

Translation Research Projects 5



Edited by

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Intercultural Studies Group
Universitat Rovira i Virgili

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Tarragona, 2014

Title: Translation Research Projects 5

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Publisher: Intercultural Studies Group. URV. Av. Catalunya 35. 43002 Tarragona, Spain.
<http://isg.urv.es/>

Printer: Gràfiques del Matarranya

ISBN – 10: 84-695-9692-6

ISBN – 13: 978-84-695-9692-0

Texts available at: http://isg.urv.es/publicity/isg/publications/trp_5_2014/index.htm

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Front cover: Castell performed by the Colla Jove Xiquets de Tarragona photo by Neus Baena

Printed in Spain



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Presentation

This volume reproduces selected presentations from the graduate conference “New Research in Translation and Interpreting Studies” held in Tarragona in July 2013

The papers range from training issues to sociolinguistics, with a strong emphasis on technology-related research. Each paper presents preliminary findings of on-going research projects, in no case with definitive conclusion, in all cases with indications of paths to be followed in the future.

Like the human towers in the front cover, we expect that each bit of research will help build a stronger whole.

Editorial Team
Tarragona, October 2014

Acknowledgements

The editors would like to extend their sincere thanks to Dean Shreeve for the linguistic revisions of the papers.

Translation in university foreign-language curricula as transferable generic learning. Challenges for pedagogy and research

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Since the 1990s, the study of translation at university level has expanded exponentially, both in terms of translator-training programs and as a component of foreign-language curricula. This paper concentrates on the latter. Moving from an analysis of tensions between narrowly philological approaches on the one hand and narrow vocationalism on the other, it proposes a translation pedagogy assumed to mitigate such tensions. At its core is an understanding of translation as transferable generic learning, i.e. as an activity that provides access to a range of widely applicable skills and attributes. After a brief contextualization of these learning outcomes, the suggested approach is discussed in terms of the challenges it poses to both implementation and empirical study. Finally, an agenda for future research is put forward.

Keywords: foreign-language learning, translation pedagogy, transferable generic skills, vocationality, skills transferability

Introduction

As is often the case with complex domains, translation has been frequently described in terms of something other than itself, mostly by means of metaphorical images (St. André 2010). The image of translation discussed here is that of a “transferable and generic type of learning”. Why yet another translation construct? The answer is that this particular construct may constitute a possible route via which some tensions in translation pedagogy in university foreign-language curricula can be addressed and possibly reconciled.

In academic language education, translation has long featured as a language-teaching and language-testing tool in many countries. Under the influence of different paradigm shifts in Foreign Language Teaching and Learning (FLT/L), it has known alternate fortunes ranging from absolute

primacy (with the Grammar Translation Method) to utter rejection (with the advent of monolingual and communicative approaches in the 1970s), to a gradual reappraisal since the 1980s. Overall, it has never really disappeared from the academic context and, at the same time, it has never been espoused wholeheartedly either. In recent years, translation has gained a more central position in current thinking on FLT/L. Especially since the turn of the century, an unprecedented body of scholarly work has cast new light on the benefits translation can bring to the enhancement of linguistic, metalinguistic, communicative and intercultural skills, along the continuum from lower to advanced levels (Witte et al. 2009, Cook 2010). Underpinning this resurgence of interest has been its reconceptualization in terms of: 1) a natural mechanism of L2 learning, to be exploited consciously and profitably (Hentschel 2009); 2) a language ability in its own right (Balboni 2008); and 3) an authentic communicative activity, increasingly useful in today's multicultural societies (Common European Framework of Reference for Languages, Council of Europe 2001).

As a result of this reappraisal and the increasing demand for language mediation, translation teaching in university foreign-language education has grown exponentially. Yet, despite the significant theoretical and methodological advances in the field, actual practice bears witness to what seems to be widespread disorientation and arbitrariness. This is the case, for instance, in the Italian academic context, where some scholars have highlighted a tendency to rely heavily on language-focused activities, even when translation is conceived of as a skill in its own right, with problems and strategies being tackled randomly as they arise, without targeted didactics (Di Sabato 2007, Mazzotta 2007). At the opposite pole, the growing demand for professionally relevant higher education has resulted in much pedagogical translation metamorphosing into downright vocational training, with the most common offerings being introductory workshops to professional translation (Lombardi and Peverati 2008) and projects organized around authentic commissions (Peverati 2009), where focus is placed on various aspects of the profession, from project management, to computer-aided translation tools, to job-hunting skills.

These initiatives can enrich classroom activities in many ways. Yet they are likely to conceal a number of weaknesses that may undermine their appropriateness and utility. In a nutshell, due to real-life quality requirements, they often turn out to be over-challenging with respect to both language and translation skills, thus negatively impacting on the overall learning experience and its output. Also, they tend to offer very dense syllabi, to the detriment of proper input assimilation. Moreover, these syllabi risk being offered in a curricular void, with no other course supporting them, unlike what happens in translation and interpreting institutions. Finally, these initiatives tend to fuel unrealistic expectations. Despite the fact that they are often presented as offering “*minimal* basic competencies useful to operate in the translation

market” (Brusasco et al. 2011: unpaginated, emphasis and translation mine), students might believe that what they are receiving is a sufficient toolkit to enter the translation profession. And although it is stressed that students must be encouraged to get further training if they wish to work as translators, such steps are not always easy to monitor.

In short, the issue with translation in foreign-language curricula can be described in terms of a polarization between narrowly philological and academic approaches on the one hand, and narrowly vocational impulses on the other. In my doctoral research, I have focused on the analysis of this dichotomy, trying to identify ways around the attendant tensions. In this paper I will focus on the vocational end of the polarization, presenting an alternative view of a professionally relevant translation pedagogy: profession-based translation training rests on the idea of translation as a preeminently professional skill, what translators do for a living in the language services industry. This is, however, a narrow and partial understanding, which leads to teaching approaches whose import for foreign-language students might be somewhat limited. A possible alternative may rest on the idea of translation as a transferable and generic type of learning. Central to this idea is an understanding of translation as a language activity that, among other things, gives access to a range of skills whose currency is wide in a variety of professional settings beyond specific language industry job niches. These skills are here referred to as “transferable generic skills” (Peverati 2013).

Translation in foreign-language curricula as transferable generic learning

Defining transferable generic skills (henceforth TGS) is not straightforward, due to the conceptual and terminological ambiguity still surrounding these learning outcomes. In recent literature on the subject, some consensus exists on at least three features. These skills are believed to be: 1) a varied set of abilities and dispositions, inherent in all education at a certain level and not exclusive to any discipline (Villa Sánchez et al. 2008); 2) relevant in multiple life spheres, like employment, social participation, lifelong learning (OECD 2005); and 3) applicable to many situations and contexts (European Commission 2004). Since their rise to prominence in higher education worldwide in the 1990s, several inventories of these skills have been devised, both at the level of single academic institutions and of international organizations like the EU and the Organisation for Economic Co-operation and Development (OECD). Typical examples cluster around key human activities such as communication, working with others, gathering and processing information, critical thinking, and problem-solving. They also include personal attributes like creativity and intellectual rigor, as well as

values like ethical understanding and tolerance of others' opinions (Hager 2006).

The idea of translation as transferable generic learning draws on an interesting intuition by Kelly (2005, 2007), who has identified one-to-one correspondences between the skill categories in her model of translation competence and the generic competences drawn up as the aim of all undergraduate and postgraduate courses within the European project "Tuning Educational Structures in Europe" (González and Wagenaar 2003). In Kelly's view, the uniquely wide access that translation offers to generic competence areas while developing subject-specific knowledge and skills makes this discipline a broadly applicable type of learning, and this is something that can serve translation and interpreting graduates well in terms of enhanced employability. It is my contention that Kelly's claim applies even better to graduates of foreign-language programs, who are not primarily trained to become professional translators and consequently might benefit more from the widely applicable learning that derives from translation education rather than from the restricted know-how developed in vocational translator training. Further, typical generic skills like those mentioned above are highly valued by employers as indicators of mature and adaptable individuals. As such, they may prove more useful in gaining and retaining jobs, or moving between them, than those acquired in strictly vocational translation modules. Finally, since these skills are believed to enable individuals to participate effectively in and across multiple fields beyond those related to employment (e.g. education, lifelong learning, social participation, private life), they may be considered learning objectives whose significance involves a person's holistic development. A translation pedagogy that explicitly integrates such skills may help mitigate the tension between academic and vocational impulses in foreign-language education, promoting an approach that caters for both the cultivation of the individual pursued by classical humanism and the professionalizing agenda underpinning much current higher education (Kearns 2008).

Based on this assumption, I have become interested in a mode of translation pedagogy in foreign-language curricula that integrates TGS and fosters learning transfer, and for the purposes of my doctoral studies I have been working on possible ways of empirically investigating it. Some aspects of this teaching approach, however, have presented a number of challenges for both implementation and empirical study, which point to areas where there is more to investigate. In what follows, I discuss the main challenges encountered, along with implications for future research.

Some stumbling blocks along the way

When planning my research project, I initially relied on Kelly's (2005: 34) claim that translation offers access to TGS in a way that "is difficult to find in other academic fields". I therefore considered analyzing the role played by communicative translation activities in the development of these skills in language students. I thought of the classic experiment design where a group of students take part in translation activities, a control group does not, a pre-post test on a selection of TGS is administered, and the two groups' performances are compared. But this research design soon posed some difficulties. First of all, it is known from the literature that TGS are inherent in all academic study regardless of the discipline. So it would be difficult to establish a causal link between translation-related learning and enhanced performance in TGS, because students could develop these skills in other courses or even outside formal education. It is true that this external variable does not really represent a threat to the internal validity of the study as long as it is the same for both groups. Nevertheless, other more fundamental factors impinge on this type of experiment.

One of these factors is certainly the selection of the TGS to be tested. As my co-supervisor rightly observed, "we don't really know which transferable skills and attitudes will be enhanced by translation education more than by any other language activity or discipline, and it would be risky to suppose that we did" (Pym, personal communication, September 2012). Equally problematic is the fact that we do not know what the TGS involved in translation activities in foreign-language education look like at all. As mentioned above, my assumption of translation as transferable and generic learning rests on Kelly's identification of substantial convergence between her model of translation competence and the generic competences devised within the Tuning Project. It must be pointed out, however, that Kelly's claim concerns the skill-set the author identifies as being the desirable outcome of a typical *translator-training* program. It may well be the case that the generic competences trained and developed through translation education as part of a broader foreign-language program are of a different nature, despite the commonalities between the two fields.

More problems with experiment design emerged in connection with TGS assessment, as any experiment aimed to test the actual development of TGS as a result of a certain pedagogical intervention needs to rely on clearly defined measurement criteria, an area that is still largely under scrutiny at present. While some skills may lend themselves relatively well to being measured (e.g. information retrieval), others much less so, because they are non-determinate and volatile, in the sense that it is difficult to specify fully what it means to be skillful in, say, working autonomously (Knight and Page 2007). Further, as Hager (2006: 34) points out, TGS are widely believed to be discrete entities

that can be recognized singly but, while it is sometimes useful in developing our understanding of these skills to consider them individually, in practice they tend to “overlap and interweave like the threads in a carpet”. Hager gives the example of teamwork, which almost always features in TGS lists as a single item, whereas in practice it is the interplay of negotiation, communication, self-critical abilities, problem-solving, etc. This intrinsic holism of TGS is likely to make assessment a challenging task, as it may be hard to isolate single skill components from the holistic bundle in which they tend to occur. Hager (2006: 29-30) also specifies that most TGS are often difficult to articulate in language, both by the performer and the person assessing the performance, as they amount to “non-transparent or tacit types of learning”. This means that traditional assessment procedures, based for example on descriptors and levels of performance, may be inappropriate.

Another obstacle that I encountered concerns the fact that TGS acquisition should be thought of in terms of an ongoing developmental process, rather than as a “quick, one-off learning event” (Hager 2006: 24). This means that—provided we devise a valid measuring tool—it may be hard to detect any significant development over the short timeframe that is generally allotted to university courses or controlled experiments, unless one opts for a longitudinal study, but this was not among the options at my disposal.

In light of these difficulties, I turned my attention elsewhere. I went back to Kelly’s claim that the skills practiced in translation are no doubt specific to the act of translating but—at the same time—can be subsumed under different categories of generic competences. She interprets this feature in terms of the “wide applicability of translation skills to other fields, that is their transferability” (2007: 34). In other words, we can assume that, say, the information retrieval and processing skills that are deployed in translation are not exclusive to this domain and can be transferred to other domains as well, academic, professional and social. I found this assumption fascinating and also central to the wider debate on the role of translation in foreign-language education. So I started thinking about possible ways of testing the transfer of translation-related TGS to other contexts. This opened up the Pandora’s box of learning transfer, an extremely vast issue in Educational Psychology that is just as complex and contested as it is considered central to the whole enterprise of education.

The claim that generic skills are transferable has stirred much debate on the grounds that these skills, although by definition at work across the broad range of university studies, necessarily configure to disciplinary contents and contexts of application, and can therefore be somewhat different in different contexts. On this account, several detractors (e.g. Hyland and Johnson 1998, Bolton and Hyland 2003) have deemed it fallacious to suggest that these skills can be *at the same time* applicable across knowledge domains or social settings. To further substantiate their criticism, they have insisted on the long-

standing record of failures characterizing transfer research. Among the few who have challenged these criticisms, Hinchliffe (2002: 200-201) points out that the problem lies in the type of transfer aimed at. What detractors may have in mind when stressing the unlikelihood of transfer for TGS is what he terms “direct transfer”, i.e. the literal application of the same techniques and knowledge units across domains, as is the case with word-processing or arithmetic skills. In his view, this kind of transfer is implausible in the more opaque field of generic skills and attributes, as these can hardly be reduced to sets of fixed procedures or rules to be mechanically lifted from one context and replicated intact in a different one. The only possibility for transfer he sees is through “situational awareness” (2006: 96-97), which enables one to understand the precise nature of the situation at hand and adapt one’s acquired knowledge and skills to its specificities.

Hinchliffe’s argument captures the spirit of much recent transfer research, which has moved past rigidly conceived notions of transfer as static “replication” of knowledge and skills across contexts (Hager and Hodkinson 2009) to embrace more dynamic views and investigate the mechanisms whereby people rely on and generalize from prior learning when faced with new situations. One point of agreement across these studies has been to reframe transfer in terms of a generative transformation and adaptation of existing knowledge, which in turn produces new knowledge or contributes to performance in other situations (Hatano and Greeno 1999, Bransford and Schwartz 1999, Carraher and Schliemann 2002).

These views offer some margin for reconsidering the assumption of generic skills transferability in less skeptical terms. Yet they do not make the pedagogical or research task any easier. As pointed out by Brent (2011), detecting evidence of generic skills that have been transformed or used as a platform for further learning constitutes a considerable challenge. Also, understanding how higher-order generalization works and what knowledge has the most potential to transform and aid learning in the widest range of contexts is no easy task either.

In light of the issues discussed so far, the following section provides an outline of the research agenda that is deemed necessary in order to bring forward the research project undertaken, still largely work in progress, as well as to pave the way for the implementation of the teaching approach theorized at the outset of the study.

Implications for future research

In order to support the implementation of a TGS-oriented translation pedagogy in foreign-language curricula as well as its empirical investigation it is essential to achieve as deep an understanding as possible of the TGS that can be realistically assumed to emerge from translation activities in tertiary

foreign-language education, thus obtaining a clearly articulated profile to be used for curriculum and syllabus design. The majority of existing TGS inventories contain a varying number of abilities and attributes that are described, if at all, at a high level of abstraction, with vague umbrella terms such as decision-making or communication. Further, as pointed out by Chanock (2003), they appear to ignore the peculiarities of each field of study, adopting a one-size-fits-all approach. As such, they hardly ever amount to useful operational reference tools for pedagogy or research. In recent years, the awareness of these weaknesses, coupled with a growing consensus that TGS are significantly shaped by disciplinary knowledge (Hager 2006, Jones 2009), has prompted scholars to direct their research efforts towards the definition of TGS repertoires that are specific and meaningful to single academic subjects (e.g. Male 2010 for Engineering, Jackson and Chapman 2012 for Business Studies). To my knowledge, no such efforts have been made in any systematic way in the field of Translation Studies or by advocates of translation in FLT/L.

Another area where more research is needed concerns teaching methodology. This is not necessarily to be intended as the development of ready-to-use syllabi but rather as an anthology of guiding principles and activity frameworks that can orient a translation pedagogy explicitly incorporating the identified TGS, in ways that will inevitably be interpreted according to context-specific features. Work on this aspect can avail of the contributions on teaching and learning processes supporting TGS development in general (Kember 2009). Equally significant is a thorough reflection on the complex issue of assessment. The belief is widely held (Hughes and Barrie 2010) that explicit assessment is one of the key determinants of the implementation and effectiveness of any TGS-oriented pedagogy, as it promotes full commitment to these learning outcomes from all the stakeholders involved, as opposed to purely declarative compliance. Considering the complex nature of the learning outcomes discussed here, their assessment is unlikely to be amenable to conventional procedures. This implies the need to acquire new knowledge in the field and to explore appropriate methodologies. Some work has been carried out on the subject (e.g. Knight and Page 2007, Villa Sánchez and Poblete Ruiz 2011), which can orient future research efforts on translation-related TGS.

One final area where further investigation—as well as experimentation—is needed is transfer of learning. In recent years, this field has witnessed an unprecedented resurgence of interest and research, with increasing attention being directed to the mechanisms and contextual conditions fostering transfer (Engle 2012, Goldstone and Day 2012). A possible way forward towards the investigation of generic skills transferability would thus be to devise a possible pedagogical agenda that calls attention to what is already known from the ample literature on transferability-friendly teaching and try to experiment with it.

Conclusion

The idea of a translation pedagogy in foreign-language curricula that valorizes widely applicable skills instead of narrowly vocational know-how is certainly intriguing but fraught with intellectual challenges, mainly linked to the still limited knowledge of some key issues, which call for substantial further research. This article counts as an interim report on a project that is still largely work in progress, focused on a developing area that still needs to move forward. Out of intellectual honesty, it must be pointed out that, at present, little progress has been made in the pursuance of the steps suggested above, mainly because the issues in need of further investigation appear a rather daunting prospect if tackled by a single person. These are probably best addressed by a team of researchers, comprised of different stakeholders such as experts in translation in FLT/L, Translation Studies scholars, language teachers, as well as learning specialists, curriculum developers, and materials writers.

The present time appears to be particularly favorable for this kind of research synergies. Among the factors that seem to augur well are surely the current flowering of attention to learning transfer as well as the general climate for a revival of translation in foreign-language education, a climate in which the transferable dimension of translation skills in terms of TGS might arouse the intellectual curiosity of other scholars and researchers. Another factor that bodes well is the very recent interest in TGS shown by FLT/L publishers (e.g. Macmillan) and organizations (e.g. IATEFL), which are increasingly reaching out to the teaching community and supporting it with concrete resources for both instructional activities and professional development. The emphasis is invariably on the idea that foreign-language learners should be placed in a position to develop more than L2 knowledge and skills in a narrow sense; they should also be involved in a learning process that, through language, fosters the development of abilities transferable across their current and future academic, professional and social lives.

The heightened emphasis on these pedagogical goals in FLT/L and the work that is being carried out towards their attainment may provide a fruitful environment for similarly oriented research in the neighboring field of translation education.

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Teaching technology in translator-training programs in Turkey

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This paper investigates the ways technology is taught in undergraduate translator-training programs in Turkey, from the perspective of various stakeholders. The main aim is to find out whether there is a gap between what is offered in training programs and what is expected on the market with regard to technological skills of graduates. In the survey of graduates, half of the respondents said technology was dealt with rarely or not at all during their undergraduate studies, whereas about 65% found technology either extremely important or fairly important for their profession. The curricula of most undergraduate translation programs presently include a technology component. Current debates concentrate on how and to what extent these skills should be taught in training programs. This paper first discusses the graduates' viewpoints on technology in translation, and then provides other stakeholders' arguments on teaching and using technology in translation. The curricula of translation programs and course descriptions are also surveyed to see how translation technology is incorporated into training programs.

