directive, instructive, expressive)
8. Possible issues, differences and changes in the textual structure of the TT in relation to the ST (topic-centred, main act-centred, mixed structure, etc.)
9. Possible issues and differences between the text acts and speech acts of both texts (according to the maxims and conventions established by each culture)
10. Possible similarities and differences between the functional relations of utterances in both texts (including possible omissions, extensions, paraphrase, etc., and problems related to the specific degree of explication and implication necessary to express the informativity of the TT, keeping in mind the principles of economy and relevance)
11. Lexical and terminological issues and problems: pragmatic-cognitive conceptual similarities and differences between both communicative situations and based on the differences between receptors (exotisation, domestication; prototype semantics; metaphoric, metonymic and image-schematic mappings; *scripts*; lexical categories according to the translation instructions, etc.)
12. Stylistic issues and problems in the TT (linguistic register, jargon, problems related to field, mode and tone/tenor, etc.)
13. Issues and problems with cohesion in the TT: problems with collocations, punctuation, suprasegmental features, referential relations of form and meaning between sentences, theme-rheme structure, etc.
14. Commentary on photos or other non-verbal elements, photo captions and typographical elements in the TT (possible differences with those of the ST)
15. Possible issues or problems in consulting dictionaries, encyclopaedias, parallel texts, databases, informants, etc.
16. Possible negotiations with the translation client and other determining factors in the process
17. Problems with the time allotted for completing the translation
18. Other considerations you deem relevant (e.g. arguments based on declarative knowledge: translation studies, interdisciplinary theories, etc.)
19. If you deem it necessary, support your translation on the basis of the similarities and differences between both texts using Beaugrande & Dressler's seven textuality criteria (1981): situationality, intentionality, acceptability, intertextuality, informativity, coherence and cohesion.

As can be seen, the order of the established guidelines (1 to 14) has the purpose of getting students to interactively ground their strategies from

the highest-level processes to the lowest-level processes in an attempt to change their initial tendency to base their strategies on linear processing, as described previously. The goal is obviously not to get students to address each guideline in the established order, but rather in a flexible and dynamic way, engaging those guidelines deemed to be most relevant, as a result of the circular path of the translation process. On another front, the time allotted for writing down the commentary—1 hour—requires students to give a succinct overview of their strategies, although this parameter can be changed (allowing more or less time) depending on the teacher's evaluative objectives at a particular time. The methodological objective of this paper is limited to stating and describing the commentary guidelines in broad, systematic terms. In the classroom, each guideline is explained in depth, depending on the issues raised by the students about how the commentary is to be written.

Guideline #1 addresses the translation *commission*, since the instructions regarding how the translation is to be performed constitute the basic starting point for planning the prospective macro-strategy of the TT. The fact that additional information is specified in this guideline (translation norms, textual norms, etc.) has the didactic aim of getting students to pay attention to all of the instructions of the commission so as to plan the macro-strategy of the TT, especially those having to do with the *initial norm* and the *preliminary norms* in specialised translation (cf. Toury, 1995). It should be remembered that these norms are bound up with the translation policy to be implemented, which in turn is predicated on the choice of the specialised target text.

Guideline #2, which points out the idea of the prospective macro-purpose of the TT, is a general, supraordinated concept that emphasises the *macro-strategy* of translation as a top-down process that will have a dynamic bearing on the output of micro-strategies. Within the frame of this guideline, students can describe the rationale behind certain aspects of the TT based on the phases of production (planning, ideation, development, expression, parsing) that they deem most important. The possible differences between the macro-purpose of the TT and that of the ST is specified in guideline #2 and likewise implies the consideration of aspects on any level of the ST within the scope of its communicative situation, the projected ST, the projected TT, and the looping phase of revision that may be worthy of comment for their possible inclusion, modification, expansion or omission in the rendering of the TT (for an in-depth analysis of the dynamic production phases of the TT see García Álvarez, 2004:274 and ff.).

Guideline #3 makes reference to considerations about the criterion of target text acceptability and any kind of possible differences with those of the criterion of source text acceptability. Arguments should be founded taking into account the idiosyncrasies of the intended target receptor in the translation commission (linguistic, textual, pragmatic and

terminological presuppositions, specific semantic-episodic schemes, world knowledge, specialist/general reading public, etc.), the interests surrounding the ST, their own view regarding the status of the ST and TT, their conception of the translator's visibility/invisibility, the intended use of the translation of the ST, and their conception of translation as *documentary translation* or *instrumental translation* as formulated by Nord (1997: 138-139).

Guideline #4 establishes a link with the *operational norms* of the commission (cf. Toury, 1995:58-60), specifically with the typology chosen for the TT and its corresponding textual conventions. The allusions about the target superstructure will obviously have a bearing on the production of the macrostructure. The learning of *normative skills* (a reflection of guidelines #1 and #4) still constitutes an unexplored field of study, yet a very necessary one for specialised translation teaching, since students are not usually taught the types of norms that govern this mode of translation on the national and international market. Also falling under this heading are *linguistic norms* (Toury, 1995), as is the case with possible arguments in relation to the domestication of recurring elements that need to be included in the TT due to target typology conventions (conventionalised lexicon, fixed syntactical-prepositional structures or conventionalised clichés, icons, graphisms, etc.). For example, some specialised texts in Spain impose lexical norms based on the use of domesticated lexical and phraseological items (as with the phrase "*los medicamentos deben mantenerse fuera del alcance de los niños*" / "medication should be kept out of children's reach" on Spanish prescription drug labels). Also included within this guideline is the possibility or impossibility of including translator's notes and what their conventions are according to the TT, or the description of other possible differences and similarities regarding both superstructures and their intertextual relations (TT and ST) in the general context of *textual norms* referred to by Toury (1995).