Keywords: translation technology, translator training, translation curriculum

Introduction

Translation technology has become one of the most popular topics in translation research as its importance in translation practice increases. Technologies have been a common research topic in Translation Studies with reference to their use in translation processes (e.g. Quah 2006, Yamada 2011), their relationship with the human factor (e.g. Olohan 2011, Teixeira 2013), their effect on Translation Studies (e.g. O'Hagan 2013) and their integration into translator training (e.g. Alcina 2008, Alcina, Soler and Granell 2007, Doherty and Moorkens 2013). Because technology has already become a significant part of translation practice, today almost all models of translation

competence involve technology as a competence in its own right (see for example Kelly 2005, PACTE 2005, 2008, Tan 2008, EMT 2009, Rico 2010). Arguing that technology is a necessity rather than an option in translation practice, Biau Gil and Pym (2006: 6) specify three main effects of technology on translation: effect on communication (with clients and colleagues), on memory (amount and speed of information storage) and on text production (word processing). In the translator-training literature, there are differing views on how and to what extent technological skills should be taught in training programs. For instance, Mossop (2003: 21) argues that students need basic skills to use Windows, Internet, e-mail and Word, and that they can learn the rest later. On the other hand, some translator profiles require students to graduate with advanced computer and technology skills, ranging from advanced word-processing skills to the ability to use translation memories and terminology management tools (see for example Mackenzie 2004, Aula.int 2005, OPTIMALE 2012). Pym (2013) suggests that the technology is not a separate component of translation competence but should be integrated into the whole training process. As a result of this integration, technology is expected to affect all other components of a training program and thus the final professional profile of learners.

This study, a part of my PhD thesis on translator training for the market, reports on the teaching of technology in translator-training programs at the undergraduate level. The paper is based on a questionnaire survey of graduates, as well as interviews with graduates, a translation company owner, and one of the founding members of the Turkish Union of Translation Students (the TÜÇEB). Furthermore, the curricula of undergraduate translator-training programs in Turkey were surveyed to gain an idea about the actual changes related to teaching technology, particularly after the recent revisions governed by the Bologna process.

Methodology

Translator training at the undergraduate level is taken into consideration for the purpose of this study, although the higher education institutions in Turkey offer translation programs at all levels. Undergraduate programs in translation have a longer history in the Turkish higher education system, and provide the majority of the workforce for the translation market. The population for the survey is comprised of individuals holding a four-year undergraduate degree in Translation and Interpreting from a Turkish university. Within this relatively large population, the participants were restricted to the graduates of two translator-training programs in Ankara: Hacettepe University and Bilkent University. These cases represent the two types of universities in Turkey, i.e. state and foundation universities. Questionnaires were completed by 125 graduates that graduated between

1996 and 2010. The number of respondents that answered all questions in the survey was 89. The respondents were not required to answer every question, since not all of them were working as translators when surveyed. The survey design has two main aims: 1) to define the curricular components that are useful in preparing trainees for professional life, and 2) to define the degree and forms of interaction between training institutions and the market. The link to the online survey was distributed through various methods, including personal contacts, social media and snowball sampling. Additionally, in-depth interviews were conducted with twelve graduates, who represented the three main professional activities of translation graduates, i.e. in-house translators, freelance translators, and language teachers. The interviewees were selected on the basis of maximum variation and criteria sampling. Further interviews were conducted with a translation company owner (i.e. an employer) and one of the founding members of the TÜÇEB. Before presenting the results, we should first grasp the place of technology in translator-training curricula in Turkey.

Technology in the curriculum

I went over the curricula used in undergraduate translator-training programs in the academic year 2013-2014 to gain a general idea of the incorporation of technology teaching into training. Here I first describe the general situation in undergraduate translator-training programs in Turkey, and then the situation in the four-year translation and interpreting programs at Bilkent and Hacettepe universities, from a historical perspective.

An overview

In the recent past, information technologies were involved in some of the training programs only to allow students to acquire basic computer skills. The 2013 ÖSYS (Student Selection and Placement System) Guidebook of Higher Education Programs lists twenty-three undergraduate translator-training programs in Turkey. My overview does not cover the programs at Avrasya and Kafkas universities, which started admitting students in the academic year 2013-2014. However, the program at Marmara University, which did not admit students in the academic year in 2013-2014 but is an active program, is taken into consideration. Thus, the overview is based on the curricula of twenty-two undergraduate programs in Translation and Interpreting.

Technology specific to translation has been offered as a separate course component in sixteen undergraduate translation programs. These translator-training departments offer technologies for translators, including translation memories, as an obligatory or elective course. The courses are obligatory in ten programs and elective in the others. The ECTS credits of these courses,

offered under names such as “Translation Tools”, “Information Technologies for Translators” and “Computer-Aided Translation”, range between four and fifteen over the four-year study. The remaining programs offer generic courses such as computer literacy or information technologies, in most cases not specifically designed for translators.

Bilkent University

In the Department of Translation and Interpreting at Bilkent University, an obligatory course on “Computer Literacy” has been offered since the launching of the program. Furthermore, “Computer Literacy II” is offered as an elective component. In these courses, students acquire basic computer skills such as word processing, Internet use, webpage building and the use of spreadsheets. These courses are offered by the department and for translation students only. It is worthy of note that the first curriculum of the program also included a course on “Translation and New Technology” as an elective. However, that course was then removed and, in the 2009-2010 academic year, “Technology for Translators” was incorporated into the curriculum as an elective component. The six-ECTS credit course has a comprehensive content, including computer-assisted translation systems, use of online materials and resources, translation project management and terminology compilation techniques.

Hacettepe University

In the English-Turkish translator-training program at Hacettepe University, there was no technology-related component in the curriculum until the 2009 revision, when two obligatory courses were added to the curriculum: “Information Technologies for Translators” in the first semester and “Translation Tools” in the fourth semester. The former covers word processing tools and software that supports the translation process, while the latter focuses on time and project management, translation memories and software used for preparing budgets and invoices. Two further technology related courses are offered as electives: “Machine Translation” and “Localization”.

Survey results

My questionnaire survey included a question on the importance of items in a list of course components offered in translator-training programs in Turkish universities. The list involved 15 items, including translation technology. The other components in the list were communication skills in A language, communication skills in B language, discourse analysis and pragmatics,

intercultural communication/cultural issues, knowledge of linguistics, professional work procedures and professional ethics, research techniques, specific field knowledge, terminology management, text analysis, translation criticism, translation history, translation practice and translation theory. The respondents were asked to rate each item based on a five-point scale with regard to their importance for professional work as a translator. In another question, the respondents were asked rate each item based on a five-point scale with regard to the frequency of being dealt with during the training. As mentioned above, 89 subjects answered both questions. Half of the respondents said technology is *rarely dealt with* or *not dealt with* during their undergraduate studies, whereas about 65% found technology *extremely important* or *fairly important* for translation work. Juxtaposing these two results related to technology, we see that there may be a gap between the (assigned) importance and the (perceived) frequency of learning technology in translation-training programs. However, given the replies to the question regarding the importance of technology for professional work, the ranking of technology among other components shows that it is listed as one of the least important components for professional work. It ranks tenth in the list of importance, with an average score of 3.89 out of 5. This suggests that although graduates see technology as an important component for professional work, they tend to regard components such as language skills, field knowledge, cultural issues, and text analysis as being more important. The graduate interviews showed that translators employed in competitive environments are vigorous defenders of using and learning technology, while others use only word processors and the Internet and are less inclined to defend teaching technology as a main concern of translator-training programs.

Interview results

For the purpose of this study, I interviewed twelve graduates, one translation company owner, and one of the founding members of the *TÜÇEB*. The graduates were asked about any gaps between training and the market and to what extent their training met their needs as a translator. The employer was asked which technological skills he expected from recruits and what he expected them to learn during university training and on the job. Their responses may be summarized as follows.

Graduates

Asked about the use of technology in translation, without making any specifications about the kind of technology, the interviewees mentioned the following five points: 1) using word-processing tools to type a translation, 2) using the Internet for information mining, 3) using social media to keep up-to-

date on both global events and news about the translation world, 4) using technologies to communicate and exchange information with clients and colleagues, and 5) using technologies specifically designed to be used for translation (i.e. translation memories).

When asked about the use of technology, the relatively older graduates tended to refer to the use of word processors in translation, and complained about the lack of a computer laboratory where they should be able to type their translations and use the Internet. However, recent graduates are expectedly more inclined to use terms such as CAT (computer-assisted translation) tools or TMs (translation memories). Interviewee 12 drew attention to the inconsistency between trainers and professionals regarding the use of technology in the profession. She reported that trainers tend to associate technology with basic computer use, especially the use of Microsoft Office, while professionals talk about specialized translation tools that the trainers are usually not familiar with.

The professionals interviewed reported to be using the Internet for information seeking before and during the translation process. In this respect, training should play a role in familiarizing students with how to make effective use of the Internet in the translation process. As suggested by Enríquez Raído (2011: 484), a successful query on the Internet requires “a highly applied and contextualized approach to the teaching of (online) information skills within translation practice courses, thus enabling students to develop and/or enhance said skills through meaningful and experiential learning”. Furthermore, it is important to inform students of the risks as well as potentials of the Internet. The Internet, as a very free zone, presents unreliable or misleading information in addition to a huge amount of valuable information. The effective use of the Internet during training may help students distinguish between reliable and unreliable information on the Internet under the supervision of instructors.

In addition to the use of the Internet for information mining, some graduates also touched upon the use of social media to catch up with the agenda and the use of communication technologies to interact with both clients and colleagues. For instance, Interviewee 3, an in-house translator employed in the Turkish office of an international organization, mentioned that social media (in her case, Twitter) may be used effectively in translation classes to ensure that students keep up-to-date and improve their foreign language skills and expand their vocabulary. Interviewee 2, with experience as a freelancer and translation company owner, also mentioned that translators need to use social media effectively to learn about the profession and become familiar with the advantages and challenges. Among the platforms she suggested using were special portals for translators, blogs, Twitter and Facebook.

Most of the current discussions focus on translation-specific technologies. Although most interviewees mentioned the need to teach CAT

tools in training programs, only one reported using CAT tools extensively. Interviewee 6, as a freelancer, mentioned that the use of technology, mainly TMs, is one of the most important demands on the translation market. The remaining interviewees were not using TMs frequently. They said that it was important to be familiar with CAT tools, but most of them were personally using only word processing tools and the Internet.

The graduates employed in more competitive settings, especially on the freelance market and in translation companies, used translation technologies more intensively. They strongly agreed that translation and communication technologies should be learned during training. Based on his experience both on the market and as a translator trainer, Interviewee 5 argued that technology should be mostly learned during university training because “colleagues, supervisors, or bosses would be reluctant to help the novice translator learn these skills”. The only translator that saw freelancing as a career option among our interviewees, Interviewee 6, was a vigorous defender of the use of technology in translation and the teaching of technology to students during their university training. In his view, prospective translators should be equipped with technological skills in addition to language proficiency from the beginning of their training. He mentioned that technology is useful not only in the process of translation (improving the speed of the translator and the quality of translations, thus responding better to market demands), but it also plays a role in the choice of profession. He had been able to pursue a career as a freelance translator because of technology. It was interesting to hear him state that the market does not need translators with excellent language competence any more, but seeks professionals that have perfect command of “how the sector functions”, which includes effective use of technology. This freelance translator did not see rapidly changing technologies and new technologies entering the market as a challenge, since behind all new technologies there are a few basic algorithms, which students are required to learn.

In the interviews, both recent and older graduates complained that the teaching of technology was limited by the instructors’ knowledge, and acquiring the skills was due more to individual efforts by students than to a systematic offering in specifically designed courses. Most of the graduates believed that they needed to acquire basic technology skills in order to enter the market more confidently. This would allow them not to waste time learning basic technologies after they entered the market.

A translation company owner

Technology was one of the main topics discussed during the interview with the translation company owner and two project managers working at the company. The company owner, also a translator at the company, contended that the most important requirements on the translation market today are

quality and speed. Technological knowledge and skills, if used effectively in translation practice, add speed and quality to a translator's work. The employer first addressed the importance of word processing skills, suggesting that every student planning to be a translator on the market should take advanced training in Microsoft Office, which allows translators to work with the most frequently encountered file formats. This requirement results from the need for not only speed in typing but also management of various file types. He argued that translators must be able to solve the formatting problems they encounter in the translation process and submit work in the required format. Source texts are usually provided in un-editable formats and translators must be able to convert these documents into editable ones and manage formatting as required by the client. A four-year training program may not include a component that covers these skills, due to lack of competent trainers or time constraints related to the curriculum. However, the interviewees highlighted that trainers should at least inform students that such skills are among the main requirements of the contemporary translation market.

The employer's second relevant contention was that translation technology is an integral part of translation practice today. As each client demands the use of a different software program, students probably cannot master all translation software during training. Nevertheless, they are required to graduate with basic knowledge of the functioning of translation technologies so that they can adapt to the market more easily. This argument finds support in the literature:

In most cases it would suffice to train students in the use of one specific tool for translation activities (more would be welcome, but two would be enough), with the idea that it would be better to master one or two tools perfectly well and on the basis of this mastery be able to familiarise oneself with other tools fairly quickly. (Thelen 2011: 173).

The employer provided training in technology for new recruits. However, the interviewees mentioned that not all companies provide this opportunity and freelancers may not have employer support to learn and use technologies. In such cases, translators have to learn how to use the programs by themselves, if the university training program had not covered them.

A founding member of the TÜÇEB

The final interview was with one of the founding members of the Turkish Union of Translation Students, who is currently an actor on the market. One of his most significant arguments is that technology should be taught in translator training just because it is now a part of translation. He challenged

Mossop's (2003: 21) argument that if you cannot translate with pencil and paper, you cannot translate with the latest technology. For him, pencil, paper and print dictionaries were means of translating in the past, whereas computers and technologies are means of translation practice today. Thus, if training programs set out to teach the practice of translation, they are required to teach computer and technology skills as well. He also maintained that translation practice should not be associated only with the translation profession: translation practice is a part of Translation Studies, and translation technology is a part of translation practice. Therefore, not only practicing translators but also practicing translation scholars need technology. Additionally, he mentioned that training programs fail to meet students' need for technology. This is mainly because trainers are not sufficiently aware of how the market functions.

Conclusions

This study reports the viewpoints of different stakeholders on teaching technology in translator-training programs and the use of technologies in translation practice. Given that translator-training programs define their objective as training qualified translators for the market and that technology is defined as one of the main market requirements, translator-training programs are expected to furnish their students with the technological skills required to work efficiently as professionals. My survey and interviews show that graduates take different roles even when they are employed on the translation market, which means they have different needs. The graduates reported using technology to varying degrees. The simplest form of technology used in translation is apparently for the purpose of word processing. The translation company owner I interviewed highlighted the importance of this simple but fundamental technology, suggesting that every prospective translator should receive thorough training in word processing programs.

The work experience of the interviewees also draws attention to mobility on the translation market. Translators move between freelancing and in-house employment, or from a state institution with one text type to a translation company that deals with a great variety of text types. Employment in each professional context has specific requirements, which requires training translators for a global market with diverse technological requirements. This brings us to the conclusion that, although translator-training programs cannot allocate time to teach every single TM tool, they may incorporate in their curricula the basics of TMs and how they are used in producing translations. Today technologies are taught in the majority of undergraduate translator-training programs. The question is whether they are integrated into the training program or just offered as individual courses. As verified by the employers interviewed in this study, time "is a very important, if not the most

important, factor in the practice of professional translation” (Nord 2005: 171). Translator-training programs are thus required to teach students how to make effective use of technology to respond to the time and quality needs of the translation market. This means seeing technological skills as complementary to translation practice and integrating them into courses on translation practice.

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Localization, training, and instrumentalization

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Discourses on the cross-cultural rendering of software and websites now huddle around one of the major communication sectors of our time, known by the semi-misnomer “localization”. However, the key concepts of the localization industry tend not to concern translation, which is often marginalized as a non-communicative phrase-replacement activity. This poses serious problems for the training institutions that would want to prepare translators to enter the industry. In the absence of any stable “localization competence” that might be mapped straight onto a study program, our training institutions must take steps to convey competence in the basic technologies and to develop links with the localization industry. Such links are partly strained by the very different ways in which industry and the academy convert knowledge into economic capital, and thus by the ways in which they build social networks. For sociological reasons, relations between the academy and the localization industry have not been easy. At the same time, this disjuncture should allow training institutions to offer a critical view of localization discourses and technologies, particularly of those that turn cross-cultural communication into phrase-replacement exercises. Rather than supply cheap labor for industry, intelligent training should intervene in the future of localization itself.

Keywords: localization, technology, training, translation

What “localization” means here

I use the term “localization” to refer to a general set of discourses informing cross-cultural text production and adaptation in the fields of software, product documentation, web technology, and some international news services. We find these discourses within what is sometimes also known as the “globalization, internationalization, localization and translation industries” (GILT for short), but the names change each year.

Although those four long “-ion” terms are all somehow necessary to describe what those industries do, or what kind of communication they are

engaged in, the four are rarely used together, and the acronym GILT has not really caught on (perhaps due to some kind of well-deserved guilt). In the place of those four terms, we usually find the one word “localization”, which at least has the serious virtues of not being an acronym and not being too long, especially when reduced to the form “L10N”. The term definitely comes from the industry, rather than from esoteric theory or any felt needs of training institutions – the sad truth is that academic theory has had no historical effect on industry practices in this field, which have been happily theorizing without us. So the term “localization” has leaped out from places where money is made, jobs are created, and academia is at bay. That might be enough reason for my interest in it. But can the one term really represent the whole complex of interrelated communication processes (the thing that GILT was supposed to cover)? Can the part really stand for the whole? If not, what price do we pay for this convenient reduction? What is it covering over?

Standard definitions of “localization” usually come accompanied with definitions of the terms associated with it (the ones sharing the space of the GILT industries). Here, for example, are those offered by the Education Initiative Taskforce of the now-defunct Localization Industry Standards Association (LISA) (Fry 2003):

- **Localization** involves taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold.
- **Internationalization** is the process of generalizing a product so that it can handle multiple languages and cultural conventions without the need for re-design. Internationalization takes place at the level of program design and document development.
- **Globalization** addresses the business issues associated with taking a product global. In the globalization of high-tech products this involves integrating localization throughout a company, after proper internationalization and product design, as well as marketing, sales, and support in the world market.

We might say that there is one general process called “globalization” (here understood at the level of the individual company), of which “internationalization” and “localization” are parts. In order to globalize, you first make your product in some way general (“internationalization”), then you adapt (“localize”) it to specific target markets (“locales”). The terms are by no means as standard as they may appear (Microsoft uses them very differently, especially for degrees of internationalization). Yet they encapsulate a whole logical process, a coherent view of the ways in which cross-cultural marketing

can be carried out in an age of information technology and international capitalism. Together, the terms can form a whole. If the one term “localization” should simply represent that whole, it might be a matter of mere convention, and little more need be said. Yet things are not quite that simple. For example, I have described this whole as a “process of communication”, but exactly who is communicating with whom through a localized product? What are the effects of the massive amounts of technology that stand between any sender (perhaps now a “developer”) and any receiver (now a profiled “user”)? And then, more worryingly, what is the precise role of “translation” within this wider whole? The term “translation” is indeed part of the GILT tetra; but it has no place alongside the reductions L10N or i18N (for “internationalization”). No one talks about “T09N”. Translation is definitely not cool enough for a neologism.

I suggest that these simple questions, if pursued, reveal that the whole known as “localization” is far more fragmentary and problematic than it might first appear.

Many of its visions are in fact of no more than parts.

What localization is not

If this coherent set of communication processes exists, then the term “localization” should obviously not be reduced to a mode of translation constrained only by the norms of target-culture usage. That could be a correct reading of the phrase “make [the product] linguistically and culturally appropriate”, which we might otherwise term “adaptation” or perhaps “re-marketing” (on a par with Ezra Pound’s dictum “Make it new” in the field of poetry translation). The notion of adaptation is certainly present as a communicative ideal. One does frequently hear localization professionals state that the end user of the software, website or product documentation should be able to interact with the product in a “completely natural” way, as if the product had been developed from within the target locale. However, the economic workings of the industry are very far from such ideals. In the interests of efficiency, the communication process also involves significant *internationalization*, the production of a neutral, generic product, apparently culture-free (in fact belonging to the technical culture of the localization industry itself). Internationalization then allows for numerous modes of semi-automatic translation and multilingual content management. Those technologies in turn tend to incur constraints that are far more powerful than any ideals of pristine end-user locales, apparently unaware of where the products come from. And those constraints almost invariably ensure that the resulting language is anything but adapted or “linguistically and culturally appropriate”. In sum, the ideology of localization as naturalization is a sham, a subterfuge, camouflage. The key to localization processes is *inter-*

nationalization, the initial production of the generic, and not adaptation. If you doubt it, just ask why we all still put up with the phrase “1 files left to download”, in many languages.

As a consequence of this wider context, the use of the term “localization” to denote just one part of the whole is bound to be misleading, and not just randomly so. And yet that is precisely the term that is being showcased in our training institutions, and in ways that are even more sham-ridden and camouflaging than is the case in industry. Classes in “localization” mostly turn out to be on translation technologies. Are such things needed? Of course. Should they be called “localization”? I have no idea why. A course in translation memories should be a course in translation memories. A course on how to create and translate websites does not necessarily deal with localization. A course in “how to write for translation” (i.e. how to produce texts that are going to be translated into many languages) has a lot to do with internationalization, but is certainly not teaching the whole of localization. A course on comparative cultural behavior, using the paradigms of Hofstede and the like, might reflect some of the naïve ideals of theory but is certainly not to be confused with the realities of the localization industry. Further, courses in terminology management or content management convey very useful software-application skills but do not necessarily have anything to do with localization. And even courses in project management, of the kind much needed by the industry, ultimately involve basic business management skills; they need not have anything in particular to do with localization itself. All those things are parts of localization processes since they all involve skills that are in demand in parts of the industry; none of them by itself can properly be labeled a course on “localization”.

When our training institutions, at least in Europe, offer courses and programs in “localization”, they are using a fashionable term to suggest that their teaching is somehow in tune with developments in the industry. More often than not, the institutions are repackaging traditional skills under deceptively new labels. In so doing, they offer no more than fragments of what should be seen as a wider, more complex and problematic whole.

Hence a first threat of fragmentation: Our training institutions cannot see, and in some cases not even name, the professional whole. It follows that they will train students to work in the galleys or mastheads of industry, without being able to ask where the ship is headed.

Is there a localization competence?

Of course, this use of the term “localization” within our institutions could be a simple fact of academic marketing, which has no need to be judged in terms of right or wrong (student enrollments and job placements are more significant measures). Further, the fragmentary nature of training courses is perhaps not

entirely a misrepresentation; it may reflect something deeper within the localization processes themselves, and indeed within the localization industry.

Let me probe this possibility with a question: We may freely admit that our training institutions can convey numerous skills that are in demand within the localization industry, but do those skills add up to anything like a unitary “localization competence”?

It is easy enough to recognize a “translation competence”, and to break that down into aptitudes, skills and knowledge that a translator should have in order to be a competent translator. An institution can then use that model in order to set about training translators, occupying as many years as it wants to inscribe in the competence. The same could be said of the various kinds of interpreters, whose professions correspond to different varieties of interpreting competence. But how can we think in those terms with respect to localization? Who or what is a competent localizer? Impossible to say—localization is carried out by teams.

When you ask that kind of question, you quickly discover that the localization industry is not configured in the same way as the traditional markets for translators and interpreters. Its training needs cannot be approached in the same way. If localization is a competence, it is certainly not one in the same way as translation and interpreting are.

Divisions of labor

Localization processes certainly do exist, at least as logical steps that a product has to go through in order to be localized successfully. Here, for example, is a basic process model for the localization of software (here adapted from Esselink’s 2000 textbook):

- Analysis of Received Material
- Scheduling and Budgeting
- Glossary Translation or Terminology Setup
- Preparation of Localization Kit (materials for the translators)
- Translation of Software
- Translation of Help and Documentation
- Processing Updates
- Testing of Software
- Testing of Help and Publishing of Documentation
- Product QA and Delivery
- Post-mortem with Client

There is a certain competence involved in getting all those things to happen in a timely and coordinated way (or better, controlling the chaos when they all happen together). That skill set is called “project management”, and it

is useful for any kind of work that involves teams and projects. (Note, in passing, that localization can also involve long-term maintenance or up-dating programs as well as projects, for example in the case of multilingual websites.) Within this process, there is work for people competent in terminology, revising, testing, software engineering, and yes, translation. But all those things are usually done by different people. There is no one person there who acts as an all-round “localizer”. In its very nature, the localization project requires a significant division of labor. And it is in this structural and very necessary division that we might locate the underlying reason for the fragmentary visions of the process as a whole.

Some might object that project managers do indeed see the whole, and that *their* competence should properly be described as “localization”. And yet, do project managers generally see what happens in the reception of the product, or in the rendition of all the languages? Managers often have to coordinate work into languages they do not know. Do they consistently see anything beyond times and quantities? Do they have time to do so? Is that their responsibility? There are many variables involved, and the project management we most like in theory will certainly require all the visions we can muster, especially those involving translation. But one must seriously doubt whether project managers really require, in the eyes of the industry, competencies other than those associated with good business and organizational skills.

One must then doubt the industrial virtues of anything like a localization competence. What industry requires, and what various training institutions can supply, are sets of skills and aptitudes, some of which may involve translation, and all of which require workers able to follow orders.

The role of translation

This brings us to the role of translation. As can be seen in the above process model, translation is commonly seen as *part* of the localization process. It is just one in a series of steps, and it is probably not the most important step (internationalization is the real revolution, and bad scheduling or a lack of testing can cost more heads than a bad translation). This state of affairs tends to upset translation theorists, whose maximum concession is to see localization as a special case of translation. The result is at best a dialogue of the deaf.

From the perspective of training, we might partly resolve the dilemma by recognizing translation and localization as two aspects of cross-cultural communication. Within this frame, localization brings in specific key elements like internationalization and, as a consequence, considerable technological mediation and teamwork. Translation, for its part, concerns multiple features of interlingual processes that are overlooked in most models of localization. It, too, has its specificity.

This way of approaching the two terms also has its geopolitical dimension. As is well known, most localization projects go from English into other languages. The labor requirements in English-speaking centers are thus likely to be quite different from those found in projects into more peripheral languages. We should not be surprised to find the United States offering many programs in technical writing (including how to write texts that are to be translated), whereas Europe invests considerably more institutional effort in training translators as such. One might also venture the general impression (awaiting some kind of empirical verification) that many project managers in the US come from business backgrounds, whereas many project managers in Europe have been trained as translators or come from backgrounds that concern languages. The *producing* centers require the skills closest to internationalization. The actual *adaptation* processes require the services of translators.

This is by no means a neat balancing act. The division of labor commonly involves reducing translation to a basic phrase-replacement process. There are several reasons for this. Translation-memory and machine-translation programs break texts into phrase and sentence units, inviting translators not to alter the renditions already in the database. The mind of the translator is consequently moved from the level of text and communication to that of phrase and formal equivalence. Alternatively, much translation work is outsourced to freelancers in the form of Excel files and the like, along with specific glossaries but rarely with indication of context. All the translator has to do is render the text at phrase level, respecting the glossary. Translators are often not trusted to do anything more spectacular. And rightly so: most of them have no specific training in the fields being localized, and they have only a vague awareness of what the entire localization process involves. If any special aptitude is required here, it might be capacity to put up with prolonged donkeywork.

That is one scenario. It embodies the fundamental paradox of localization. The communicative frame that superficially promises complete adaptation to a new locale threatens to reduce its lingual component to precisely the opposite. Translation becomes the phrase-level replacement exercise it was thought to be in the 1960s and 1970s, in the days of the linguistic equivalence paradigm. Since then, some thirty years of translation theories have increasingly seen adaptation as a legitimate part of the translator's activity. The process of localization would want to take that progress and place it in the hands of its marketing experts and desktop publishers. Translators are turned back to the basics.

There is an alternative scenario. Some localization companies (and some of their clients) are reported to appreciate that bad translations result in bad localization projects, with economic consequences at the point of the end-user. They are also aware that experienced translators have cultural skills that can help in the marketing of products in new locales. The established concept of

translation as phrase-replacement is thus undergoing some revision. Yet I am unable to say to what extent this is happening, nor to what actual effect.

The role of training institutions

How might these competing scenarios be addressed within a training institution? Here are a few suggestions:

- First, students should be warned about the kind of donkeywork jobs being created in the localization industry. They should be advised to work their way, as soon as possible, into the more creative (and probably more lucrative) positions available. Even better, they should receive the added management skills needed to have them start somewhere in the environs of project management.
- Second, some means should be found to develop lines of communication with the industry, in such a way that the competencies of professional translators might become a source of shared benefits. This is happening as the odd localization professional is employed in a training institution, presumably indifferent to the salary drop. There is also a handful of academics seriously interested in discovering what is happening in the localization industry. But they are only a handful, unfortunately surrounded by crews of cultural theorists who are sure they know where everything is headed.
- Third, teamwork and project management should become parts of our training in technical translation and translation technologies. This should happen throughout the entirety of our programs, both within translation courses and in projects involving other faculties (law, engineering, informatics, etc.). Through the various modalities of inter-professional teamwork, our students should become aware of the range of services they can provide, avoiding any illusion that there is only one eternal kind of professional translator. In our own age, translators are called upon to do other tasks in addition to translating: documentation, terminology, rewriting, and especially post-editing. There is also a wide range of professionals who have to learn how to interact with experts in cross-cultural communication.
- Fourth, those training institutions that also incorporate research programs (usually at PhD level) should be seeking research contracts with the localization industry. This has been done most spectacularly by the CNGL Centre for Global Intelligent Content in Ireland, on a long-term basis by relations between SAP and several translator-training institutions in Germany, to cite two examples because I am aware of no others. As a general rule, research cooperation between

industry and the academy has been very scant, sometimes reduced to the use of students for the testing of products.

Industry vs. academics

An earlier version of this paper, written in 2006, was very pessimistic about possible relations between academics and the localization industry. Let me list the reasons for that pessimism, before moving to the more optimistic outlook that I have now in 2014.

First, academics tend not to take the localization industry seriously because they, the academics, have established themselves in apparently stable professional fields (technical translation, literary translation, conference interpreting) and see no reason to change. The new kid on the block seems to offer no more than hype and money, without the humanistic discourses still treasured by ageing teachers (“translation helps create dialogue and peace among the peoples of the earth”, and so on).

Second, localization experts mistrust academics because they think that they, the academics, know nothing about the industry, or about any real-world industry for that matter. And often they are quite right.

Third, in keeping with the above, there are strange cultural differences. Localization experts use very smart cell phones; academics use email. Localization research is published as PowerPoints; academics write long meandering articles. Localization people smile all the time (happiness indicates success, which brings new business); academics look permanently distressed (our role is to be critical of the present world, knowledgeable about better things, and thus professionally discontent). Localization discourse attributes values to large impressionistic numbers, percentages of growth, the latest advance, and a revolution a week; when academics occasionally do the same, it is not uncommonly with a tinge of self-irony. Localization partners get rich or go bust; academics wallow in middling financial comfort. Localization gurus are ranked by how much they sold their last company for; academics have ranks that date back to the late Middle Ages, and we still keep the funny hats and gowns, waiting in closets for the occasional days when we show that we are speaking from another place, with other values.

Fourth, and no doubt less anecdotic, the localization industry has done much to create its own social field (in Bourdieu’s sense), and part of this creation is the production of its own modes of training. Localization professionals do not simply lament that translation schools fail to produce good employees; they have developed training programs themselves. Thus we find courses offered by a “Localization Institute”¹ in the United States, the Institute of Localisation Professionals² in Ireland, and a search for web pages called “Localis/zation 101” gives about 4,000 hits – there are a lot of would-be industry trainers out there! In the web pages of the Localization Institute you

can currently find online tutorials in things like “Game Culturalization”, at a cost of US\$200 per session. The 12-week self-study course in Localization Project Management costs US\$600, plus US\$1,450 if you sign up for the certification seminar. The client is implicitly invited to take on small online lessons, then go for bigger ones if they work. In sum, these services have adopted the money-for-knowledge practices of the Peripatetics (except that Socrates purportedly only asked for money *after* the lesson, if the student thought they had learned anything). All this happens while industry experts insist that the academic institutions thus imitated are of little practical value. The industry is doing the training, but in a very direct and financially oriented way.

Fifth, localization seminars and conferences suggest similar differences with respect to academic norms. The man in suspenders wants several hundred dollars from each participant in his seminars on internationalization; some company directors pay this, not because the expert necessarily knows more than them, but because he will be a kind of football coach, a motivation man, for the company’s employees. He is a good investment. As for the actual conferences, they can cost participants some US\$700 a day, and are spatially designed so that the full fee will get you to the inner circle of knowledge (people speaking and showing), whereas a reduced fee will allow you into the outer fringe of the “demonstration area”. The only free knowledge is website hype. Such is industry. Knowledge has market value if it is expensive (Bourdieu might talk about the immediate inter-convertibility of cultural and economic capital), at the same time as high fees keep the riff-raff out and enable organizers to offer reductions to the people they like (for Bourdieu, they restrict the circulation of social capital—the people you know and exchange favors with). The economic is swiftly converted into knowledge and networks.

Academic seminars and conferences tend not to operate like that. In Europe, at least, we are quite good at converting cultural capital (knowledge) into symbolic capital (titles and degrees), without any quick conversion into economic capital (money). The localization industry can then only imitate the symbolic capital, and disdain the rest. Thanks to this fundamental difference, our social capital (the people we meet and know) tends not to include representatives of the localization industry, and their social capital certainly does not include us. Hence the two worlds.

However, as I have said, things have changed over the past ten years or so. In 2006, the Education Initiative Taskforce of the Localization Industries Standards Association (LISA) had seven university members, which was respectable enough, albeit just a fraction of the more than 500 translator-training institutions in the world.³ Then LISA disappeared, apparently bankrupt. Its functions have been taken over by organizations including the Globalization and Localization Association (GALA⁴), and the Translation Automation User Society (TAUS⁵), which are doing real work on the

institutional relations and tools of the industry, and which seem remarkably more open to discussions with academics. Representatives of entities like the European Language Industry Association (ELIA⁶), the European Union of Associations of Translation Companies (EUATC⁷) and the Globalization and Localization Association (GALA⁸) are occasionally invited speakers at academic conferences, and academics sporadically appear at the industry meetings. Along the way, at least to judge from the names of the organizations in Europe, the term “localization” is gradually being absorbed into superordinates like “language industry”, “translation companies”, or even, sometimes, “translation”.

Perhaps the most spectacular move in recent years has come from where one might least have expected it: the European Commission’s Directorate General for Translation (DGT). This has involved two main initiatives. First, the DGT has commissioned a series of reports on issues such as the size of the language industry in Europe, the role of English as a lingua franca, the use of intercomprehension (bilingual conversations), the status of translators, and so on.⁹ It has been interested in discovering how the language industry works in Europe as a whole, and not just within its own corridors. Second, the same DGT has launched the European Masters in Translation (EMT¹⁰), which regularly includes industry representatives at its meetings and has spawned the research projects of Optimale, which has set out to gather data on what the industry expects of trainers. At last! So what does the industry say? What do you expect them to say, when they don’t know who is listening in: accuracy is the foremost requirement (as reported in Optimale research), the ability to follow the rules, apply the glossary, and get the right expression. Did you expect them to admit that speed and variable qualities are what constitute their bottom line? In sum, dialogue and self-report data might get us part of the way to mutual understanding, but not all the way.

One last mode of contact between industry and academics is through having doctoral students carry out research in industry or with the help of industry. Translation is perhaps one of the few areas of the humanities where this is very feasible: doctoral research is paid for by Microsoft, for example, and I have come across doctoral students who were doing their translation research for BMW, and others for an Italian manufacturer of kitchens (why not?). Over the past few years I have been involved in a European Union Marie Curie project designed to place four doctoral researchers within companies, in both the private and public sectors, for short well-paid-for stays.¹¹ In the part of that experience that has directly concerned localization companies, the job placements have been anything but easy (see the reports in Pym et al. 2014). The companies all respond positively at first, since any costs will be covered, there is some prestige to be gained, and the researcher might even discover something really useful. But then comes the negotiation phase: exactly what will the researcher do?, what is it possible to do?, how much will

this get in the way?, then the killer, given that all real-world projects are for real-world clients, how do we allow the researcher access to confidential texts? We have mostly only been able to arrange research stays in situations where there were prior contacts between the people involved, either through the researcher having worked as a translator at the company concerned or with the people at the company, or a company researcher having reached out and placed one foot in academia (a prime example being Fred Hollowood formerly from Symantec, with his involvement in the CNGL Centre for Global Intelligent Content). Despite all the rationalist models where aims and backgrounds dovetail perfectly, cooperation between industry and academics still requires strong personal ties.

Training beyond industry

When industry and the academy cooperate, they can do so very well, bringing different insights that genuinely help open new horizons on both sides. The underlying question, though, concerns the prime aim of the cooperation, which tends to fall more one side than the other. The easy assumption is that we are both in the business of perfecting training programs: industry representatives thus tell academics what kind of skilled people they need, and academics happily supply the required products. That very simplistic assumption might work well enough for the online PowerPoints in the industry's multiplying "Localization 101" courses, but it is not likely to take us very far with respect to universities.

That is one reason why I have included *research* in the above discussion: we academics can indeed provide industry with some of the numbers, and perhaps the odd idea that they can use, but with that insistence on research, which need not be entirely dissociated from training, comes a malignant resistance to servitude. Academic researchers traditionally inherit an ethics that encourages free, disinterested inquiry, with data and results available to all. Some of us actively embrace that millennial ethos, along with the mediocre salaries it may entail. The questions we ask are *our* questions; and the answers are for *all*. There is rarely any thought of us providing numbers that directly drive the profits of any one company, or of hiding results in the name of confidentiality or financial secrets. To be sure, the actual conflicts over such matters may be few and far between. Yet the division is there, and is even cemented into place by a certain amount of mutual respect. For the most part, there are situations of reasoned exchange between professions: academics produce knowledge that may be of use; industry provides the data needed for the knowledge, which will hopefully be of use to them. All that seems fair enough, at least as far as research is concerned.

But training? Surely our aim is to ensure employment for our students? Yes and no. We lost the division between polytechnics and universities, and

thereby our capacity to feign indifference to employment. But this does not mean that we have succumbed to producing users of technology, followers of guidelines, meeters of deadlines, reliable and invisible bearers of meaning from language to language. If such creatures exist, they have little need of much that we can teach. Far better, I suggest, at least with respect to the people who might indeed learn from us, to provide all those serious virtues along with something else, something along the lines of a critical capacity to think beyond the needs of industry, albeit from within it. For example, instead of applying dehumanized rules, our students might occasionally ask about who is communicating with whom, to what end, and to what common improvable purpose. This does not mean simple resistance – the charge of “dehumanization” is not necessarily a complaint about technological progress, since much of the more recent progress is precisely in highly humanizing social media. But it does mean producing graduates with a capacity to think for themselves, and to seek their own way through the labyrinths.

To summarize

The sliding of the loose terms should indicate that there is no such thing as a “translation industry”, in the singular. There are only conjunctural industry demands and complaints, which are met well or badly at certain points in history, according to the varying capacities of each partner in the exchange. The really strange thing is that some of our training institutions fail to see this; they act as if we really were all in the same boat, rowing against the same winds, seeking the same port. There is no surer way, I suggest, to have the boat sink, losing benefits for all concerned.

The prime role of our training institutions should *not* be to provide immediate industry needs. We should not suddenly be adjusting all our courses to fill the labor gaps that open momentarily. We should, however, be able to train people for long, adventurous and multi-faceted careers, for the long-term well-being of both the graduate and the industry itself.

This means two things. First, we must be teaching the basic technical competence that will save the localization industry from exploiting public ignorance (none of our students should be paying for an introductory PowerPoint presentation of Trados—they should be quite good at finding all the technical information they want on the web and in discussion groups). We ignore technology at our peril; we must be there; we must teach students how to find it, learn it quickly, and move to the next release, all for free. Second, and far more important, we should be able to edge our graduates toward a critical *vue d'ensemble*, an overview of what cross-cultural communication is, of how it is being affected by technology, and of how far the current practices of the localization industry privilege numbers more than communication. And

both those things should be done at the same time, if enough disaffected localizers and technocratic academics can be found.