Guideline #5 deals with the identification of possible communicative defects or any other type of shortcomings in the ST. As a representative example of possible communicative defects in a text, let us mention the large number of errors usually found in instruction manuals.

Guideline #6, related to the possible differences in time and location between both texts, allows students to analyse possible omissions or modifications required in the TT in connection with these parameters. This factor makes it possible to evaluate, for example, whether students are aware that the internal topic of the ST is current or if the information provided is outmoded in relation to the time and place of publication of the TT, a fact which would warrant possible modifications or expansions in the informativity of the TT. This fact is brought to light in the case of scholarly articles, in which the publication date constitutes an important clue about how current the topic is.

Guidelines #7, 8, 9 and 10 mainly encompass pragmatic aspects of the text. Guideline #7 implies arguments about the intentions sought with the TT and their possible differences and similarities with those of the ST. Intentions are based on the main motive and secondary motives in TT production established in the commission. The taxonomy of communicative intentions expressed in the commentary is derived from the pragmatic-functional methodology of Hulst (1995) and García Álvarez (2004).

Guideline #8 is closely bound up with the preceding guideline and guideline #4: its aim is to evaluate students' strategies with regards to the interactive production of the intentions and textual structure required for the TT, including arguments about possible changes in the textual structure (possible *matricial norms* cf. Toury, 1995). Towards this end, we apply the functionalist methodology of Hulst (1995:100-109) for the analysis or production of texts, which talks about two basic starting structures: a) texts with a topic-centred structure (e.g. a scholarly article) and b) main act-centred texts, although it is true that a considerable number of specialised texts have a mixed structure (e.g. instruction manual). This helps to ensure that the intended intentions are optimally stated and the target macro-structure is structured in effective fashion (for a discussion about the analysis and production of these types of structures applied to specialised translation, also see García Álvarez, 2004).

Guideline #9 also has an interactive connection with guidelines #7 and 8 although it represents a lower-level textual process than the others. The aim is to properly produce the *pragmatic coherence* in the TT macrostructure. Thus, what is evaluated here is the interaction and production of textual acts (as global speech acts, as main acts also in the functionalist vein of Hulst, 1995 and García Álvarez, 2004), speech acts as posited by Austin (1962) and Searle (1969), the textual structure and the intended communicative intentions of the TT. On another front, the arguments addressing these aspects that fall under the criterion of pragmatic coherence would mainly be based on the application of Grice's maxims (1978) and considerations of cultural conventions, stating, for example, possible divergences in speech acts based on the behavioural and ideological norms between both cultures.

In a similar fashion to the preceding guidelines #7, 8 and 9, guideline #10, based on arguments about the production of functional relations between utterances of the TT, fully links up with reflections about the target macrostructure, and in particular about the production of the *specific informativity* of the TT. Evaluation is based on the way in which students state the *content-based functional relations and interactional support (metacommunicative) utterances* (again see the functional methodology of Hulst, 1995:109-125), analysing the convergences and divergences in relation to those of the ST and in turn connecting them

with speech acts, textual acts, textual structure and communicative intentions. The principles of economy and relevance constitute the starting grounds for argumentation which in turn can be used to address the degree of explicitness and implicitness necessary to produce the informativity of the TT based on the intended intentions.

Guideline #11 is obviously connected to the preceding one, since both get processed in parallel fashion during textual production. This guideline specifically deals with *conceptual coherence* and everything related to lexical and terminological issues and problems. The theoretical applications of cognitive psychology and semantics (cf. Lakoff, 1987; Rosch, 1978; Schank and Abelson, 1977 among others) also enable the evaluation of cognitive declarative knowledge acquired by students about the concepts, as well as the observation of how this is interrelated to procedural knowledge. Reasoned application of prototype semantics, prototype effects, concepts and associations, figure-ground, schemes, scripts, metaphorical, metonymic and imaginistic projections, the application of theoretical concepts of exotisation/domestication, etc. might be a step in the right direction if we made students aware of how these mental categories come into being.

The guideline also discusses the possible difficulties involved with translating lexical categories and/or rhetorical figures based on the commission instructions (if the same lexical category is to be kept, if it can be modified, if it can be omitted, if it can be replaced by another one, etc.).

Guideline #12 makes reference to any issue related to the linguistic register and textual style of the TT. In this regard, we should recall the variables of the semiotic, pragmatic and communicative dimension posited by Hatim and Mason (1990), which offer methodological support in grounding arguments on the basis of these issues, especially insofar as the variables of *field, mode and tone/tenor* are concerned. This will in turn help to analyse whether the textual conventions of the required TT type have been learned according to what has been set forth in this guideline, and whether parallel texts or other suitable documentary sources have been consulted to deal with stylistic factors. Included in this premise are the arguments related to different specialised jargons and the way in which they are translated, as per translation norms.

Guideline #13 is related to general remarks or problems with TT cohesion, including syntactic and semantic aspects, from a structuralist standpoint. Also included here are formal aspects: theme-rheme structure (similarities and differences between the TT and ST), formal relations between TT utterances (grammar and meaning) mainly based on the research of Brinker (2001⁵), or problems and issues with punctuation, spelling and suprasegmental features.