In a word, our students should be able to work not just within the localization industry, but also beyond it. With luck, they might one day be able to communicate, rather than replace internationalized phrases.

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Notes

¹ <http://www.localizationinstitute.com/>

² <http://www.tilponline.net/>

³ See the list of translator-training institutions at <http://isg.urv.es/tti/tti.htm>.

⁴ <http://www.gala-global.org/>

⁵ <https://www.taus.net/>

⁶ <http://www.elia-association.org/>

⁷ <http://www.euatc.org/>

⁸ <http://www.gala-global.org/>

⁹ See <http://ec.europa.eu/dgs/translation/publications/studies/>

¹⁰ http://ec.europa.eu/dgs/translation/programmes/emt/index_en.htm

¹¹ <http://eu-researchprojects.eu/time>

Automatically building translation memories for subtitling

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This article describes a methodology to automatically create translation memories for subtitling, using translated books adapted into films and recognising extra-linguistic markers to differentiate character interventions from narration. This methodology includes the automatic identification, extraction, and alignment of the dialogues. The aligned bi-texts served as translation memories in the subtitling of the adapted films. Results show an overall 95% extraction rate for English dialogues and 85% for Spanish dialogues. Alignment showed an accuracy of 90%. Results for the translation memory performance showed that hits between 70% and 100% matches accounted for 15% of the corpus. The results reinforce the claim that dialogues in books can be used as reference material for the translation of subtitles.

Keywords: audiovisual translation; translation memories; subtitling; natural language processing

Introduction

The use of automatic tools to help in the translation process is a field with a great amount of academic research and well proven usability in the market. However, in audiovisual translation, and more specifically in subtitling, there are very few tools to support this process by granting access to the creation of subtitles (Mejías 2010). The lack of resources for automatic subtitle creation may result from the difficulty of processing an ever changing language. Unlike scientific, legal, or even literary texts, audiovisual material does not follow guidelines and cannot be framed in a single type of language.

This research focuses on developing a methodology to build, automatically, translation memories to assist in the subtitling process.

Literature review

The Code of Good Subtitling Practice (Carroll and Ivarsson 1998) establishes guidelines for the subtitling task. The authors propose a standardisation of technical features including length of subtitles, number of characters per line, duration on screen, font and size of the letters, and of language features like coherence, cohesion, and treatment of interjections. However, with the increasing demand for subtitling, short deadlines and tight budgets, translators often need the help of more automated or semi-automated methodologies to help them follow good practices and meet deadlines (SUMAT 2011).

In recent decades, researchers in audiovisual translation and machine translation have begun to combine the two fields in order to provide audiovisual translation techniques with tools that focus not just on the technical aspects but also on the translation. The support computer-based systems offer to the subtitling tasks mainly focuses on mechanical aspects such as time coding and word processing, while the possibility to reuse previous translations in new translation assignments remains unaided.

Previous studies have approached the reusability of translations in audiovisual material and automated subtitling. The STAR project developed a rule-based machine translation system to produce Japanese subtitles for English news programmes and Japanese subtitles for newswire translation services (Sumiyoshi et al. 1995: 4). The project Global Translation Systems (GTI), Inc. (Díaz Cintas and Remael 2007: 20-21) uses SYSTRAN to translate, in real time, English subtitles into Spanish subtitles on selected television programmes. SUMAT (2011) is an on-going project to develop an online service for subtitling through machine translation in nine different European languages, with the aim being to semi-automatize the subtitle translation processes on a large scale.

However, when it comes to films, specifically those that are adapted from novels, the translator could rely on the same source the scriptwriters used: the written novel. Harrington (1977) estimates that a third of all films ever made have been adapted from novels, without including other literary forms (such as plays or short stories). The Writing Studio (2001-2004) confirms that over fifty percent of feature-length films for both cinema and television are adaptations of novels, short stories, plays or nonfiction journalism, which together account for 25 percent of all adapted feature films.

It is safe to say that almost all great literary works have been adapted at least once in cinema history. When adapting a novel into a script for a film, and especially when writing a screenplay, “[t]he essence of dialogue and subtext should stay the same [...] despite several tricks to “cull and shape the cinematic elements” (Online Film School). When adapting, the writer should compress all dialogues “so that it has the economy and directness of screen dialogue” (ibid). Dialogue in literature is mimetic (as opposed to diegetic), the writer tries to “create the illusion that it is not he who speaks”, therefore

dialogue in novels is generally direct discourse; a *quotation* of a character's words (Rimmon-Kenan, 1983). Also, Lotman (1989) (as quoted by Rauma 2004) argues that cinematic dialogue is equivalent to dialogue in novels or plays and is thus an indistinctive property of the film medium.

Methodology

It may be possible to use the data contained in novels that have been adapted into films as reference material for the translation of the subtitles for the films. The present research thus seeks to ascertain whether that material can create translation memories suitable for the production of translated subtitles.

To work on this hypothesis, a series of experiments were designed and conducted with the objective of defining a method to search for relevant data in the novels, extract it and create translation memories. We assessed the efficacy of the search and extraction of the information, the alignment, and the matching percentages in the translation memory.

The automatic creation of the translation memories consisted of four stages. The first stage analyzed five film-adapted novels in English and their Spanish translations and extracted the common dialogue features in both languages. The second stage focused on the creation of rules to edit and standardize the texts for processing, the creation of the dialogue extraction scripts and the testing of eight further novels in English and their translations in Spanish. The third stage focused on the alignment of the dialogues extracted and the creation of a TMX file, fine-tuning the pre-processing and extraction scripts as well as the revision of the extraction using seven additional novels in English and their translations into Spanish. The final stage focused on collecting and analyzing the data, and a first evaluation of the translation memory. In all, 20 novels in English and their corresponding translations were analyzed and tested for dialogue extraction.

Definition and characterization of dialogues in English and Spanish novels

Literary theorists (Bakhtin 1986; Maranhão 1990) define *dialogue* as the conversation, or the literary work in the form of a conversation, between characters, often used as a mechanism to reveal characters and to develop and make the plot advance. Dialogues are the lines that a character speaks in any literary work.

Dialogues can be differentiated from the surrounding prose by using punctuation marks. Sherlock (2011) states that "in standard American usage, opened and closed double quotation marks [“ ”] indicate when narration has stopped and a character's dialogue begins." This is supported by Elson and Mckeown (2010), who state that, in English literary novels, quoted speech or

dialogue is “considered to be a block of text within a paragraph, falling between quotation marks”.

According to Portolés et al. (2009), Spanish novel dialogues tend to be written directly, without any clarifying introduction, and with very few comments or detailed explanations of the mental state or features of the speaker. In Spanish novels, dialogues open with an em-dash, *raya*, [—] at the beginning of the sentence (but it is not repeated at the sentence closure), and when indicating the speaker; closing only when there is a clarification in the middle.

Tables 1 and 2 present the most common standard combinations of punctuation, narration and character intervention (CI) or dialogue sequences found in English and Spanish novels.

Table 1: Types of narration and character intervention (CI) in English novels

English	Example
“CI”	“Oh, yes! I know that! I know that, but do you know what day it is?”
“CI” narration. narration “CI”.	“She’s packing them,” explained Mother. He said to the driver, “You are early tonight, my friend.”
“CI” narration “CI”. narration “CI” narration.	“But where?” he asked. “Where are we going exactly? Why can’t we stay here?” She saw, I suppose, the doubt in my face, for she put the rosary round my neck and said, “For your mother’s sake,” and went out of the room.

Table 2: Types of narration and character intervention (CI) in Spanish novels

Spanish	Example
—CI	—Los Potter, eso es, eso es lo que he oído...
—CI —narration. narration —CI	—Tendremos a papá y a mamá y a nosotras mismas —dijo Beth alegremente desde su rincón. Hubo un momento de silencio, hasta que Padre dijo: —¿Y bien? ¿Qué opinas?
—CI —narration—. CI —CI —narration—. CI. —narration— CI.	—No —respondió en tono cortante—. ¿Por qué? —Hemos recibido denuncias sobre hombres y mujeres vagabundos que desaparecieron el mes pasado —intervino Banks—. Al principio pensamos que podría ser uno de ellos, pero no es así. —añadió en tono dramático—. La víctima fue una de esas personas de anoche.
—CI —narration—. CI. — CI2.	—Pero ¿adónde? —preguntó—. ¿Adónde nos vamos? ¿Por qué no podemos quedarnos aquí? —Es por el trabajo de tu padre. Ya sabes lo importante que es, ¿verdad?

English and Spanish pre-processing of the novels

English dialogues are represented by single (‘ ’) or double (“ ”) quotation marks. There are two ways of expressing them: 1) The ones with identical form (neutral, vertical, straight, typewriter, or “dumb” quotation marks), typewriter double quotes (" ") and typewriter single quotes (' '). 2) The ones with left and right hand distinction (typographic, curly) typewriter double quotes curly (“ ”) and typewriter single curly (‘ ’). For the sake of standardization, and to enhance recognition of the dialogues, it was decided to convert all quotes to the typewriter double quotes curly (“ ”) format.

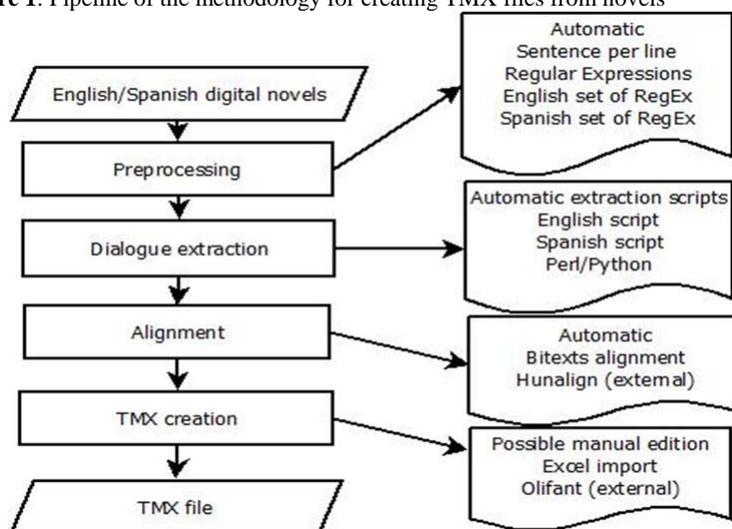
The main feature of the Spanish dialogues is the em-dash (—), but it needs to be in accordance with another feature (punctuation mark, capital letter) to distinguish the character intervention from the narrative part. For technical reasons we changed the em-dashes into en-dashes (–).

English and Spanish dialogue extraction scripts

The scripts to extract the dialogues from the English and Spanish texts were designed to read each line of the novel and recognize the dialogues based on the previously mentioned marks.

Figure 1 is a flow chart graphically showing the process and the description of the modules included in the methodology.

Figure 1: Pipeline of the methodology for creating TMX files from novels



The most common error in the extraction phase of the English texts was due to problems in recognizing the marks when the extraction involved very long segments. These segments contained several character interventions as

well as narration that required editing in the alignment phase. The most common error in the Spanish extraction was when there was a character intervention that did not follow the specified mark rules; therefore it was not recognized and extracted. However, since most of these errors usually took place in the second part of the character intervention, the first part of it was always extracted, providing the first sentence of the dialogue.

Evaluation results and discussion

For the dialogue extraction, the notion of accuracy is understood as the amount of the original dialogue that the script is able to recognize and extract. For the TMX file results, accuracy is in terms of the fuzzy matches and the match percentage.

The results of the method will be presented in three different categories:

- (i) Results of the dialogue extraction,
- (ii) results of the alignment, and
- (iii) first results of the TM performance when translating the scripts.

Results of the dialogue extraction

The total amount of dialogues was retrieved using ReGex to recognise the proposed patterns and then they were manually checked to compare the correct recognition of all of them, especially for the Spanish novels were the dialogues needed to be checked to determine the end of a dialogue and the beginning of narrative. Table 3 shows the difference rates between English original and extracted amount of CI, Spanish original and extracted amount of CI and the difference rate between both original sets.

On average, the dialogue sequences differ by 14%, which is not surprising because in English there are more dialogue markers (quotation marks) for the same dialogue in Spanish. For English, the difference between the dialogue in the original novel and the dialogues recognised and extracted by the script is 5%. For Spanish, the average extraction difference is 18%. Again, this was expected because the Spanish script recognizes all the character interventions and merges them into one, outputting just one chain of dialogue.

Table 3: Percentage difference between the total numbers of English and Spanish dialogues

Title	Original CI Eng	Extracted CI Eng	Org/Ext CI Eng %	Original CI Spa	Extracted CI Spa	Ori/Ext CI Spa %	% Differ Org/CI Eng/Spa
Atonement	1010	998	1,2	932	836	10	8
The bone collector	4372	4230	3,2	4050	3489	14	7
The boy in the striped pyjamas	1451	1394	3,9	1306	935	28	10
One flew over the cuckoo's nest	1713	1679	2,0	1554	1150	26	9
The devil wears Prada	2312	2254	2,5	2139	1654	23	7
Dracula	1150	1098	4,5	1048	927	12	9
East of Eden	7623	7543	1,0	5898	5361	9	23
The great Gatsby	1438	1348	6,3	1153	922	20	20
Memoirs of a geisha	2875	2740	4,7	2415	1896	21	16
The hitchhiker's guide to galaxy	1862	1828	1,8	1453	1272	12	22
Harry Potter 1	2396	2230	6,9	2205	1700	23	8
Harry Potter 2	2919	2748	5,9	2431	1846	24	17
Harry Potter 3	3826	3708	3,1	3510	2481	29	8
Harry Potter 4	6004	5365	10,6	4940	3773	24	18
Harry Potter 6	6124	5491	10,3	5523	3977	28	10
Little women	1723	1614	6,3	1611	1608	0,1	7
Murder on the Orient Express	2572	2346	8,8	2377	2075	13	8
Pride and prejudice	1783	1597	10,4	1298	1190	8	27
Sense and sensibility	1580	1481	6,3	1089	993	9	31
The hunger games	1537	1536	0,1	1398	1094	22	9
Average %			5			18	14

Results of the alignment

The results of the alignment of the extracted dialogues showed that most of the books followed a pattern according to which the number of sentences, the disposition of lines, and the continuity of the speech are similar in both languages. Since there is no gold standard for the evaluation of the alignment of these dialogues, the alignment was measured taking into account a shuffled sample corresponding to 10% of each aligned bitext. On average, the

alignment was precise for about 90% of the cases, with an erroneous alignment rate of 10%.

First results of the TM performance when translating the scripts

This step aims at providing preliminary findings on how many complete matches or partial matches were retrieved from the TM. These results were obtained using OmegaT 2.6.3 and the entire corpus of TMs against the subtitle corpus of all the adapted movies.

Table 4 shows the total result of repetitions, exact matches, fuzzy matches and no matches found when using the translation memories as reference material for the translation of the subtitles.

Table 4: General results and percentages of Match Statistics with OmegaT

Type of segment	Total Occurrences	%
Repetition	2105	5.9%
Exact Matches	1129	3.2%
Segm 75-99%	1960	5.8%
Segm 50-74%	23553	69.8%
No Match	5334	15.2%
Total Segments	34081	

The general results show that of 34,081 analyzed segments, repetitions account for 5.9% (2,015 segments were repeated). The repetition feature of the translation memory means that there is one translation per repeated segment, if the translation memory system finds the exact segment in the translation memory file; this 5.9% can be automatically translated. This also accounts for the Exact Matches, which were 3.2% of the corpus (1,129 segments).

In literary narrative, dialogues are one of the main guides for plot development, but the neighboring description is in charge of directing the references thereby limiting the dialogues to their function of continuity. This is reflected in the matching of subtitles with their extracted dialogues, especially when the character interventions in the subtitles and in the novel are the same. In these cases, there may be a 100% match, however, that match will not occur frequently along the text: we see that 9.1% was found to be repeated, rendering it difficult to rely on automatic translation as a resource to speed up the translation process.

Note that 5.8% of the corpus (1,960 segments) obtained a match between 75% and 99%. This range is considered highly relevant for translation because these segments need minor edition and, as a whole, save the translator a great amount of time (Somers 2003, Bowker 2005).

In total, 69.8% (23,552 segments) of the corpus found a match in the 50%-74% group. Although it can be assumed that matches below 70% are not

very useful for translation memory systems, many TM software products state the minimum match value between 60% and 75%, and recommend starting with a low percentage such as 50%. With these values in mind, the hits found in the fifth group could be considered partial matches (O'Brien 1998). As shown by the alignment and preliminary fuzzy match analysis, the tendency is that most of the dialogues stored in the TM will serve as contextual information for the subtitles.

The remaining 15.2% of the corpus (5334 segments) obtained no match with the subtitle TM file. It can be assumed that these dialogue segments either belong to films with a high degree of free adaptation (change of plot, change of characters, etc.) or to novels whose dialogues tend to be especially longer in the original and have been significantly cut.

Conclusions and future work

The aim of this paper was to design a method to automatically create translation memory files for subtitling. The method searches for dialogue marks in the novels and sets the boundaries to extract each character intervention. These character interventions are then aligned to create a TMX file that is used as translation memory when translating the subtitles.

It is possible to automatically recognize and extract dialogues from the English and Spanish novels. This process is language-dependent, requiring a defined set of pre-processing steps and a specific set of scripts per language. The alignment results show that the books and their translations followed similar organization patterns and speech continuity.

The preliminary translation memory test showed that a high percentage of partial matches were in the 50% to 74% group. Probably these low percentages were due to the transformations from written novel to cinematographic script, but an initial analysis showed that they contain enough contextual information to help in the translation process.

In regard to future work, it is necessary to improve the features of the dialogue extractor, taking into account the special needs of Spanish narrative, by marking the end of dialogues to allow full automatic recognition. It is also necessary to test the resulting TM files using different translation memory systems. Further ways of automatically shortening the longer dialogues might be useful to obtain higher matching scores in the TM.

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The reception of subtitling by the deaf and hard of hearing. Preliminary findings

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Audiovisual translation is a complex means of communication where multiple sources of dynamic information interact. This complexity presents methodological challenges for research, particularly when studying the way different viewers receive information with subtitles. In an attempt to tackle this complexity, we combined eye-tracking and oral questionnaires in a reception study of 72 subjects, including deaf and hard of hearing sign-language users, deaf and hard of hearing oral-language users and hearing oral-language users. Preliminary findings suggest that oral-language users tend to be more efficient with verbal information, whereas sign-language users may be more efficient with visual information. Further, these differences might be due to general communication aspects rather than strictly hearing aspects.

Keywords: reception, audiovisual translation, accessibility, eye-tracking

Introduction

In Audiovisual Translation (AVT) communication is conveyed using multiple information codes. Meaning is articulated through a network of verbal and non-verbal elements, roughly outlined in dialogue and images (Chaume 2004, Gambier 2013). All these elements are processed almost concurrently through our visual and auditory channels, and interact in the construction of meaning. Even so, research has been mainly concerned with the verbal level, especially with translation strategies. However, in subtitling for the Deaf and Hard of Hearing (SDH) the non-verbal level is especially worthy of attention. The oral discourse conveyed in the subtitles needs to be processed through the visual system and includes dialogues, music, sound effects and other paralinguistic features (Arnáiz-Uzquiza 2012), which might increase its information load. The role of the type of audience in the interplay between reading and watching must also be considered.

This article will provide an overview of Reception Studies in AVT and will present an experimental design and the preliminary results of a study on SDH aimed to investigate the effects that subtitling speed and viewers' hearing and communication profile have on reception.¹

Reception Studies: theory and methodology

The list of scholars who encourage research on reception is noteworthy (Neves 2008, Gambier 2008, Orero 2005, Jensema 2000, d'Ydewalle and de Bruycker 2007, Romero-Fresco 2011 and forthcoming). On a micro-level, research is required on viewers' needs and preferences so that translation strategies can be reviewed. On a macro-level, it is needed to gain empirical evidence of how viewers deal with audiovisual semiotics. Nevertheless, little attention has been paid in practice to the role and importance of non-verbal information or to the way different viewers process and prioritize information from different types. The notion of "reception", nevertheless, encompasses various meanings and, as stated in Gambier (2009), a consensus has not been reached. Most AVT scholars do however agree that a comprehensive approach should consider three levels of expertise: response, reaction and repercussion (cf. Kovačič 1995, Chesterman 2007, Gambier 2007 and 2009). These can be glossed as follows:

Response concerns the legibility of the information conveyed in the audiovisual text, i.e. the perceptual decoding of its elements. It includes physiological and behavioral responses – either automatic or automated through practice – related to motor and attentional processes.

Reaction concerns the readability of the elements contained in the text. It comprises cognitive and psycho-cognitive processes (such as short and long term memory, comprehension or understanding).

Repercussion concerns viewers' attitudes and beliefs. It accounts for their feedback to and assessment of specific audiovisual and translation strategies and practices. It can be viewed from an individual or a sociocultural perspective, if social or culturally-based groups share beliefs and preferences.

Each level provides a different type of information and involves a different method of analysis. To examine viewers' responses we may seek evidence of where attention or effort is deployed. Controlled experimental methods can be then used to record and measure eye movements, pupil or neuronal responses, using eye-tracking, pupillometry or electroencephalography (EEG). On the other hand, to analyze reaction and repercussion survey methods should be used: questionnaires (oral, written,

¹ Research carried out as part of the ITN Marie Curie European project TIME 2010-2014: Translation Research Training: an integrated and intersectoral model for Europe.

online, self-administered, etc.), interviews (unstructured, semi-structured, guided, etc.) or even additional standardized tests (on reading, oral and written comprehension, etc.). Caffrey (2009) provides a list of AVT studies with combined approaches and it keeps growing (see Perego 2012). A combination of approaches leads to a higher reliability, since it allows two or more levels to be addressed. As the levels are not isolated or independent from one another, an interesting window is open: does response affect reaction/ repercussion? Does reaction have an effect on response/ repercussion? Or repercussion on response/ reaction? Comparison and complementarities of methods can lead to a better interpretation of results.

From theory to practice: a reception study on SDH

We have designed an experimental reception study on SDH. Combining eye-tracking and a set of questionnaires, it investigates the role of subtitling exposure speed and participants' hearing and communication profile. The study collected data from 72 participants grouped into three hearing and communication profiles: D (deaf sign-language users), HOH (deaf and hard of hearing oral language users) and H (hearing oral language users). One by one they watched two excerpts from films in English with SDH subtitles in Spanish (randomly displayed at three exposure speeds) and answered a set of questionnaires. The study explored how verbal and visual information were processed and prioritized and whether reception was affected by subtitling speed and/or the participant's profile.

Research questions, objectives and hypotheses

The research questions (RQ), objectives (O) and hypotheses (H) are structured into the levels of reception and arranged around the aspects under study: subtitling speed and viewers' profiles. Specific hypotheses are stated for response and reaction. For repercussion, because of its qualitative nature, no hypotheses were made.

RQ 1: Does subtitling exposure speed affect response?

O: To see whether speed affects the time participants look at the subtitles and the images, and the number of crossovers between these areas.

H: The greater the speed, the more time participants will spend on the subtitles and the less time on the images, and the fewer the crossovers.

RQ 2: Does the participant's profile affect response?

O: To see whether the profile affects the time participants look at the subtitles and images, and the number of crossovers between these areas.

H: The greater the deafness and the dependence on sign language, the more time participants will spend the subtitles and the less time on the images, and the fewer the crossovers.

RQ 3: Does subtitling exposure speed affect reaction?

O: To see whether speed affects how participants recall, process and understand the verbal and the visual information.

H: The lower the speed, the better the recall, processing and understanding of the verbal information and the worse the recall, processing and understanding of the visual information.

RQ 4: Does the participant's profile affect reaction?

O: To see whether the profile affects how participants recall, process and understand the verbal and the visual information.

H: The greater the deafness and the dependence on sign language, the better the recall, processing and understanding of the visual information and the worse the recall, processing and understanding of the verbal information.

RQ 5: Does subtitling exposure speed have repercussions?

O: To see whether speed affects the participants' feedback and assessment.

RQ 6: Does the participant's profile have repercussions?

O: to see whether profile affects participants' feedback and assessment.

Variables

A viewer-oriented AVT study will at least have two types of variables: sociological – related to the population – and audiovisual – related to the material. These could be correlated to a set of translation variables: spatial-temporal, textual or paratextual (Gambier 2007). In this study, the variables are as follows:

Independent variables

The subtitling exposure speed (defined as the number of seconds for which subtitles are displayed on screen) consisted of three levels: short (1-2 seconds), medium (2-4'') and high (4-6''). The participants' profiles (based on hearing and communication skills) contained three groups: D (deaf Spanish/Catalan sign-language users), HOH (deaf and hard of hearing Spanish language speakers) and H (hearing Spanish language speakers).

Subtitles were commissioned from a translator who applied the Spanish guidelines for SDH (AENOR, 2012) and the speeds were adapted afterwards by the researcher. The profiles corresponded to a natural distinction. A pre-

study questionnaire about the daily use of language and hearing capacity was used in order to allocate participants. For the D and HOH, it included questions about the type of education received, degree and age of hearing loss, and use or not of hearing aids or cochlear implants.

Dependent variables

Based on the methods of analysis, two sets of variables (produced by eye-tracking and questionnaires respectively) were expected to be affected by the independent variables. According to the type of information provided, these were:

(Response) Duration and count eye-tracking variables: fixations on the subtitles and the images, total visit duration (percentage of time in both areas) and number of crossovers between areas.

(Reaction) Comprehension questionnaire-based variables: narrative understanding of the plot and characters, recall of visual and verbal information and inference of information.

(Repercussion) Assessment questionnaire-based variables: feedback about subtitling speed, other translation strategies and reception practices.

Control variables

These variables were controlled through a set of questionnaires and a focus group among AVT researchers:

Sociological variables: age and gender, level of education, levels of reading comprehension in Spanish and oral comprehension in English (for group H), reading and subtitling viewing habits and familiarity with the audiovisual material used.

Audiovisual variables: period of release and original language, type of film (fiction), duration, verbal and visual density.

Films

The selection of non-appropriate audiovisual material might affect results. Apart from copyright, issues as representativity (when studying one fragment of a film or program) or comparability (when comparing fragments) need to be considered. In this study, in order to strengthen its validity, decisions were taken and agreed upon through discussion groups. To avoid lip-reading (most HoH participants used it to access spoken language) English was the language chosen for the audio track. Two films were chosen from the DVD catalogue of the distributor *Cine Accessible: Cassandra's Dream* (Allen 2007) and *Slumdog Millionaire* (Boyle 2008). In order to maintain attention span, two excerpts (one from each film) of less than two minutes were selected. They contain the main narrative elements from the structure proposed by Branigan

(1992: 14): introduction of settings and characters, explanation of a state of affairs, initiating event, statement of a goal by the protagonist, complicating actions, outcome, reactions to the outcome. Without altering the narration, the last two elements were deleted in order to explore the participants' ability to infer information. Overall meaning was expected to come from the dialogue in one excerpt and from the images in the other. Continuous and high-speed dialogues (indicators of verbal density) were required for both cases. However, the number and type of shots (indicators of visual density) were expected to differ. The excerpts were as follows:

Cassandra's Dream (CD): The excerpt shows Howard telling his nephews about some problems he is having with a former member of his company. He tries to ask them for something that is not revealed. The sequence has two shots, one of more than one minute in which the camera travels around the three characters, starting with a wide shot and ending with a medium close up. The faces are mostly out of focus or covered by trees. Visual information is scarce and static and does not take precedence over the construction of meaning, which is primarily based on the verbal dialogue.

Slumdog Millionaire (SM): The excerpt shows how the Indian boy - who stands up in front of the Taj Mahal next to a sign advertising tours - is mistaken for a guide by a foreign couple. He accepts to give them a tour and gets paid for it but makes up the stories behind the historical places and monuments they visit. It has more than thirty shots, most short and static, which go from long and shot-reverse-shots to close-ups and extreme close-ups. Visual information participates actively in the narrative development, becoming essential for understanding the meaning.

Selection and sample of participants

The number of participants depended on the experiment design and their classification responded to sociological factors. Although payment was not expected, travel expenses were covered. The duration of the tests, the mode of contacting the participants and their availability affected time management. Prior contact could help to pre-classify participants and may lead to fewer absences. However, it could also affect behaviour. In this study, the researcher had no previous contact with participants. Difficulties were found to complete the expected numbers and the data collection lasted over seven months. In few cases, it was difficult to allocate participants to groups. The research pre-criteria (based on hearing capacity) did not coincide with participants' personal criteria (based on communication preferences) so profiles were adjusted to both.

The volunteers were recruited in Catalonia. D participants were contacted through local associations for deaf people and MultiSignes (industry partner specialized in accessibility). The laboratory was set up in the premises of the

company, which also provided sign language interpreting services. HOH participants were reached through ACAPPS (Federation of Catalan Associations of Hard of Hearing People), where part of the tests took place. Additional tests were conducted at the public library El Clot-Josep Benet and at the University Rovira i Virgili. H participants, mainly neighbors and workers from surrounding locations, travelled to the different laboratories.

A total of 22 male and 50 female participated. As shown in Table 1, homogeneity in the age and gender distribution could not be achieved. D participants had Spanish/Catalan Sign Language as first language whereas H and HOH were Spanish/Catalan oral language users. Group HOH, as happened with most D participants, had received an auditory oral-based education, either in conventional or deaf schools. Only the four youngest D participants attended a bilingual school with an inter-modal (oral and sign-based) approach. Among the rest of D participants, five acquired sign language as adults, and the rest in childhood by contact with other deaf children. Table 2 shows the degree and age of onset of deafness of D and HOH participants and the use of cochlear implants and hearing aids.

Table 1: Number of male and female and age intervals (in years).

Groups	Gender distribution		Age interval
	Male	Female	
H	9	15	23-48
HOH	3	21	23-69
D	10	14	18-65

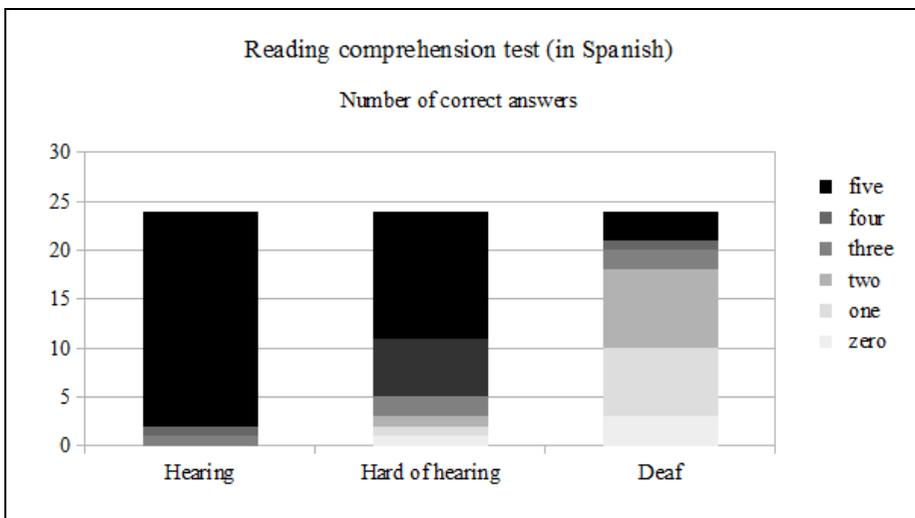
Table 2: Specific features from groups HoH and D.

Variable	Categories	D	HOH
Degree of deafness	Profound	24	12
	Severe-profound	0	12
Age of onset of deafness	Prelocutive (0-3 years)	23	11
	Postlocutive (+ 3 years)	1	13
Use of cochlear implant	No	22	19
	In one ear	2	4
	In two ears	0	2
Use of hearing aid	No	17	7
	In one ear	4	7
	In two ears	3	10

In terms of education, an elementary level was minimally required. However, differences were found. A total of 21 H and 13 HOH participants had a university level. In group D this number drops to three. Only one H,

four HOH and one D attended high school. Most D participants received a vocational or an elementary education (ten and ten) while HOH and H participants with these levels were much less in number (four and three/ two and none). Participants' level in reading comprehension in Spanish was also assessed. They were asked to read a text and provide answers to five questions. As seen in Figure 1, differences were observed. Most D participants had trouble in understanding the text (only four fully or almost fully comprehended it). Group H, on the contrary, had very good comprehension, as did most HOH (21 answered all or almost all questions correctly).

Figure 1: Answers to the reading comprehension test.



Experiment design and distribution

The participants watched the excerpts (A: SM and B: CD) in the original versions. Subtitles were randomly displayed at three speeds (1: high, 2: medium and 3: short) and assignments were completed in order of participation (see Table 3). To prevent H participants with a good level of English from understanding the auditory information, their sound was turned off. Their level of listening comprehension in English was assessed by watching a sequence of the film *The Royal Tenenbaums* (Wes Anderson 2001) without subtitles and answering five multiple-choice questions. The 12 participants with the lowest scores did the experiment with sound (s) and the 12 with the best scores with no sound (n). The order of the excerpts was reversed to avoid any effect.

Table 3: Design and distribution.

Clips and speeds	Groups					
	D		HOH		H	
A1-B2	1	2	1	2	1 (n)	2
A1-B3	3	4	3	4	3 (n)	4
A2-B1	5	6	5	6	5 (n)	6
A2-B3	7	8	7	8	7 (n)	8
A3-B1	9	10	9	10	9 (n)	10
A3-B2	11	12	11	12	11 (n)	12
B1-A2	13	14	13	14	13 (n)	14
B1-A3	15	16	15	16	15 (n)	16
B2-A1	17	18	17	18	17 (n)	18
B2-A3	19	20	19	20	19 (n)	20
B3-A1	21	22	21	22	21 (n)	22
B3-A2	23	24	23	24	23 (n)	24

Tools, methods and procedure

All tools and methods were pilot-tested. A study with six participants (two from each group) assessed the appropriateness of the eye-tracking test and questionnaires. Written questionnaires were used with groups H whereas OH and group D was administered oral questionnaires through sign language interpreting. Written answers were shorter as participants did not elaborate on them. On the other hand, the personal interaction involved in the oral administration allowed for more fluid communication and despite taking longer, led to more detailed answers. Thus, for the definitive experiment, oral questionnaires were used with all groups. The questions not well understood were made more explicit and a question about preference for sign interpreting or subtitling for TV (which arose in the pilot study) was added. The order and the nature of the instruments were:

Questionnaire to elicit personal information: age, education, type and degree of deafness, language and communication skills.

Test for reading comprehension in Spanish.

Test for oral comprehension in English (for group H).

Eye-tracking test. After the process of calibration, participants' eye movements were registered while watching the videos on a TV monitor with a Tobii X60 eye-tracker at a rate of 60Hz.

Comprehension questionnaires. After watching each video, participants answered the corresponding questionnaire with six questions: two on narrative information, three on recall of information and one on inference of

information. Measures for evaluation were established after a control test with 15 English native speakers who watched the videos without subtitles and answered the same questions.

Questionnaire on subtitling viewing habits and preferences with 15 questions (one yes/no, four open, five Likert scale and five multiple choice).

The average duration was 45 minutes. Participants knew that they were volunteers for a European study on SDH but were informed in situ about the procedure. They were also asked to sign a consent form to fulfil the ethical requirements of the Autonomous University of Barcelona. It was emphasized that they should watch the videos as they would do in a non-experimental setting. Without consistency in the instructions, as happened in the pilot test, participants would have focused on reading the subtitles, presumably because “subtitling” was in the name of the experiment. At the end, they were told the overall objective and had the opportunity to express their opinions.

Preliminary results

Here we present the preliminary findings concerning the effect of participants’ profile on the level of reaction. Statistical analysis has not yet been applied so the tendencies observed require further corroboration.

The participants were asked about the relationship between the characters in the excerpt and for a summary of the plot. Groups H and HOH obtained very good, almost identical results but HOH participants were slightly better in the comprehension of the plot of SM, with higher visual cognitive load. Presumably through practice, HOH could have developed strategies for switching attention effortlessly. Group D, on the other hand, obtained low scores. An improvement was observed in SM, so visual information could have supported their comprehension. However, it did not lead to full comprehension, as the answers were incomplete. In CD, visual information did not provide enough support and overall performance was poor. Except for five subjects who obtained very good results, D participants experienced difficulties when extracting the narrative information.

Three questions were designed to analyse participants’ recall and processing of information: one about the verbal information conveyed in the subtitles, one about the visual information from the images, and one open question, the answer to which could come from both sources. This third question was designed to identify the type of information prioritised. Answers to the verbal question reflect some differences. In CD, group H obtained the best results, closely followed by group HOH. Group D, again, with the exception of very few participants, performed very poorly. In SM, H and HOH behaved similarly and obtained very good results. Performance of group D slightly improved but answers were still partial. Results from the visual question also show differences. In CD all groups obtained very good results

but in SM these differed. The worst performance was that of group H and the best was that of group D. In contact with sign language, they might have a naturally developed ability to understand images. Group HOH also obtained good results. In the open question in CD, most H and HOH participants referred to both verbal and visual information. In SM, however, they just mostly referred to verbal. In CD, most of group D alluded to visual information but in SM they referred to verbal information. These results show a pattern similar to that found in other studies (Cambra et al. 2008, 2009 and 2010, Romero-Fresco 2011, Arnáiz-Uzquiza forthcoming): regardless their profile, participants prioritised verbal over visual information.

Finally, the participants were asked to infer information and anticipate the consequences of the actions developed in the excerpts. As mentioned, the narrative content did not include the “outcome” and “reaction to the outcome”. Group H obtained the best results. Surprisingly, given the results for the other categories, groups D and HOH had a comparable performance. In CD, all H participants answered correctly, as did most HOH and more than half of D. In SM, group H had very good results but HOH and especially D had a poor performance. Once more, few D participants obtained good results in both cases.

These recurrent D participants turned out to be those with the best scores in the test for reading comprehension: the one postlocutive deaf and the four who received a bilingual and inter-modal oral and sign language education. According to research on inter-modal bilingualism by Morales-López (2010), it is essential for deaf children to acquire sign language at early stages of the learning process in order to develop a second oral language, as the early development of one language facilitates the acquisition of a second one. Nevertheless, within the current deaf community in Spain and Catalonia, few sign-language users could actually be considered native users of the language. It was not until the last twenty years that schools for deaf children started to move from an exclusively auditory oral-based approach to a bilingual approach that integrates oral and sign languages. Therefore, only some of the youngest generations are native sign-language users. The majority of sign-language users, however, consider the sign language their natural language, despite having learnt it at later stages of childhood or adulthood. The sample in this study shows this, as only four participants were strictly native sign-language users. This educational context might explain the ability shown by the native users when compared with the difficulties faced by the non-native users. However, definitive conclusions cannot be drawn due to the limited number of participants with this specific profile.

Even without statistical analysis, some of the hypotheses have been partially confirmed. The sign-language users were more efficient in comprehending, recalling and inferring visual information, and oral language users were more efficient with verbal information. However, this was not

always the case: perhaps through practice, HOH seemed to have developed strategies to cope with split attention and efficiently process multimodal information. The same could be said of the few bilingual and native sign-language users, although the differences between L1 and L2 acquisition in sign languages require further research. The results of this study, as indicated, are expected to be in tune with the findings of previous studies by Cambra et al. (2008; 2009; 2010), Romero-Fresco (2011) and Arnáiz-Uzquiza (forthcoming). Our results also seem to confirm some differences between the reception of the two videos, as their visual load was significantly different. However, this would need to be further investigated.

Conclusions and further steps

Although the analysis of the data is still underway, some interesting results have already been obtained. Results on the effect of viewers' hearing and communication profile on reaction have partially confirmed that oral-language users were more efficient with verbal information and sign-language users with visual. The results also indicate that differences might be more due to communication rather than hearing aspects, since despite the deafness and hearing loss, most HOH (perhaps more accustomed to watch with subtitles) and some few D native sign-language users seem to have developed efficient strategies to efficiently switch attention. Nevertheless, these possible differences between native and non-native deaf sign-language users deserve further research.