Guideline #14 makes reference to any non-verbal elements (photos, drawings, diagrams, etc.) in the ST that need to be remarked on in relation to their specific textual function in the TT. When the commission requires a change in these types of elements and captions, it is interesting to note how students choose and rationalise these non-verbal issues, and whether they take into account the textual macro- and micro-structure of the TT in their arguments, given that they are interdependent aspects. On another front, worth mentioning is the importance of typographical elements, especially in relation to the differences between both cultures and the respective conventions of these issues in TT production.

Guidelines #15, 16, 17, 18 and 19 are issues that are not included in the translation process proper, yet they are no less important since they can ostensibly have a bearing on any of its phases. The reason for listing them after guidelines #1-14 is precisely due to the pedagogical concern of not interfering with the close interaction between the macro- and micro-processes which have been included in consecutive—albeit dynamic—fashion in the commentary vis-à-vis guidelines #1-14. For this reason, the commentary scheme moves from higher-level processes to lower-level processes, subsequently adding guidelines about the documentary phase (#15), the translator's social role (#16), the time allotted for the translation (#17), interdisciplinary declarative knowledge (#18) and possible references to textuality criteria of the ST or TT (#19).

Guideline #15 encompasses the entire documentary phase, of the ST in its communicative situation as well as the projected ST, the projected TT, the TT produced in real time and the looping phase of revision. By studying these documentary factors, teachers can use students' arguments to evaluate their acquired documentary skills: their lexical and terminological knowledge, their approach to and knowledge of the different parallel texts consulted, their mastery of the Internet, their cognitive knowledge, their knowledge of the textual norms of the TT typology, textual style, etc. In this regard, students must develop the habit of listing the sources they consult, so that teachers have a documentary frame of reference for each student so as to understand the reasons behind their decisions.

Guideline #16 deals with the translator's social role and implies, for example, any revision having to do with the commission instructions and the possible dialogue with others taking part in the process. This guideline takes on its chief importance in those translations done by a team, in which each student performs a given social role during the specific translation process. In this connection, the evaluation of social skills depends on how well students handle their roles: client, translator, translation agency, terminology expert, proof-reader, etc.

Guideline #17 allows students to tell teachers about problems with the time allotted for performing the translation. Some students do not

manage to finish their translation in the time given for exams, because they can get stuck for different reasons at a particular point in the process. These hindrances stem from linguistic problems during the ST analysis phase, specific types of problems during the documentation phase, problems during TT production, problems in revision, etc. If we consider that the *time variable* plays an essential role in the translation process, teachers can see the reasons for these problems: lack of previous foreign language skills, problems with one's mother tongue, the emotional and attention-related aspects involved, etc.

Guideline #18 is mainly based on evaluating the student's *declarative knowledge* in interaction with procedural knowledge. Included here is the evaluation of interdisciplinary theoretical knowledge applied to translation praxis (translation studies, cognitive sciences, textology, pragmatics, lexicography, terminology, documentation, etc.). It is important to analyse the coherent grounding of these theoretical aspects, since they have a direct bearing on procedural knowledge.

Lastly, guideline #19 has the main aim of evaluating students' possible successes and failures in relation to the differences and similarities between both texts according to their respective textuality criteria. This guideline gives teachers a general frame of reference of the process and both kinds of knowledge—declarative and procedural—in which students ground their strategies according to each textuality criterion and the variables that they consider to be adequate at the time. Depending on the nature of arguments, teachers can determine if there are theoretical or procedural methodological aspects that need further clarification for learning a specific skill, if the arguments are coherent with the solution provided, if methodological aspects covered previously in translation classes need to be reviewed, etc.

3. A case study

Here we will present a practical example of a commentary made by a student in January 2003, with the aim of analysing the main guidelines she focused her attention on when justifying some of her translation strategies. Due to space constraints, we will just comment on those points where attention was focused, without establishing a detailed evaluation of the process with its corresponding grading.

The choice of this commentary in preference to others was based on the student's specific profile: she has an excellent linguistic competence in both languages (German and Spanish), she attended the translation classes regularly with the resulting gradual assimilation of the methodology, she has learnt the guidelines of the commentary, produced all the translations and their corresponding commentaries established by the teacher during the academic course and has displayed considerable interest and motivation in translation activities.

For both the process and the product to be evaluated, the student was required to present the teacher with the following:

- a) The TT product
- b) The commentary of the translation
- c) A description of the sources consulted: dictionaries, encyclopaedias, parallel texts and websites
- d) An annexe containing photocopies of all the parallel texts, highlighting all the information consulted, so that the teacher would know what steps the student followed in the documentary phase

The ST was an informative scientific text published in the German scientific magazine *Bild der Wissenschaft* in May 2001 and intended for a German non-specialist reader. The main communicative objective established for the TT in the translation commission was to inform a Spanish reader of average culture, not specialised in concrete aspects of the universe, therefore, the TT needed to be adapted to the chosen textual typology, i.e., the scientific information article. The TT will be published in the Spanish scientific magazine *Muy Interesante* in April 2003. For this reason, the TM must comply with the conventions of this magazine. The time given to carry out the translation, from the moment the ST and the commentary guidelines were handed out, was one week. After these seven days, the student should hand in to the teacher the TM, the commentary and the documentary sources consulted.

Below, we will present the ST, TT, bibliography consulted, and finally the commentary. It should be born in mind that the documentary texts have not been included in the present article due to obvious reasons of space. However, the evaluation of the parallel texts, as well as the evaluation of the commentary and the TM is essential, as the quality of the commentary. Translation solutions must be accompanied by documentary sources for the translation commentary to have repercussions on the quality of the translation. Regarding the commentary, we will include, after each justification, the guideline chosen by the student in brackets and bold type, with the aim of describing some questions about her translation process.

ST:

Astrophysik Sternenalter Uran-datiert

Wie alt ist das Universum? Noch schwankt die Unsicherheit des verlässlichsten Werts zwischen 10 und 16 Milliarden Jahren, 13 bis 14 Milliarden ist die wahrscheinlichste Angabe.

Einem internationalen Astronomenteam um Roger Cayrel vom Observatoire de Paris-Meudon ist es nun erstmals gelungen, das Alter eines Sterns anhand seines Gehalts an Uran-238 zu bestimmen. Ergebnis: Den Stern CS31082-001 gibt es seit rund 12,5 Milliarden Jahren – das Universum muß also noch älter sein.

Obwohl Uran-Atome in Sternen nur in Spuren vorkommen, gelang es den Astronomen, den Anteil dieses Elements zu quantifizieren. Die Messungen wurden

mit dem UVES-Spektrographen am 8,2-Meter-Kuyen-Teleskop der Europäischen Südsternwarte in Chile gemacht.

Aus der Halbwertszeit von 4,47 Milliarden Jahren und einer Abschätzung des anfänglichen Uran-Gehalts läßt sich das Alter von CS31082-001 errechnen. Allerdings ist die Unsicherheit der Angabe groß: plus/minus 3 Milliarden Jahre. Sie liegt jedoch weniger an astronomischen Meßfehlern als an der ungenauen Abschätzung der anfänglichen Isotopen-Produktionsrate. Über sie werden kernphysikalische Messungen mehr verraten, die bereits bei CEA (Commissariat à l'Énergie Atomique) im französischen Saclay und an der Universität von Lund in Schweden angelaufen sind.

Auch die Datierung anderer uralter Sterne in den Außenbezirken der Milchstraße wird die Meßgenauigkeit bald verbessern. Einige dieser sogenannten Halo-Sterne haben einen Anteil schwererer Elemente von nur einem Zehntausendstel des Anteils in der Sonne. CS31082-001 wird auch dabei helfen, noch eine andere kosmische Uhr zu kalibrieren. In dem Spektrum des Sterns sind nämlich auch elf Absorptionslinien von Thorium aufgespürt worden. Mit Hilfe der Uran-Uhr läßt sich die Präzision der ungenaueren Thorium-Uhr verbessern.

Bild der Wissenschaft 5/2001

TT:

Astrofísica

Uranio, datación de las estrellas

¿Qué edad tiene el Universo? La incertidumbre sobre el dato más fiable aún es de entre 10.000 y 16.000 millones de años; lo más probable es que tenga una antigüedad de entre los 13.000 y 14.000 millones de años.

Un equipo internacional de astrónomos, liderado por Roger Cayrel, del Observatorio de Paris-Meudon, ha logrado determinar, por primera vez, la edad de una estrella mediante la medición de su contenido en uranio-238. Resultado: la estrella CS 31082-001 data de hace unos 12.500 millones de años; la edad del universo será, por tanto, superior.

A pesar de la escasa presencia de uranio en las estrellas, los astrónomos consiguieron cuantificarla. Las mediciones se realizaron por medio del espectrógrafo UVES, instalado en el potente telescopio Kueyen, de 8,2 m, del Observatorio Europeo Austral (ESO) en Chile.

Con una vida media de 4.470 millones de años y un cálculo de la cantidad inicial de uranio, se puede deducir la edad de la estrella CS 31082-001. Existe, sin embargo, un margen de error de 3.000 millones de años en más o en menos, que se debe, en menor medida, a errores en la medición que a la estimación imprecisa de la producción inicial de isótopos. Las mediciones físico-nucleares iniciadas en el centro de investigaciones nucleares francés CEA, en Saclay, y en la Universidad de Lund, Suecia, revelarán más detalles acerca de este fenómeno.

También la datación de otras estrellas muy antiguas, pobres en metales, localizadas en las regiones periféricas de la Vía Láctea mejorará, en un futuro próximo, la precisión de las mediciones. Algunas de estas llamadas "estrellas del halo" poseen, de hecho, una cantidad de elementos pesados que equivale a sólo una diezmilésima parte de la del Sol. La estrella CS 31082-001 ayudará, además, a calibrar otro reloj cósmico, pues en el espectro de este astro se han detectado once líneas de absorción de torio. Gracias al reloj de uranio, se podrá, por tanto, mejorar la precisión del inexacto reloj de torio.