It also seems that visual information might be a support for group D, especially in narrative comprehension and inference of information; although reading the subtitles takes precedence over viewing the images in all the group cases. This could be an added difficulty for group D, especially for the non-native sign-language users with a low level of reading comprehension. As Cambra et al. (2008; 2009; 2010) and Romero-Fresco (2011) claim, it would be important to find subtitling exposure times adequate to their cognitive needs, which should provide enough time to read and extract relevant narrative information from the subtitles and to view and benefit from the cognitive support of the images. Nevertheless, more research is still needed on how visual and verbal information are actually processed and how they complement each other.

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Where is the audience? Testing the audience reception of non-professional subtitling

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This paper presents the results of a pilot study exploring the reception of non-professional subtitling. Nine participants were shown three video excerpts with commercially available professional subtitles and two different versions of non-professional subtitles. To examine participants' reception, eye-tracking was used to collect gaze data, while questionnaires and interviews were used to assess comprehension and translation difficulty. The results indicate that the reception of the product depends on the participants' level of English. Additionally, the participants demonstrated a greater degree of comprehension with professional subtitling, but their level of satisfaction with the content and the translation does not vary significantly. The methodology to explore the reception of subtitled material is supported by the results of the pilot study.

Keywords: non-professional subtitling, reception, audience, viewer behavior

Introduction

The participatory culture enlarged by Web 2.0 has allowed a greater number of people to take part, as active and as passive users, in online consumption and production activities. At the same time, in the globally connected world, media producers serve international audiences, rather than geographically or politically divided target markets. The distribution of audiovisual content over the Internet illustrates this situation. In 2013 the most frequently downloaded TV series episode via BitTorrent was the season finale of *Game of Thrones*, with 5.9 million downloads¹, exceeding the 5.5 million traditional television users in the United States – this number does not include the number of online streaming users. Further, half the episode downloads occurred during the first

week after the release, reflecting the audience's unwillingness to put up with extended delays in international releases.

Under these circumstances, subtitling is an essential requirement for international audiences since not everybody can consume the content in its original language. Given the user-friendly software that is freely available now to produce subtitles, and the way audiences develop emotional attachment to audiovisual content, non-professional subtitling has become an option for a significant number of users. The expansion and longevity of non-professional subtitling communities further indicate the importance of this phenomenon.

In this project, I explore the reception of professional and non-professional subtitles. Adopting the user's perspective, my aim is to test whether there is a difference between the reception of professionally and non-professionally subtitled audiovisual products, depending on the listening-comprehension proficiency of young viewers. I assume users with different levels of listening-comprehension skills will engage differently with the subtitled products, especially when the original language of the product is not entirely foreign to them.

Categories of non-professional subtitling

Non-professional subtitling is a heterogeneous phenomenon that can be divided into different categories depending on the focus of interest.

From the perspective of the translation initiator, the focus could be on crowdsourcing and user-initiated translation (Fernández Costales 2012). In crowdsourcing, a company traditionally decides what material needs to be translated and asks users to translate the content, according to a set of requirements defined by the company. User-initiated translations, on the contrary, are produced by independent volunteer communities where members are in charge of the entire process. The TED Open Translation Project² is the quintessential example of crowdsourcing, while Addic7ed³ and OpenSubtitles⁴ are characteristic examples of user-initiated translations.

When the format is considered, two different types of subtitles can be distinguished: pro-am (professional-amateur) subtitling (Leadbeater and Miller 2004) and innovative subtitling. Pro-am subtitles are mainly guided by the principle of producing subtitles that are at a near-professional quality level. The Pro-am communities tend to imitate professional subtitling; they do not embed the subtitles in the video, but rather distribute them as individual subtitle files to be used with specific video versions. Innovative subtitling, on the other hand, explores new possibilities in the subtitles, such as variations in terms of colors and fonts or creative spelling to express emotions. Sometimes it also includes surtitles or glosses to add supplementary information. To be

able to include these new features, subtitles must be embedded directly in the video.

Research on non-professional subtitling

Research on non-professional subtitling has experienced a steady growth in recent years. The influence of translation communities and the emergence of crowdsourcing models in specific translation markets have raised awareness in the Translation Studies community about the non-professional translation phenomenon. The first studies dealing with non-professional subtitling, specifically fansubbing, explored it as part of the fandom phenomenon (Napier 2001, Cubbison 2005), mostly in areas related to Asian Studies. Nornes (1999) makes a claim for updating the mainstream approach to film translation. He argues that *abusive subtitling* may open up a range of new possibilities for subtitlers to experiment with language and formatting (by using textual and graphic abuse), which could lead the viewer to the original. From his perspective, abusive subtitling is an emerging subtitling practice guided by instinct and experimentation, rather than by “the inertia of convention” (Nornes 1999: 18).

Since 2000, the study of non-professional translation has taken root in Translation Studies proper. The phenomenon has been approached from different perspectives: Some researchers have described the working mechanisms of the communities and groups (Díaz-Cintas and Muñoz 2006, Pérez-González 2007, 2012) while others have compared non-professional and professional translations (Bogucki 2009, La Forgia and Tonin 2009). Aspects related to the ethics and legality of these practices have also been explored (Leonard 2005). Considering its possibilities for translator training, O’Hagan (2008) calls for exploration of the usefulness of non-professional translation environments in professional training settings. O’Hagan (2011) has edited a volume of *Linguistica Antverpiensia on Community Translation*, providing a general view of the phenomenon.

Even though non-professional subtitling initiatives are evidently a result of viewer empowerment and the decentralization of media flows, Translation Studies research on non-professional subtitling still lacks studies on users’ actual reception and evaluation of these products. Caffrey (2009) studies the cognitive effort necessary to watch Japanese anime subtitled in English, both with and without additional pop-up glosses. The results suggest that increased processing effort is required when a pop-up gloss is on screen, which results in less processing time allocated to the subtitle and a greater number of skipped subtitles. The study found that participants had a better understanding of culturally marked items when they watched the videos with pop-up glosses, although they also reported the speed of the subtitles to be too fast. Künzli and Ehrensberger-Dow (2011) study audience response to surtitles by comparing

the reception of translated material that includes surtitles explaining specific cultural references in the video. They conclude that the material using surtitles produces a higher cognitive load, but “participants’ performance in terms of retention of various verbal and visual elements in the movie excerpts was identical in the two conditions” (2011: 197). The authors point out that using surtitles for an entire film could yield other results, such as fatigue and/or reduced reception capacity. However, Ramos Pinto (2013) found some of the viewers consciously decided whether or not to follow the surtitles and thus achieved greater surtitle processing efficiency. Künzli and Ehrensberger-Dow also stress that the acceptance of innovative subtitling might be related to the age and literacy level of the users. In a pilot study with four participants, Secară discusses the use of *txt lingo* (the creative spelling used in chats, SMS and electronic communication) in subtitling for specific environments such as short online videos. The participants reported no problems reading the subtitles and relating to the viewing experience. Eye-tracking data also indicate that the use of such creative spelling would allow viewers to spend more time on the image. Secară also notes that this type of subtitling might be suitable for a certain age group and a specific type of video. Although Caffrey (2009), Künzli and Ehrensberger-Dow (2011), and Secară (2011) have explored some of the common features in non-professional subtitling, they all report on characteristics found in material prepared by the researchers. These studies do not analyze authentic subtitles produced by fans.

Methodology

The present study is on the *reception* of non-professional subtitling. Although Kovačič pointed out in 1995 the need for reception studies in audiovisual translation already in 1995, this area still lacks attention from translation scholars (Gambier 2008). Adopting an empirical approach, this study aims to answer the question: Does the audience’s reception indicate any difference between professional and non-professional subtitles?

The experiment uses eye-tracking, questionnaires, and interviews to collect data on participants’ response when they engage with professional and non-professional subtitling. The participants are grouped according to their listening-comprehension skills in English. I assume these different levels of proficiency will be reflected on behavioral differences in terms of the respective time spent on the subtitle and on the image. Eye-tracking has been used in audiovisual translation since the 1980s (d’Ydewalle et al. 1987) to monitor, collect, and report gaze information from the viewers in terms of fixations, saccades, and attention shifts between the subtitle area and the image area. The data from the eye-tracker are complemented with information from questionnaires and interviews regarding participants’ audiovisual habits, their understanding of the content and their attitude towards subtitling.

The data collection for the study was divided into three different stages.

Pre-experiment questionnaire

This stage involved a pre-experiment questionnaire on the participants' background, media-consumption habits, linguistic knowledge and a listening-comprehension test to select a subset of participants. A proficiency test was developed and used to gather information on the participants' listening-comprehension skills.

Since standardized tests are designed to assess a wide range of skills, I had to develop a special proficiency test to categorize the participants according to their listening-comprehension skills alone. Considering that, from a linguistic point of view, understanding a TV series requires mostly listening skills, I designed a listening-comprehension test using an excerpt from the TV series used for the experiment. As Thomas (1994: 322) explains, this type of test "has the advantages that if all participants are tested uniformly, proficiency within the sample may at least have internal consistency and that subgroups may be compared with respect to proficiency on some rational basis."

Students were asked to watch a 103-second excerpt from the TV series *The Big Bang Theory*, in English and without subtitles, and answer seven questions. Based on the number of correct answers, they were classified into three groups: low (0-2 correct answers), mid (3-4 correct answers) and high (5-7 correct answers). One of the main objectives of the pilot experiment was to validate the appropriateness of this test as a tool to categorize the participants.

Eye-tracking session

The eye-tracking session and the interview combined lasted between 40 and 60 minutes per subject. During the eye-tracking session, the participants watched the clip and answered the comprehension questions. The study included three different types of subtitles: one professional version and two non-professional versions. Tobii Studio 3.2.1 was used to create the video excerpts and on-screen questions, collect gaze data and to record the participants' verbal responses. At the beginning of the eye-tracking session, the participants were asked about their active and passive use of English. After that, they read a synopsis of the TV series and watched the clips. The sequence in which the subtitles were presented was randomized so that the subtitles were presented in all possible positions (initial, medial and final). The randomization design included six sequences. As indicated in Table 1, the sequences of presentation of the three types of subtitles (PRO = professional version, NP1 = non-professional version 1 and NP2 = non-professional version 2) were actually semi-randomized because the order of presentation of

the clips was not altered. The reason for this was twofold: 1) rotating the clips would add complexity to the experiment design and would require more participants, since there would be 54 possibilities; and 2) the selected videos were assessed for comparability so that their individual differences would not affect the analyses.

After each clip, the participants answered 16 questions on their comprehension of the clip, in terms of both their subjective opinion on different aspects of the clip and recall testing. All questions were presented on the same computer screen and participants answered them orally. The first question asked if they had seen the episode before (to see if this variable affects the results), and then they were asked to explain what happened in the video. The next six questions assessed their reception in terms of three different types of information: narrative, verbal and iconic (cf. Hickethier 2007, quoted by Künzli and Ehrensberger-Dow 2011). Three additional questions asked the participants to rate (on a 6-point scale) the content of the dialogue, their enjoyment, and their difficulty following the translation. They were also asked to give reasons for their ratings.

Table 1: Presentation sequence used

Order	Clip 1	Clip 2	Clip 3
Test 1	NP1	NP2	PRO
Test 2	PRO	NP1	NP2
Test 3	NP2	PRO	NP1
Test 4	NP1	PRO	NP2
Test 5	PRO	NP2	NP1
Test 6	NP2	NP1	PRO

Interview

To conclude the experiment, I interviewed the participants immediately after the eye-tracking session to learn more about their audiovisual consumption habits. The interview included questions regarding the participants' knowledge and considerations of non-professional subtitling. At the end of the interview, I informed them about the specific purpose of the research. Interviews lasted between 15 and 25 minutes.

Pilot experiment

Participants

The group of participants for this pilot experiment comprised nine second-year undergraduate students of the BA program in English at the Universitat Rovira i Virgili (Spain): 8 women and 1 man, ranging from 20 to 27 years ($M = 23.1$, $SD = 3.0$). I contacted students by e-mail and 15 of them volunteered

to participate in the experiment. According to the number of correct answers to the questions from the pre-experiment questionnaire, five students were placed in the low-level of English group (LLE); six in the mid-level group; and four in the high-level group (HLE). Participants in the mid-level group were not included in the experiment. All of them were Catalan or Spanish native speakers and had normal vision or corrected-to-normal vision (by wearing glasses or contact lenses). The participants were deliberately only told that the research was related to media reception, in order to make sure their attention to the subtitle area was not mediated by their expectations for the experiment. At the end of the experiment, I informed them about the specific purpose of the study.

Apparatus

The participants were seated between 53 and 63 cm away from a 23-inch LED monitor with a 1920x1080 resolution. Eye-movements were recorded using a Tobii X120 eye-tracker. The participants wore headphones during the entire experiment. I calibrated the eye-tracker for each participant before the experiment: participants focused their gaze on a dot that stops at 9 data points in a 3x3 grid displayed on the screen. Lighting was kept relatively constant by closing the blinds and turning on the same lights for all sessions.

Material

Three excerpts, of between 3:08 and 3:55 minutes long, were selected from the second season of the popular sitcom *The Big Bang Theory* (CBS 2007–). The show focuses on five characters: Leonard, an experimental physicist; his flat mate, Sheldon, a theoretical physicist; their two equally geeky and socially awkward scientist friends, Howard and Raj, and their neighbor, Penny, an aspiring actress. The show builds its comedy around the contrast between the geek characters' intellect and lack of social skills and Penny's outgoing personality and low education level. Since it was first released in the United States in 2007, the show has proved to be an international success and has maintained large audience ratings.

Three different sets of subtitles were included in the study: one professional version and two non-professional versions. The professional version (PRO) was taken from the DVD distributed in Spain. The two non-professional versions were taken from two online communities: aRGENTeam (NP1) and TusSeries.com (NP2). These two communities were selected because they were both active in 2008 (when the episodes were broadcasted in the United States), and their records indicated that the subtitles were produced internally. Additionally, both communities follow pro-am guidelines and distribute the subtitles in the form of .srt files instead of embedding them in the video file itself. Since the frame rates of the video versions are different, I

decided to use two different versions of the video instead of altering the time codes. I prepared three versions of each clip using DVD Decrypter 3.5.4.0, FairUse Wizard 3D R2 and Total Video Converter 3.71.

Procedure

Prior to the experiment, I wrote a protocol for the eye-tracking and interview session. The experiment took place in the *Aula d'Anàlisi de la Parla* at the Universitat Rovira i Virgili, during two weeks in December 2012. I arranged individual appointments with the participants. They selected a suitable time and date for the session and came to the laboratory individually. Upon arrival, I verbally informed them regarding their participation in the study and their rights, and they signed the appropriate consent form.

Table 2: Sequence randomization for the pilot experiment

Participant	English Level	Sequence	Clip1	Clip2	Clip3
P1	Low	1	NP1	NP2	PRO
P2	High	2	PRO	NP1	NP2
P3	Low	3	NP2	PRO	NP1
P4	Low	1	NP1	NP2	PRO
P5	High	5	PRO	NP2	NP1
P6	High	5	PRO	NP2	NP1
P7	Low	2	PRO	NP1	NP2
P8	Low	4	NP1	PRO	NP2
P9	High	6	NP2	NP1	PRO

Regardless of the low number of participants in each group, all six possible sequences were tested in order to identify any possible problem in the order of presentation. I seated the participants in front of the monitor one by one, and calibrated the eye-tracker to their eyes. Once the calibration process was successfully completed, I started the video playback. I assigned a sequence to each participant and showed them the three excerpts, alternating the three conditions, as shown in Table 2. After each clip, they orally answered the on-screen questions and recorded their answers with a microphone. Immediately after this session, they took part in the interview.

Results

Only the results from eight participants are included here. In accordance with Caffrey (2009), the gaze data threshold was set at 85%. Participant 1 was excluded from the analysis because the gaze data collected did not meet the threshold.

Eye-tracking data

Taking into consideration that initial testing showed the presentation order of the subtitles for this sample is not a relevant variable for mean fixation ($F(5,18)=325.46$ $p=0.545$), the following results will present some statistical analyses regardless of the low number of participants included in this pilot experiment. Two areas of interest (AOIs) were defined for the analyses: a rectangle surrounding the subtitles (subtitle area) at the bottom of the screen and the rest of the screen for the image area.

Fixation length

The mean fixation length for each participant, for each condition, was calculated by dividing the sum of the length of the fixations by the number of fixations (Table 3). No significant difference was found between the mean lengths of the fixations on the subtitle area among the participants based on their level of English ($F(1,18)=0.013$ $p=0.909$), nor the type of subtitle ($F(2,18)=0.867$ $p=0.437$). The same occurred with the fixations on the image area and the level of English ($F(1,18)=0.394$ $p=0.538$), and the type of subtitle ($F(2,18)=0.011$ $p=0.989$).

Table 3: Means for fixation length (in milliseconds) and number of fixations by AOIs (Subtitle and Image), Group and subtitle condition (PRO, NP1 and NP2)

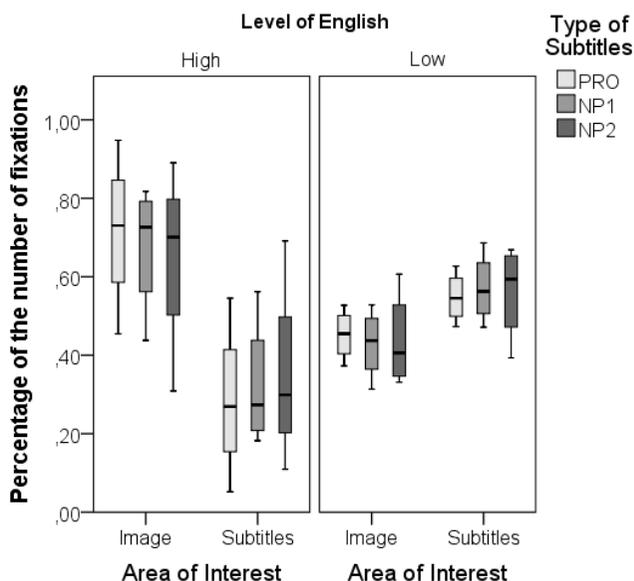
	Fixation length (ms)		Fixation length (ms)	
	Subtitle area		Image area	
	Mean	SD	Mean	SD
<i>Low Level of English Group (LLE)</i>				
PRO	200.97	15.84	352.86	63.60
NP1	223.87	10.92	369.94	55.02
NP2	202.32	19.46	342.31	21.77
<i>High Level of English Group (HLE)</i>				
PRO	202.36	26.50	383.74	135.45
NP1	208.79	33.33	371.97	118.04
NP2	212.83	21.21	385.31	136.73

Number of fixations

As shown in Figure 1, in the LLE group, 44% of all fixations are on the image, while this number rises to 68% in the HLE group. Thus, there is a significant difference ($F(1,18)=13.39$ $p<0.01$) in the percentages of the fixations allocated to the image depending on the level of English, but this percentage did not differ significantly between the subtitle conditions ($F(2,18)=0.137$ $p=0.873$). A similar correlation with language level was found for the *percentage* of time allocated to the subtitle area ($F(1,18)=13.39$ $p<0.01$). A paired t-test showed there is a significant difference between the

amount of fixations allocated to each area by the two groups, HLE ($t(11)=3.31$ $p<0.01$) and LLE ($t(11)=-2.39$ $p<0.05$).