Documentary sources consulted:

- Corripio, F.: *Gran Diccionario de Sinónimos: Voces afines e incorrecciones*. Barcelona: Editorial Bruguera, 1971
- Deilers, S.: "VLT: CS31082-001 und das Alter des Universums". *Astronews* 8/02/2001 (www.astronews.com/news/artikel/2001/02/0102-011.shtml)
- "El prión se adapta a su nueva especie". *El País* 21/03/2001 (www.elpais.es/suplementos/futuro/20010321/34bio.html)
- Gran Enciclopedia Larousse*. Barcelona: Planeta, 1990. Tomo 20, p.9.694; Tomo 8, p.3.944
- Libro de estilo: El País*. Madrid: Ediciones El País, 1996, pp. 126-130
- "Medirán edad del universo". *Diario El Sur* 9/02/2001 (www.diarioelsur.cl/archivo/2001/febrero2001/9febrero2001/elsur/secciones/...)
- "VLT UVES: observación de la estrella sin metales" (www.telecable.es/personales/azppl/noticias/noviembre02/astrofisica/nat13...)
- "¿Qué son los isótopos?" (www.ugr.es/~gabpca/spr/sprlFAQ.htm)
- Moliner, M.: *Diccionario del Uso del Español*. Madrid: Gredos, 1998. Tomos I y II
- Rivera, A.: "Primera medida directa fuera del sistema solar: feliz cumpleaños, Universo". *El País* 11/02/2001 (<http://ea.gmcsa.net/2001/02-febrero/20010211/cuerpoc/portada.htm>)
- "El Very Large Telescope se convierte en realidad" (<http://sea.am.ub.es/Boletin/b11/HTML/node4.html>)
- "línea de absorción" (www.astroscu.unam.mx/Divulgación...)
- "periodo de semidesintegración" (www.astroscu.unam.mx/Divulgación...)
- Stilwörterbuch der deutschen Sprache: Die Verwendung der Wörter im Satz*. Mannheim: Bibliographisches Institut&Brockhaus AG, 1998, p.63
- Wahrig, G.: *Deutsches Wörterbuch*. München: Bertelsmann Lexikon Verlag, 2000
- Wolschin, G.: "Neuer Maßstab für das Alter des Kosmos: Datierung anhand eines langlebigen Uranisotops", *Neue Zürcher Zeitung* 21/02/2001 (www.rzuser.uni-heidelberg.de/~q61/uatlnzz.html)
- "¿Qué edad tiene el Universo?" (<http://personales.com/colombia/ibague/katherincruz/>)
- "La edad del Universo supera los 12.500 millones de años" (www.terra.es/ciencia/articulo/html/cie4192.htm)
- "El Universo tendría 12.500 millones de años" (www.eafit.edu.co/astrocol/010227.htm)
- "Principales organismos de investigación franceses (CEA, Comisariado de Energía Atómica)" (www.francia.org.mx/cyt/centcienytec/cea.html)
- "Planetas devorados" (www.pagina12.com.ar/2001/suple/futuro/01-05/01-05-26/nota_a.htm)

The student's commentary:

"The present descriptive commentary of the translation process will comment, in a general manner, on the main problems the translator has had to face when making the TT. The solutions given will be commented from the different communicative variables that have been considered most relevant.

Firstly, it should be highlighted that, despite the fact that the ST data is two years old, the current state of science is still the same, therefore the information translated from the ST will be perfectly adequate to publish in April 2003 **[guideline # 6]**. Nevertheless, the editor of the TT could be informed of this question of the ST publication date, in case there has been any recent research on the dating of stars warranting changes and/or modification of the contents of the TM **[guideline # 16]**.

It should also be taken into account that the TM has respected the requirements of the translation commission **[guideline # 1]**: the prescribed format has been respected, i.e., the maximum number of words established for the title has been

complied with. In accordance with the translation commission **[guideline # 1]**, we have written a scientific informative article **[guideline # 4]** that is perfectly appropriate for the scientific magazine *Muy Interesante*. To meet this requirement, several articles were consulted, especially those referring to astronomy, published in the same magazine **[guidelines # 4 and 15]**, as in this manner it was possible to observe what type of information is assumed, in other words, the degree of specialisation within the “non-specialisation” of the target reader **[guideline # 3]**. Only by respecting this criterion will we be able to create a TT that meets the target acceptability criteria **[guidelines # 3 and 19]**. Therefore, we have preferred not to include a paraphrase or any other type of similar resource **[guideline # 10]** regarding the term “isotope” **[guideline # 11]**, as it is considered a basic scientific term that any educated reader of average culture should have studied at school **[guideline # 3]**. Consequently, the target reader should remember this term, even if only vaguely **[guideline # 3]**. It does not really matter if the target reader does not have a perfect knowledge of the term “isotope”, they only need to know that it is an atom that makes up a chemical element **[guidelines # 3 and 15]**. Taking into account the degree of knowledge of the target reader **[guideline # 3]**, we have decided to include in the TT the term “*vida media*”, a more accessible term for a non-specialist than “*periodo de desintegración*” **[guidelines # 3, 11, 12 and 15]**: even if the reader does not understand the term “half-life” **[guideline # 3]**, they will at least be able to get a rough idea about what the text is referring to.

No additional information has been included about the UVES spectrograph **[guidelines # 10 and 11]**, because in the context where it appears **[guideline # 2]** it is perfectly understood that it is a certain type of spectrograph (its location is also revealed) **[guideline # 11]**. To offer more data on the spectrograph would be redundant and superfluous **[guideline # 10]**. It has not been necessary to explain the initials UVES **[guidelines 10 and 11]**, because this knowledge is not indispensable information to understand the text **[guidelines # 7 and 2]**. The case is the same for the Kueyen telescope **[guidelines # 7 and 2]**: in the context where it appears, it can be deduced **[guideline # 2]** that it is a specific kind of telescope, located in the European Southern Observatory (ESO) **[guideline # 10]**. As can be seen **[guideline # 15]**, the Kueyen telescope has a different spelling in the source language and in the target language **[guideline # 13]**. With the aim of finding the correct spelling of the initials **[guideline # 13]**, the “Libro de Estilo de El País” (El País newspaper Style Book) has been consulted (See documentation enclosed) **[guideline # 15]**.

It will also be necessary to comment the solutions given in the TT for foreign organisations and centres included in the ST **[guideline # 11]**. To do this, different articles in the *Muy Interesante* magazine were consulted, with an aim to find out how the names of foreign organisations are presented in this magazine **[guidelines # 4 and 15]**. Result: the terms do not generally appear in their original form, but translated into Spanish **[guideline # 4]**, a criterion that has been taken into account in the TT. Thus, the “*Observatoire Paris-Meudon*” has been rendered in the TT as “*Observatorio de Paris-Meudon*” **[guideline # 11]**, as this denomination appears in reliable sources consulted **[guidelines # 4 and 15]**. Regarding the observatory “*Europäische Südsternwarte*” **[guideline # 11]**, it can be mentioned that in several documents **[guidelines # 15 and 4]**, it appeared as “*Observatorio Europeo Austral*”, which was the option chosen for the TT.

The most difficult term to translate was “*Commissariat à l’Energie Atomique*” **[guideline # 11]**. The different solutions found in different sources (See the enclosed documentation) **[guideline # 15]** were the following: “*Comisariado francés de la Energía Atómica*” (denomination found in the newspapers *El País* and *El Mundo*), “*Comisión de Energía Atómica*”, “*Centro de Energía Atómica*”, “*Comisaría para la Energía Atómica*”. However, it must be said that the term “*comisariado*” does not appear in the *Diccionario de la Real Academia*, or in the *Diccionario de Uso del Español* (María Moliner), so this option was rejected **[guideline # 12]**. Finally, to avoid the use of an erroneous solution, we decided

on the simple explanation of the organisation **[guideline # 10]**, as in the present text, the exact denomination of the organisation in question is not really necessary **[guideline # 2]**. Therefore, we tried to give the target reader **[guideline # 3]** the necessary information **[guideline # 10]** on the *activity* of the French organisation, because this is the important element for this text **[guidelines # 11 and 2]** (See the documentation consulted) **[guideline # 15]**, using the expression "*centro de investigaciones nucleares*" (Nuclear Research Centre) **[guideline # 10]**, also accompanied by the nationality and standard CEA initials **[guidelines # 11 and 12]**.

Finally, it must be mentioned that some connectors have been included in the TT between the different paragraphs, **[guidelines # 2 and 13]** to show the relationship between the different ideas **[guideline # 2]**, improve comprehension for the "non specialist" **[guidelines # 10 and 3]** and achieve a coherent and fluid text **[guideline # 2 and 12]**. This criterion has been especially used for the translation of the last paragraph, as in this section of the ST **[guideline # 10]**, the ideas are not explicitly related, which would make the following of the logic of the text in the TT more difficult **[guideline # 2]**. Thanks to the documentation consulted **[guideline # 15]**, we managed to understand the principles of that reasoning, therefore it was explained in the TT **[guideline # 13]**."

As can be seen, the introduction of the commentary indicates the main objective of the commentary, i.e., the *succinct and general description* of the most relevant problems that arose during the translation, especially during the production phase of the TT.

The first guideline taken into consideration (# 6) displays the student's reflection on possible similarities or differences in the information of both texts regarding the time and place of publication of the TT (April 2003). Her documentary consultations on the subject have shown that the information contained in the ST article is still up to date. In fact, many of these parallel texts consulted have more or less the same dates of publication as that of the ST (Year 2003). These explicit observations carried out by the student show her critical spirit in the adequate selection of documentary material in accordance with guideline # 6, which in turn shows her prospective vision of the target communicative situation as a determining factor of the possible convergences and divergences in the information supplied by both texts. Regarding this issue, guideline # 16 has also been taken into consideration, which shows the student's awareness of the role and social dialogue of the translator with the other actors in the process for an optimum attainment of intercultural communication.

The translation is conditioned by the commission instructions (guideline # 1), an aspect that the student has considered relevant for the planning of the TT. Her reasoning, and the product of the translation, show that she followed the instructions perfectly: Neither the title nor the subtitle exceed the maximum number of words permitted.

This emphasis on the translation commission also displays an insight into the student's declarative knowledge on the functional theory of translation

(cf. Reiss & Vermeer, 1984), even if this has not been explicitly given in her reasoning (guideline # 18).

Closely connected to guideline # 1, the student has taken into consideration the type of text required in the TT (guideline # 4): An informative scientific article that will be published in the Spanish magazine *Muy Interesante*. Her assumptions of knowledge about this type of text is the result of prior academic learning of the textual conventions. It is noted that the student consulted some parallel texts (guideline # 15) focusing on three communicative aspects: a) idiosyncrasy and assumptions of knowledge of the target reader on the subject, b) exotisation or domestication of the scientific organisations or institutions in accordance with the conventions of the magazine and c) the language register of a Spanish informative scientific article. The documentation provided shows that the student consulted not only some parallel texts, but also some encyclopaedic texts probably to broaden her knowledge about the dating of stars. An interesting point in this commentary is that she checked in the documentary sources the type of information on the subject that is supposed that the lay target reader will know, in contrast to the greater degree of assumption of knowledge of the target reader. It can be seen that this reasoning has taken into account the criterion of target acceptability (guidelines # 3 and 19).