Figure 1: Percentage of fixations on areas of (image and subtitle) by group (HLE and LLE) and type of subtitle (PRO, NP1 and NP2)

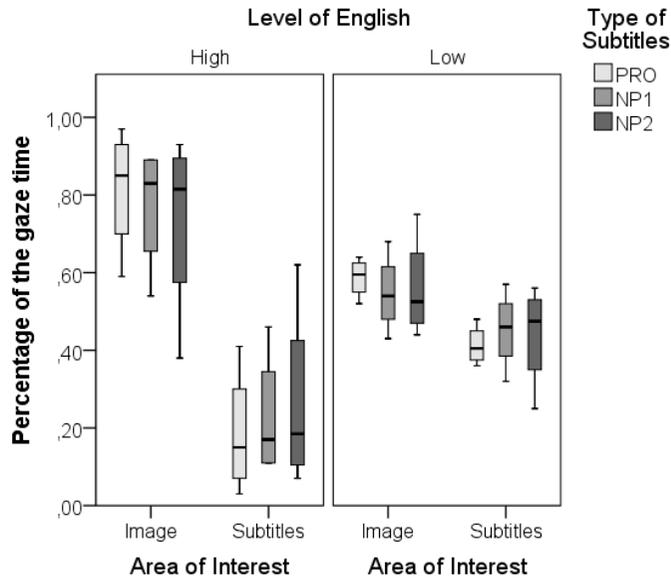


Percentage of gaze time

The proportion of gaze time spent on each area of interest (Figure 2) shows that both HLE and LLE fixated more on the image (77% and 56% respectively) than on the subtitle area (23% and 43%). As with the percentage of the number of fixations, there is a significant difference in the proportion of gaze time on the image ($F(1,18)=10.83$ $p<0.01$) and the subtitle area ($F(1,18)=10.83$ $p<0.01$) by level of English, but the type of subtitle does not have a statistically significant effect. Within-group analyses also confirmed significant differences in the percentage of gaze time in each area for each group, HLE ($t(11)=5.26$ $p<0.0001$) and LLE ($t(11)=2.43$ $p<0.05$).

A visual inspection of Figures 1 and 2, and the standard deviations of mean fixations (Table 3), indicate that the data from HLE subjects have greater dispersion than those from LLE subjects, which is consistent with the different levels of proficiency. LLE participants rely mostly on the subtitles, while HLE participants might make a conscious decision about reading the subtitles or not. When comparing the percentage of fixations to the percentage of gaze time on the image and on the subtitle area, on average, participants in the LLE group have more fixations on the subtitle area than on the image, but their fixations are longer on the image than on the subtitles.

Figure 2: Percentage of gaze time on areas of interest (image and subtitle) by group (HLE and LLE) and type of subtitles (PRO, NP1 and NP2).



Comprehension questionnaire

Table 4 presents the percentage of correct answers by the participants under the three conditions. As can be seen in the means, the PRO condition ranks higher than NP1 and NP2 in both groups, with 76.7% correct answers in the LLE group and 83.3% in the HLE group. Analysis of the answers shows differences in the scores for the Verbal Attention questions, where the PRO subtitles correlate with better results than the other two versions: 70% for PRO condition and 40% and 50% for NP1 and NP2 among the LLE participants, and 87.5% for the PRO condition and 62.5% for both NP1 and NP2 in the HLE group.

Table 4: Percentage of correct questions by type of question and condition

	Verbal Attention	Iconic Attention	Narrative Attention	Mean (cued recall)	Gist Comprehension (free recall)
<i>Low Level of English Group</i>					
PRO	70.0	80.0	80.0	76.7 (<i>SD</i> = 5.7)	100
NP1	40.0	80.0	80.0	66.7 (<i>SD</i> = 23.1)	100
NP2	50.0	90.0	70.0	70.0 (<i>SD</i> = 20.0)	60
<i>High Level of English Group</i>					
PRO	87.5	87.5	75.0	83.3 (<i>SD</i> = 7.2)	75.0
NP1	62.5	87.5	75.0	75.0 (<i>SD</i> = 12.5)	100
NP2	62.5	62.5	62.5	62.5 (<i>SD</i> = 0.0)	75

In the Narrative Attention and Iconic Attention questions, the PRO and NP1 subtitles yield the same results in both groups.

As can be seen in Table 5, the means self-reported comprehension ratings were positive and very similar: 4.0 for PRO and 3.8 for NP1 and NP2 in the LLE group and 4.2 for NP1 and 4 for both, PRO and NP2 in the HLE group, on a scale from 0=none to 5=very high. These do not reflect the differences found in the analyses of the comprehension questions.

Ratings on the difficulty to follow the subtitles were also highly positive, with the only rating below 4 being 3.5 (where 0=very difficult and 5=very easy) for the NP1 in the HLE group. This difference is unexpected since participants in the HLE group were less dependent on the subtitles, but as can be seen in Figures 1 and 2, some participants in the HLE group did use the subtitles.

Table 5: Self-reported comprehension and translation difficulty by type of subtitle

	PRO	NP1	NP2
<i>Self-reported comprehension*</i>			
LLE	4.0 (<i>SD</i> = 0.7)	3.8 (<i>SD</i> = 0.4)	3.8 (<i>SD</i> = 0.4)
HLE	4.0 (<i>SD</i> = 0.8)	4.2 (<i>SD</i> = 0.5)	4.0 (<i>SD</i> = 0.8)
<i>Translation difficulty**</i>			
LLE	4.2 (<i>SD</i> = 0.8)	4.6 (<i>SD</i> = 0.5)	4.0 (<i>SD</i> = 0.7)
HLE	4.2 (<i>SD</i> = 0.5)	3.5 (<i>SD</i> = 0.6)	4.2 (<i>SD</i> = 0.5)

* 0 = none and 5= very high

** 0 = very difficult and 5= very easy

Discussion

The eye-tracking data show a significant difference in the behavior of participants with different levels of English, with the participants in the LLE group spending around 56% of the time in the image area and participants in the HLE group spending around 77% in the image area. This difference coincides with comments made by the participants during the interviews, when some mentioned they normally use subtitles as an aid rather than as their main source of information. This also corroborates the initial assumption that participants engage differently with the content depending on their language skills. The participants displayed similar gaze behavior under all three subtitle conditions, which is consistent with the participants' failure to notice differences between the subtitles during the interviews.

The results from the comprehension questions and the self-reported comprehension suggest different attitudes. Most of the participants mentioned in the interviews that, beyond this experiment, they had noticed low quality in non-professional subtitling available online, which relates to the general assumption of low quality in amateur translations. Nevertheless, when they

were asked to assess the difficulty of following the different subtitle versions included in this experiment, the ratings for all conditions were highly similar. Additionally, when asked if they noticed any difference between the subtitles, they only mentioned subtitle speed and appearance on the screen as relevant factors. All the participants said they had good comprehension of the material, and the general comprehension ratings were high for most of the conditions, but in fact, their answers to the questionnaire showed different levels of comprehension, probably depending on the type of translation (Table 4). This result might suggest participants' expectations do not necessarily correspond to a need to understand the content entirely.

The results from the comprehension questionnaire show that the Verbal Attention scores have an impact on the overall result. This may be a consequence of the sample size being small. The analysis of the data suggests the proposed methodology is suitable for studying the reception of professional and non-professional subtitling. Based on this experience, the methodology will be fine-tuned and the experiment will be reproduced with a larger sample in order to offer a better account of the reception of non-professional subtitling.

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Notes

¹ <http://torrentfreak.com/game-of-thrones-most-pirated-tv-show-of-2013-131225/>

² <http://www.ted.com/OpenTranslationProject>

³ <http://www.addic7ed.com/>

⁴ <http://www.opensubtitles.org/>

Personality traits and personification in translators' performances. Report on a pilot study

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Do translating translators interact with the text being translated and/or the person behind the text? Using methods borrowed from Psychology and Cognitive Science, this research aims to answer that question by unveiling correlations between personality traits and the interactions a translator engages in when translating. The interactions are identified by means of arguments formulated by translators in think-aloud protocols and post-translation questionnaires. It is found that there are five types of interaction: translator-text, translator-author, translator-self, translator-receiver and translator-commissioner. In the translator-author frame, translators display "personification", the act of referring to the text or textual author as a person. This paper reports on a pilot study on how personification operates within this frame.

Keywords: translator-psychology, interaction (in translation), personification, think-aloud protocols (TAP), personality traits, cognition, NEO FFI.

Introduction

The goal of this research is to understand the impact that human personality has on translating. There are various psychological viewpoints concerning the translator's mental experience during the process of translating. However, there seems to have been no systematic approach to the field of "translator-psychology". This paper aims to explore the field from the perspective of personality traits and the various interactions engaged in by translators in the process of translation.

Our basic question is whether and under what conditions translating translators interact with the *text* being translated or with a *person* behind the text. Do they ask "what does *this* mean?" or "what do *you* mean?" (Laygues 2007). The latter question would be an indication of personification,

understood as the construal of a text as a person rather than a thing. We consider translation to be a combination of different strategies; we do not assume that one single type of interaction is maintained through the entire translation process. Further, being intangible, interactions are to be identified by means of the “arguments” formulated by translators in the process of translation. Interactions here are considered to function within the two general frames of translator-text and translator-person, with the latter being characterized as “personification”. The translator-person frame consists of the four different sub-frames: translator-author, translator-self, translator-receiver, and translator-commissioner. These frames are assumed to be activated by combinations of different variables: personality traits, text types, and strategies adopted in solving translation problems. Our aim is to know which frames are activated by which variables or combination of variables, with a specific focus on the translator’s personality.

The following are the hypotheses that have emerged in the course of our initial research:

1. Open-to-Experience and Agreeable personalities tend to personify more in the translation process.
2. Conscientious and Open-to-Experience personalities tend to show greater interactions of the “translator-author” type while personifying. They would also show considerable interaction of the translator-text type.
3. The Conscientious personality produces texts that are more source-oriented in the process of translation. They interact more with the text and show less signs of personification.

This study is rooted in the belief that “translators and interpreters carry a wealth of different selves or personalities around inside them, ready to be reconstructed on the computer screen whenever a new text arrives, or out into the airwaves whenever a new speaker steps up to the podium” (Robinson 2002: 23-24).

Previous research in the field

Since there appears to be no previous research aimed at exploring the link between personality traits and personification in Translation Studies, we have borrowed methods and tools from Psychology and Cognitive Science to explore the human person’s influence on translating, i.e. translator-psychology.

In psychological terms, personality is the set of traits and mechanisms within the individual that are organized and relatively enduring and that

influence interactions with and adaptations to the environment, including the intrapsychic, physical and social environment (Larsen and Buss 2008: 4). According to Larsen and Buss (2008), in personality psychology traits function as the personality variables. This study therefore aims at identifying the link between personality traits and translatorial performance.

In Psychology, the view that behavior is the outcome of personality and situational factors is referred to as “interactionism” (Hampson 2001). When applied to translatorial behavior, interactionism explains translation as the outcome of a translator’s personality and situational factors. Situational factors here include a wide array of elements, ranging from age, gender, education and experience-as-translator to the translation brief, expectations from the translator and even ideology.

I adopt a multi-trait theory of personality (Hjelle and Ziegler 1981), used in a number of recent studies as indicated in Oliver, Pervin and Robins (2010). The five-factor model of personality presented by Costa and McCrae (1988) provides an empirical generalization of the co-variation of personality traits. The five factors, labeled Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C), abbreviated as CANOE or OCEAN, have been found not only in peer-rating scales where they were originally identified (Tupes and Christal 1992). They were also found in self-reports on trait descriptive objectives (Saucier 1997), in questionnaire methods of needs and motives (Costa and McCrae 1988) as well as in other areas.

In this research, only three of the five personality traits are tested by means of the NEO personality test. Neuroticism and Extraversion are not considered here since they introduce more extreme psychological domains that are beyond the scope of this study. The NEO personality test comes in various forms, with different numbers of questions (44, 60 and 240) and in different cultures. Since this research is on a Persian-speaking population, the test is administered in the Persian language, the subjects’ L1, for better results.

This research also uses think-aloud protocols (TAPs) as a means of collecting data (Ericsson and Simon 1998). This tool has a long history in Translation Studies, with the first study taking place in the early 1980s. According to Jääskeläinen (2001), TAPs have been used to investigate translators’ creativity (Kusmaul 1991) and attitudes (Laukkanen 1996) as well as numerous aspects of the translation process (Bernardini 2001).

Methodology

This research is carried out in three phases: a personality test, a TAP test and a post-translation questionnaire.

Subjects and what they are required to do

The research subjects were mainly selected from among translators who have a degree in any field and/or with more than three years of experience in translating. In general, translation-experience is given greater importance than holding a degree in translation. The number of subjects to be tested in the full project will be approximately thirty. Here I report on the three subjects tested for the pilot study. The results were analyzed in separate “analysis reports”.

All subjects first completed a 60-item test referred to as the NEO-FFI (NEO Five Factor Inventory). This cut-down version of the NEO test is designed to take only 10 to 15 minutes to administer. In this study, only the three Agreeableness, Conscientiousness and Openness (Open-to-Experience) factors are tested (Appendix II). The test has been translated and standardized in Persian.

As a second step, all subjects translated the same warm-up and main texts from English into Persian. The main text (see Appendix I) had a strong first person to evoke personification. The text was on translation since this was considered a topic in which all subjects might have a similar interest. The chosen text contained 534 words, which is considered long enough to allow the translator to build up a relationship with the textual world. The maximum time considered for translation was 120 minutes. The subjects were asked to work individually. The subjects/translators were all asked to come to the same office for the test, where they translated in a white room with white furniture. White is the color associated with neutrality, perfection and cleanliness, hence bringing a sense of comfort and peace, reducing tension. The translators wrote their translations on paper. They had access to the latest edition of the *Oxford Advanced Learners Dictionary* and a quality bilingual dictionary. Additionally, they had access to a laptop and Wi-Fi for web searches.

While the body of the text was the same for all subjects, the form in which it was presented was different: one with the textual author’s biodata, one without this information, and one containing both the biodata and a picture of the author. It was considered that the presence of the biodata and image would increase personification.

As the translators worked, they verbalized their mental processes. The TAP was a monologue, to avoid indirect effects on the subjects resulting from the presence of an opposing translator or the commissioner. These effects may alter the translator’s course of thinking. The TAPs were recorded using a voice-recording device. The translators were asked to speak out loud everything that crossed their minds in the process of translation. A written instructions sheet was handed out to the translators prior to the test.

The translators were asked to render the text as if it were for publication in an anthology of texts about literary translation, intended for monolingual people who read novels, assuring them of their anonymity in the research process or in any publications.

Immediately following the translation, a third requirement asked each translator to fill out a post-translation questionnaire asking about their age, sex, occupation, monthly income, education, marital status, years of experience as translator (being an amateur or professional in translation), blood type, and their full name (optional). They were also asked about the way they found translation solutions: they could choose between the text being translated, the reader, the author and the translator's self. The answer to this question depicts the translators' type of interaction in the translation process. Additionally, subjects are asked about their attitude towards the translation profession and some general questions designed to test their attitude to personification in everyday life.

The results of the TAPs (observational data) were then compared with the results obtained from self-report data (the questionnaires) in order to see if the presence of personification in translators' performances correlates with the information on their personality.

A main feature of the analyses is determining the type and/or nature of the problem encountered when translating a problematic segment. The types of problems considered here are threefold:

1. Word choice and textual
2. Authorial intention and re-expression
3. Reception

I define these three types of problems as follows:

1. Word choice and textual problems occur when the translator has problems understanding the text and the meaning of a term and has difficulty in finding an appropriate rendition for that specific term in the target language. Word choice is problematic here. The problem here can be resolved by work at no more than the sentence and text level.
2. Authorial intention and re-expression problems are those that deal with what the author wanted to say. In other words, the translator here experiences problems in understanding the author's intention. In this case, the translator may return and re-read the ST over and over. The translator here understands the meaning of a term in the text, but not in context. The translator in this case struggles to understand the author and to express and/or re-express the author's intention in a manner understandable to the receiving culture/readership. (The problem here is resolved by working at greater-than-sentence level and at times, especially when there is an intention to produce something appropriate for the receiving culture, the translator might have to move beyond the text.)

3. Reception problems are those that deal with how to make an ST segment understandable for the receiving culture and audience. These occur mainly due to cultural differences between the readers of the ST and the readers of the TT. Another reason for their occurrence may be national regulations. This can at times lead to censorship. In this type of problem, the reader of the TT may be explicitly mentioned by the translator. More generally, the translator considers the nature of the target culture and audience.

Additionally, the following are considered in this study as nine problem-solving strategies and/or solution types that may be adopted by translators:

1. Addition: to include an item that is not present in the ST, for further clarification.
2. Deletion: to suppress an ST item in the TT.
3. Explicitation: to make an implicit ST idea explicit in the TT.
4. Implication: to make an explicit ST item implicit in the TT, or to say something without directly expressing it (normally for problems of reception).
5. Literalism: to translate an ST item/chunk/sentence literally.
6. Simplification: to simplify a difficult-to-translate term or syntactic structure.
7. Substitution: to replace an ST segment with a totally different term, not a different sense.
8. Transliteration: to transliterate an ST item/chunk/sentence.
9. Re-conceptualization: a solution-type adopted in response to a message-based approach to the ST, which is adopted when translators do not fully understand the meaning of each item in the ST and therefore switch to the message as construed from the co-text and the context, often based on guesswork and the invention of a new concept.

Classification of interactions

One of the main problems with our methodology is the classification of the interactions based on linguistic data (the TAPs). If we followed a strict reading Laygues' idea, "personification" would involve the translator using the second person while translating: "What do *you* mean?". In the pilot study, however, there was no such use of the second person. We thus classify the interactions on slightly different criteria:

1. Interaction with the self: presence of the first person.
2. Interaction with the author (personification): naming of the author, in

- the third person (and possibly in the second person).
3. Interaction with the text: naming of the text in the third person, directly referring to the text by saying "text" or affirmative or negative interaction with the text-as-discourse.
 4. Interaction with the receiving culture and/or reader: naming of agents or factors in the target culture, and concern about the produced text's acceptability and appropriateness.
 5. Interaction with the commissioner: addressing the commissioner in the second person.

To illustrate how this works, in table 1 (Interaction types as identified from translators' verbalizations), I present examples from Subject 1, translated from the Persian:

Table.1: Interaction types as identified from translators' verbalizations.

Type of interaction indicated	of	Phrases Used (Arguments)/or behavior Indicating a specific type of interaction within the translator-text and/or translator-person frames of interaction
Interaction with Self	with	'How can I understand her intended meaning?' 'How can I know what she had in mind?' 'A hell of an artist I am to understand what she meant!!' 'I like what she says; it's interesting'. 'I suppose 'Holy Book' is better'.
Interaction with Author (personification)	with	Using the 'SHE' pronoun: 'She means that...' 'She wants to say that...' 'She had a special vision of translation.'
		Being in conflict with the author: The subject got angry with the author at times and she reacted in different ways. For instance by complaining or asking questions of herself: 'What is this author talking about any way?'
		می‌خواد بگه که در، چی می‌خواد بگه؟ می‌خواد بگه در تایید این مطلب یا برای، برای تایید این گفته در ادامه می‌مطلب ا ا ا هنگام ا آزمایش اولین ماشین ترجمه ا یک جمله از با ی بل کتاب مقدس بگم یا بگم که از تورات؟ She wants to say that in, what does she want to say? She wants to say as proof of this, eh, eh, eh, when eh, the first translation machine was tested eh, a sentence from the 'Bible', should I say 'Holy Book' or should I say 'Torah?'
Interaction with Text	with	Using the 'it' pronoun: 'What does it want to say?'

Interaction with the receiving culture and/or reader	<p>Thinking of and applying censorship in translation: The subject thought she shouldn't translate "vodka" and "bible" and she used other words to replace them in the Persian. (the words were 'non-alcoholic drink' (نوشیدنی) and 'holy book' کتاب (مقدس)).</p> <p>همون کتاب مقدس فکر کنم که بهتر باشه. با توجه به اینکه این ترجمه باید در ایران باشه بهتره لزوماً اسم کتاب گفته نشه. (خنده). نکته سیاسی.</p> <p>I suppose 'Holy Book' is better. Given that this translation is intended for use in Iran, it's best not to use the word 'Bible'. [Laughs aloud]. A political point.</p> <p>جمله نهایی ترجمه شده که از ماشین دریافت شد این بود: (خنده) چه جالب. "ودکا" یا "نوشیدنی"؟ نمی‌دونم "ودکا" را ترجمه می‌کنند یا نه، ولی اصولاً اگر ترجمه برای ایران باشه ترجیح می‌دهند "ودکا" را بگویند "نوشیدنی".</p> <p>The final translation received from the machine was: [Laughs aloud]. How interesting! 'Vodka' or 'non-alcoholic drink'? I don't know whether 'Vodka' is translated as it is or not, but if the translation is intended for Iran it is preferable to translate 'Vodka' as 'non-alcoholic drink.'</p>
Interaction with the commissioner	<p>Talking to me at times both as the commissioner and a friend.</p> <p>خسته شدم I'm tired نمیشد اینو میبردم خونه انجام میدادم؟ Couldn't I have taken this and done it at home? اه چقدر سخته این کار Humph, this is too difficult</p>

Pilot test results

Short descriptions (summary analysis reports) of the findings for each of the three subjects included in the pilot study are available in Appendix III. The following offers conclusions obtained from the self-report data (questionnaires) provided by each subject as well as general assessments of each subject obtained from analyzing the TAPs.