Based on guidelines # 3, 15 and 19, the student proceeds to describe a concrete micro-strategy: the term "*isótopo*", a lexical problem that the student has considered necessary to reason (guideline # 11). The student has not added any source of clarification in her TT, such as a paraphrase, because it is supposed that the target reader would understand the concept of "isotope", even if only vaguely. This reasoning leads us to the evaluation of two aspects: on the one hand, the declarative knowledge previously learnt in the university lectures on the different functional relationships between utterances, such as for example paraphrase (guideline # 10); and on the other, the references to the target reader (guideline # 3) and his/her supposed knowledge of the subject as determining elements to establish the correct translation solution. In addition to these two factors, consultations about the word "*isótopo*" in the documentary sources indicate that the student has reflected to a certain extent about guideline # 15, interacting with # 3 and # 10. In fact, the student did not consider necessary to include the definition of the term "*isótopo*" as a paraphrase in the TT, as this would adversely affect the degree of explicitness and implicitness of the information in the TT (guideline # 10). In fact, this fragment only intends to awaken the reader's attention (and not to inform) about the real problem of dating stars: The lack of data on the initial production of isotopes. The post-text clarifies the importance of this information, remarking on the scientific expectations of the future regarding this research. Also taking into account the criteria of target acceptability (guideline #19), in the student's reasoning, it is unnecessary to clarify the term. A target reader,

who does not know this word and needs to understand it, can look it up in a dictionary or encyclopaedia.

The observations in the commentary on the word "*Halbwertszeit*" show certain terminological reflections made by the student, especially with reference to language register and assumed knowledge of the target reader about the thematic content of the TT (guidelines # 12 and 3). According to the student, "*periodo de desintegración*" (disintegration period), according to the documentation consulted, is a more understandable term for the specialist than for a layperson. If we consult the sources used by the student, it should be taken into account that the solution given, "*vida media*" (half-life), is a part of the definition established by these sources to explain the term "*Halbwertszeit*". The student has managed to link the micro-strategy to certain macro-strategic aspects.

The macro-strategy, as high-level processing, has also been applied to the student's reasoning regarding the translation of the UVES spectrograph (guideline # 11), when she indicates that it is the context (guideline # 2) that conditions the possible translation solution. This concept does not need clarification (guideline # 10), because it is understood by the pretext that it is a tool or device for astronomic observation. The post-text ("installed in the powerful Kueyen telescope...") also indicates the location of the object (In a telescope). The student has managed to act macro-strategically, indicating that "to provide more details about this spectrograph would be redundant and superfluous". This last affirmation also shows a reasoning based on the principle of economy and relevance (guideline # 10).

The following micro-strategy is based on reasoning about the initials UVES as a lexical category (guideline # 11) and reasoning about the possible inclusion of an explanatory functional relation (guideline # 10). It can be seen that she again applies the macro-strategy (guideline # 2) when it is indicated that these initials have no informative load indispensable for understanding the text, and therefore need no explanation. The student's mental processes are guided by the required informative intention (guideline # 7) in the commission as a determining element in the production of the macro-structure.

Regarding the concept of "Kueyen telescope", we have the same case of macro-strategic and intentional application (guideline # 2 and 7), to which we can add the desire to localise linked to the need for conceptual understanding (In the European Southern Observatory, ESO, in Chile). The student has also reflected on the differences of spelling of proper names and acronyms in different languages (guideline # 13) with the corresponding consultation in the documentary sources of the target culture (guideline # 15).

The following reasoning is related to the translation of the scientific institutions and organisations (guideline # 11). Regarding this topic, many students just reflect on the ST in a retrospective manner, with the following approach: "shall I foreignise or domesticate the scientific organisation in the TT?" or "Shall I foreignise and domesticate the institution at the same time, by including a paraphrase in brackets?" However, this student does not question the micro-strategy as a linear processing between both texts, but also takes into account the conventions of the target scientific magazine to analyse how the names of these foreign organisations are presented (guidelines # 4 and 15). The domestications of "*Observatorio de Paris-Meudon*" and "*Observatorio Europeo Austral*" (guideline # 11) are related, in accordance with the parallel texts, to the type of target text (guidelines # 15 and 4). With regard to this last organisation, the inclusion of the initials ESO in the student's TT must also be taken into account. These initials conventionally accompany the organisation in many of the parallel texts consulted (guideline # 15), and were therefore used in the TT.

The translation of "*Commissariat à l'Énergie Atomique*" is another conceptual problem (guideline # 11) that the student has managed to solve adequately. After consulting different sources about the term (guideline # 15), and in view of the wide range of possibilities that always refer to the domestication of the institution, the student asks which of them could be the most appropriate in the target culture. Although not explained in the commentary, perhaps she is indirectly basing the reasoning on the framework of textual style (guideline # 12), and specifically on the framework of the standard/non standard dialect variable (cf. Hatim and Mason, 1990:43), if we take into account that, according to the Spanish-speaking country studied, there are different conventions for the scientific organisation. As the documentary texts do not supply a clear solution, the student then considers the textual function of the concept, due to the fact that "what is of principle importance is the activity of the organisation", and therefore she again applies a macro-strategy (guideline # 2). The solution in the TT is the expression "*centro de investigaciones nucleares*", which is also a paraphrase (guideline # 10) that originates in the information provided by the parallel texts about the institution (guideline # 15). She also included in her TT, as a part of this paraphrase, the origin, "France", an aspect that the student has managed to reason correctly and which she has marked in the TT using the adjective "French" (guideline # 10). The initials CEA (guideline # 11) appear in all the documentary sources as a standard dialect and for this reason they have also been included in the TT as a part of the micro-strategy (guideline # 12).

The last point in the commentary focuses on clarifying some questions related to cohesion in the TT (guideline # 13) during its production, and probably during the revision of the TT. The cohesion of the target text is analysed in accordance with the macro-strategy (guideline # 2) and the

analysis of the macro-structure, aspects that the student takes into account when indicating that these connectors improve comprehension of information in the TT for the target reader (guidelines # 10 and 3) with the creation of a coherent and fluid text. This last point probably refers indirectly to questions related to the textual style (guideline # 12) and the approach of some collocations. In fact, one can find in the TT some collocations that are different from those in the ST (e.g., compare the first fragment of the TT and the corresponding section of the ST).

Other justifications of some cohesive aspects are related to the last fragment of the TT. The ST presents the ideas (guideline # 10) without using explicit connectors, something that has been explained by the student in her TT ("*de hecho*"; "*además*"; "*pues*", "*por tanto*"). The parallel texts (guideline # 15) provide help for establishing the logic of these ideas (guideline # 13), as indicated by the student.

As can be seen, there are some conceptual questions regarding the process that have not been justified in the commentary, probably because they are not considered to be of central importance for translation problems, or because the documentary sources enclosed provide the desired solution to these micro-strategies. The documentary texts do give some information and terminological conventions regarding "*reloj cósmico*", "*los astrónomos de ESO buscaron las estrellas más pobres en elementos pesados*", "*las estrellas tempranas, y por tanto más viejas, difieren principalmente de las estrellas jóvenes en su escaso contenido de metales o elementos pesados*", "*torio*", "*diezmilésima parte*", "*Vía Láctea*", "*estrellas del halo*", "*reloj de uranio*" and "*líneas de absorción*". The teacher, when analysing the documentation provided by the student, can observe in the resulting TT how these micro-strategies have been resolved with relation to the textual macro-structure.

The case study analysed above is just one example of more than 400 student commentaries (collected during seven consecutive years of teaching) to justify the strategies of their translations, specifically in the modalities of general translation and scientific and technical translation. Our aim in the present article is limited to the presentation of a case study where the coherence and organised structure of the student's reasoning could be observed in relation to the commentary guidelines. Our aim has not been to award the translation commentary with a mark, as it will also be necessary to take into account the evaluation of the product and the documentary sources, an aspect that goes beyond the scope of this article.

4. Possible Applications of Commentary in Process Evaluation

Translation commentary is particularly effective in evaluating translation exams since in these types of situations the use of *think-aloud protocols* is not practical. Depending on other factors such as whether it is an in-

class/out-of-class translation or group/individual assignment, translation commentary represents another evaluative alternative, whose data can round out those provided by *think-aloud protocols*. In short, none of the predominant inductive models should be discarded; rather, they should be used in conjunction with one another to determine students' strengths and weaknesses, thereby improving translation teaching.

Overall, the results of commentaries show that students provide more expert knowledge in the grounding of their strategies when doing an individual/group translation assignment than a translation exam. This is obviously due to the fact that they have more time to think about what they are doing and feel more at ease in the former situation than the latter, due to the emotional factors involved, which are decisive in effectively evaluating students' translations.

This fact also demonstrates that students should not only be evaluated on the basis of a final translation exam, given the emotional and attention-related factors; rather, this should be expanded to include the evaluation of earlier processes in the form of class participation, their evaluation of other translations and the commentaries written during the entire course, the use and rationalisation of documentary sources, their declarative and procedural knowledge, etc. In fact, the commentary written for a final exam greatly differs from those written by the student for individual assignments during the course: the commentary written without time constraints for individual translations contain a greater number of strategies and therefore more well-grounded thought processes than those done for a translation exam.

Commentary in oral form represents a complementary alternative to think-aloud protocols: the guidelines constitute a good starting methodology for guiding and analysing students' verbal arguments in these protocols. With these general premises of the translation process at their disposal, students ground their strategies in more expert fashion, keeping in mind the higher-level processes for channelling micro-strategies.

The application of the written commentary methodology has always taken into account students' backgrounds and their previous translation skills. In fact, commentary has been used to evaluate the process of beginners, students in advanced courses and students who either work or have worked as professional translators; obviously, the way in which guidelines are presented and explained are modified to suit students' particular level of expertise. In this regard, guidelines can also be attuned from the extremely general to the extremely specific. This means that if teachers need to focus on one of the phases of the process, or for example on terminological aspects, the commentary can include a series of specific guidelines designed to cover these didactic issues. Likewise, if our aim is to analyse students' declarative knowledge, guideline #18 can be explained much more exhaustively, as can the rest of the guidelines.

Lastly, let us point out the importance of including commentary as an evaluative model of the translation process in translation exams and other assignments and, therefore, in the design of university class syllabuses.

As has been mentioned previously, *the evaluation of the process complements the evaluation of the product*. If we want to establish a model in the future for the effective evaluation and grading of the product—something which is still not feasible at present—we need to start by planning optimal evaluative models that enable us to clarify, to a certain extent, the underlying basis of students' mental processes.

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