Subject 1

Subject 1 was identified as having a Conscientious personality. The responses to the questionnaire and the results of the TAP analysis both confirm that the Conscientious personality personifies the textual author. However, the hierarchy of interactions indicated in the questionnaire is somewhat different from that obtained from the TAP analysis. When asked about the ways she finds solutions to her translation problems, the subject's responses indicated interactions in the following order: author, text, reader, and self, whereas her interactions in the translation performance were in the following order of

frequency: self, author, reader, text. She has therefore under-reported her interaction with herself and over-reported her interaction with the author.

When asked about her behavior with her personal belongings, her responses indicated that:

1. She always names her personal belongings;
2. She talks to them most of the times;
3. She respects her personal belongings; and
4. She sometimes swears at/says bad words to her computer.

The main interaction types revealed in the TAPs are with herself and the author. Personification therefore exists. She is also concerned about her readers, thus justifying the reason for the cultural problems she encounters. Decision-making is easy for her in the sense that once she decides she does not change her mind.

To solve the problems encountered, the subject adopted "simplification" and "substitution" strategies. She simplifies difficult-to-translate segments (phrases, terms, etc.). There are also signs of the subject using the implicitation strategy, where she avoids direct reference to "vodka" and "Bible" in her translations. The use of these strategies indicates a concern for the readership and a will to satisfy the target culture. Application of the simplification strategy could also indicate a desire to avoid risks in translation.

In parts of her TAPs, the readers of the target text are explicitly mentioned and taken in mind when deciding on a certain solution.

Subject 2

The questionnaire showed that the subject interacted mainly with himself and the text. This is because his response to the question asking about the frequency of finding solutions to his problems by thinking about his personal experiences was "always" and his second choice was "the text". The reader ranked third and the author came last.

The subject does not seem much of a personifier in everyday life because he responded negatively to all the questions about the author and about his personal attitude towards his belongings. When asked if he had an image of the author in mind when translating, his response was "no".

This translator was analyzed as being Open-to-Experience, according to the personality test. He mainly encounters word choice and textual and authorial intention and re-expression problems, dealing with understanding the meaning of terms and choice of word and understanding the author's intention. Making a final decision is somewhat difficult for him and in most cases, he postponed decisions to his revision of the whole translation. His main interaction type is with himself. Personification does exist within the

translator-person frame where he interacts with the author, but to a very low degree. The target audience is not a source of concern for him.

The results of the questionnaire confirm the results obtained from analyzing the translator's verbalizations. In spite of the inevitable interactions taking place in the translator-person frame, this Open-to-Experience personality is not much of a personifier. The readers are not very important to him, nor is his faithfulness to the author. He is mainly self-centered. The translator's main interaction type was with himself.

Subject 3

The questionnaire confirmed the results of the TAP analysis, indicating that the translator's interactions were in the following order of frequency: the reader, the author, himself, the text, and lastly the commissioner.

Response to the questions about whether the translator has an image of the author in mind when translating the text, his/her age and nationality, also indicated the existence of personification. According to the self-report data, the translator did have an image of the author in mind when translating the text, and he thought of her as being middle aged and possibly coming from one of the countries of the former Soviet Union (in his own words).

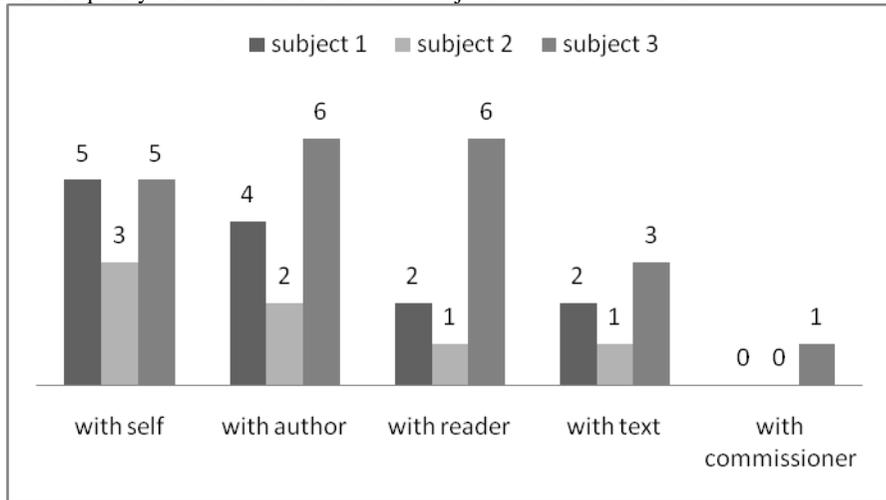
In everyday life, he is not much of a personifier, but personification is not totally out of the picture for him either. When asked about his attitude towards his personal belongings his responses indicated that he:

1. Respects his personal belongings;
2. Sometimes talks to them; and
3. Gives them names, at times.

This subject is on the average for all three personality types (the results of the NEO test are compared to the results obtained for the average Iranian college student on each of the said traits, considering that the 60-item NEO-FFI is translated and standardized in the Persian language). The problems he spent time on often concerned the target audience. The main interaction types revealed are with the author and the reader. Personification is an apparent attribute of this on-the-average personality type, specifically because the textual author is referred to as a person here.

Discussion

The differences in interaction strategies between the three subjects can be seen in Figure 1.

Figure 1: Frequency of interactions for the three subjects as absolute numbers.

Considering the link between personality traits and personification, an analysis of the above-explained pilot tests suggests that:

1. Personification could be a constant attribute of the Conscientious personality (subject 1).
2. Personification may not be a prevalent attribute of the Open-to-Experience personality (subject 2).
3. The on-the-average personality (Subject 3) treated the text and the textual author as a person. Personification was therefore a significant attribute of this type, who scored slightly more on Conscientiousness. This subject also interacted with the commissioner. Subject 3's significant interaction with the author could also be an attribute of his greater experience as a translator (Appendix III) in addition to his personality specifications. This calls for further research into the link between experience as translator and the interactions showcased by translators in translatorial behavior, with emphasis on personification.

In view of the results of this pilot study, personification might be considered an attribute of the Conscientious personality. However, further research might refute this finding. My finding actually contradicted my initial assumption that the Conscientious personality would interact more with the text and less with the person behind the text.

Similarly, the pilots do not support the hypothesis that the Open-to-Experience personality is a personifier. Here, the Open-to-Experience translator interacted more with the self and less, or not at all, with the person behind the text. As such, the open-to-experience personality relies more on personal experiences when translating.

Conclusion

This research is a preliminary step for a wider survey of how different personality types activate personification. There are many specific hypotheses that can be tested with this data. For example, with a greater sample we should be able to identify gender orientations in the act of translation: female translators are expected to interact more with the person behind the text, while male translators are assumed to see the text more as an object (this is actually confirmed by our three test cases, although clearly not in a statistically significant way). We will also be able to test the effect of having the author's biodata and image presented to the translator. Further analysis can also focus on the type of translation problems, and thus greater or lesser propensity to risk-taking associated with the personality types. On those issues, we hope to report in the near future.

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Appendix I: Text translated

Lost and Found in Translation

Translation seems to be an excellent metaphor for consciousness. From time immemorial, when we have been trying to understand and be understood, we have been trying to translate. Since different languages offer different possibilities, something always has to be lost in the process of translation — and sometimes, something can also be found. It even happens that, when being translated, the author discovers something within his or her text of which he or she was not aware before. For example, witnessing my poetry translated into a ballet by a Canadian choreographer, into music by a Dutch composer, and into a play by a Thai theatre group, was quite an amazing experience, reaching beyond not only the borders of language, but also of cultural expression. I truly believe that translating has an element of alchemy in it; it is complete transformation — or, as the alchemists say, transmutation. And it is not only the text that is transformed. Within the process something changes also in the translator. For translating is first and foremost a deep experience of understanding; therefore it has a strong transformative influence on the one who takes on the responsibility of translation. Needless to say, I am not speaking here about technical translation, or interpretation. The example of this, as the story goes, is that when testing the first translation machine, a sentence from the Bible: “The spirit is ready, but the flesh is weak,” was given for translation from English into Russian, and back again. The final sentence received was: “Vodka is good, but meat is rotten.” And sadly enough, translations like this occur very often. Sometimes they can even create a rather comical effect, as when “Bye-bye, baby, goodbye” is understood as “Buy, buy the infant, that's a great purchase!” However, there are much more subtle, yet no less sad misinterpretations. Like our fingerprints, our personal languages within any language, or idiolects, are unique. They contain vocabularies, intonations, rhythms and silences. In order to translate a literary text — particularly poetry — one must commit oneself quite like an actor does. One must let go of all habits and one's ego. One has to enter the imaginary state of the mind of the author, to experience the urge to create this particular text as painfully and passionately as the author did — only then can he or she start with what is called translating. Translation is never about the words. It is not even about choosing between meaning and music, sacrificing one for the other. Translation is a creation, recreating something that has the same effect as the original. Mathematically, if A is the original text, and X is the language in which it is written, B the translation, and Y the language into which it is translated, then B's relation to Y has to equal A's relation to X. That is, the translation's relation to the language into which it has been

translated has to equal the original text's relation to its original language. Naturally, in order to achieve this, one has to thoroughly understand not only the language, but the cultural context. What is a very simple everyday phrase in one language may become grandiose or awkward, incorrectly symbolic or senseless, in the other language. For example, "sitting 1 in the sun," in Estonian, is literally "sitting in the hand of the Sun;" "visiting someone" is going "into his or her root." In poetry one can use everyday meaning blended with the metaphorical — but this double meaning is always puzzling for a translator, just as the use of various homonyms as puns is. However, the more challenging the process of translating poetry from one language to another is the more fascinating it is as well. It also takes a lot of empathy. One always has to consider which words the author would have chosen if he or she had the original author's mother tongue as his or her tool. Sometimes, however, it is possible to achieve a good translation even if the translator does not know the original language. But then it takes two — the translator and an interpreter or transliterator — and good cooperation. If the author and translator share at least one common language it is possible to work together. Listening to how the author speaks, his or her tone of voice when reading, his or her explanations of the text, can give a very valuable insight into his or her poetry. Not always is the translator lucky enough to meet the author, so he or she has to rely on the written word, guessing all the time and discussing — even if only in his or her mind — the matter with various scholars who have done this before the translator or have shared common experiences and difficulties. I remember when I translated Shakespeare I could not help talking in his meter for months. At first people were puzzled, but then they got used to it and sometimes even replied in the same way. It was only when my body had adjusted itself to Shakespeare's rhythm that I could talk and write naturally in it, and that puns came to my mind without thinking.

Number of words to be translated: 534

Appendix II: Defining facets or sub-scales of the three trait domains studied

Openness (Open-to-experience)

This personality trait is defined as the active seeking and appreciation of experiences for their own sake.

The personality test measures six facets of openness. These are:

1. Fantasy: the tendency toward a vivid imagination and fantasy life.
2. Aesthetics: the tendency to appreciate art, music and poetry.
3. Feelings: being receptive to inner emotional states and valuing emotional experience.
4. Actions: the inclination to try new activities, visit new places and try new foods.
5. Ideas: the tendency to be intellectually curious and open to new ideas.
6. Values: the readiness to re-examine traditional, social, religious and political values.

Agreeableness

This trait is accompanied by a tendency to be pleasant and accommodating in social situations. It reflects individual differences in concern for cooperation and social harmony. Agreeableness is depicted as being revealing of the following six facets:

1. Trust: to believe that others are honest and well-intentioned.
2. Straight-forwardness: frank, sincere and genuine.
3. Altruism: active concern for others' welfare and generous, helpful and considerate.
4. Compliance: defer to others in interpersonal conflicts and seek to inhibit aggression and will forgive and forget; meek and mild individuals.
5. Modesty: humble and self-effacing, but not always lacking confidence esteem.
6. Tender mindedness: sympathy and concern for others; moved by the human side of social policies.

Conscientiousness

This is all about the degree of organization, persistence, control and motivation in goal directed behavior. The six underlying facets of conscientiousness are as below:

1. Competence: sense that one is capable, sensible, prudent and effective; well prepared to deal with life.
2. Order: neat, tidy and well-organized.
3. Dutifulness: governed by conscience, strictly adhere to ethical principles and

- scrupulously fulfill moral obligations.
4. Achievement-striving: work hard to achieve goals, diligent and purposeful in their lives.
 5. Self-discipline: ability to begin and carry-out tasks; self-motivating.
 6. Deliberation: the ability of thinking carefully before acting, cautious and deliberate².

² Note that the mentioned dimensions are bi-polar. In other words, a low score on any facet or domain means stronger tendencies towards the opposite character traits and behavioral tendencies.

Appendix III: Pilot test results (Summary analysis reports)

Subject 1

General information	Biographical data on the subject
The subject had the author's image and biographical data.	Sex: Female
Total test time: 1:25:41	Age: 33
Maximum time allowed: 120 minutes	Marital Status: Married (No children)
She did not use the Internet.	Education: Master's in Translation Studies
She did use dictionaries.	Occupation: International affairs department of a bank
	Monthly income: High
She did not do a TAP in the warm-up.	Amateur translator (depicted as such by the subject and also because this is not a main source of income for her).
	Experience as translator: Almost 7 years
	Blood type: O

NEO Personality Test analysis report

Personality trait	Score
Openness to experience	31
Agreeableness	30
Conscientiousness	37

TAP analysis: Frequency of interaction types

Interaction types	Number	Percentage
Interaction with self	5	38.5
Interaction with author	4	30.7
Interaction with reader	2	15.4
Interaction with text	2	15.4
Interaction with commissioner	0	0

Subject 2

General information	Biographical data on the subject
The translator's text was plain with neither the author's image, nor biodata.	Sex: Male
Total test time: 1:39:34	Age: 45
Maximum time allowed: 120 minutes	Marital Status: Married (2 children)
He did not use the Internet.	Education: Master's in Translation Studies
He did use dictionaries.	Years of experience as translator: more than 9 (Professional translator)
He did not do a TAP in the warm up.	Occupation: Bank staff and translator
	Monthly income: High
	Blood type: B+

NEO Personality Test analysis report

Personality trait	Score
Openness to experience	35
Agreeableness	33
Conscientiousness	22

TAP analysis: Frequency of interaction types

Interaction types	Number	Percentage
Interaction with self	3	42.9
Interaction with author	2	28.6
Interaction with text	1	14.28
Interaction with reader	1	14.28
Interaction with commissioner	0	0

Subject 3

General information	Biographical data on the subject
The translator had only an image of the author.	Sex: Male
Total test time: 1:45:29	Age: 34
Maximum time allowed: 120 minutes	Marital Status: Married (No children)
He did not use the Internet.	Education: Master's in Translation Studies
He did use dictionaries.b	Occupation: Chief Officer in Charge, Department of International Affairs in a financial institution
	Years of experience as translator: almost 10 (he is a professional translator as this is his main source of income in addition to his current post).
He did a TAP in the warm-up.	Monthly income: High
	Blood type: A+

NEO Personality Test analysis report

Personality trait	Score
Openness to experience	31
Agreeableness	29
Conscientiousness	34

TAP analysis: Frequency of interaction types

Interaction types	Number	Percentage
Interaction with reader	6	28.6
Interaction with author	6	28.6
Interaction with self	5	23.8
Interaction with text	3	14.3
Interaction with commissioner	1	4.7

Gender and linguistic background in SMS code-switching by Lebanese students

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Lebanese society has been always known for its multi-cultural and multi-lingual interactions, a natural product of which is code-switching. Nowadays code-switching is found in computer-mediated communication. In this study, a corpus of 606 SMS messages was collected from 18 Lebanese university students. The results indicate that there are gender distinctions in the code-switching percentages, and that language background as well as linguistic repertoire is relevant.

Keywords: Code-switching, SMS messages, bilingualism, multilingualism, sociolinguistics

Introduction

Due to the accelerated globalization process, the English language has become a lingua franca that brings many societies in the world together: it is the language of technology, science and education. Lebanese society is no exception; an increasing number of English words have become essential in aspects of young people's language. Lebanese students, both men and women, from different sociolinguistic backgrounds and different universities, have become accustomed to mixing Arabic and English in their daily communications.

Code-switching is the sociolinguistic phenomenon that corresponds to this alternation between languages. Bilingualism is considered the pillar of code-switching. Research on code-switching has shown that the behavior of code-switching among bilinguals is not confined to their spoken language; it embraces their written language as well.

This research seeks to add to knowledge of written code-switching, which "remains relatively unexplored and under-researched" regardless of the "variety of data" (Sebba 2012: 1). The findings should fill a gap in the studies

that pertain to the phenomenon of code-switching between Arabic and English in computer-mediated communication on the one hand, and to the gender differences in SMS code-switching on the other. The study is aimed at investigating the gender differences in SMS code-switching among Lebanese undergraduates at different universities. It seeks to understand the correlations between gender and other variables within a sociolinguistic framework.

Literature review

Bilingualism

Although the core of this research is code-switching, it is of utmost importance to start with discussing bilingualism since code-switching is rooted in it, and has been always considered its natural product. Code-switching is “the most creative aspect of bilingual speech” (Hoffmann 1991: 109). Regardless of the attempts that have been made by linguists to find an explicit definition for bilingualism, this sociolinguistic phenomenon has not yet received a unanimous definition. Hoffmann (1991:14) says that “[t]he most salient feature of bilingualism is that it is a multi-faceted phenomenon. Whether one is considering it at a societal or an individual level, one has to accept that there can be no cut-off points”. One of the earliest definitions is made by Bloomfield in his book *Language* in 1933 as the “native-like control of two languages”, yet the definition was questionable as for the degree of proficiency required by a “native-like” speaker. One of the shortest definitions is offered by Weinreich, who is one of the founding fathers of bilingual studies and a bilingual himself, where he describes it as “‘ [t]he practice of alternately using two languages will be bilingualism, and the person involved, bilingual’” (Hoffmann 1991:15). The definition provided by Mackery is, more or less, the same as that of Weinreich; “we shall [...] consider bilingualism as the alternate use of two or more languages by the same individual” (Hoffmann 1991:16).

So, what about bilingualism in Lebanon? Lebanon has been always known for its multiculturalism and thus, multilingualism has shaped the attitudes of most Lebanese people. It is common among Lebanese people to say ‘hi, kifak, cava?’ (it means hi, how are you?, are you ok?), when they meet each other, and it is so obvious that three languages, English, Arabic and then French are used in this short statement. Thus, bilingualism is not a strange phenomenon in the Lebanese society; it is something you ‘see’, ‘hear’, ‘feel’, ‘speak’ and even ‘touch’ wherever you go in Lebanon. It “is mainly seen in the streets, on the billboards, the way people address each other, etc. Many people are bilingual, trilingual if not multilingual” (Chahine 2011: 1). The official language in Lebanon is Arabic, but English and French are the main

instructional languages in most of the schools and universities. Thonhauser (cited in Chahine 2012:2) says: “If you were to ask a Lebanese person what the language of Lebanon is, most people would say Arabic, but is it?” Chahine (2011: 2) believes that “English and French can be included in the Languages spoken in Lebanon”. This interaction among languages in Lebanon could be attributed to different reasons, one being the geographical location of Lebanon, which enables it to be a country ‘where East meets West’. Moreover, the phenomenon of immigration has been always rooted in the Lebanese society; it goes back to the beginning of the nineteenth century. The French colonization in addition to globalization that is mostly characterized by the English language, have altogether contributed to this phenomenon.

Code-switching

Milroy and Muysken (1995: 12) believe that “the field of [code-switching] research is replete with a confusing range of terms descriptive of various aspects of the phenomenon. Sometimes the referential scope of a set of these terms overlaps and sometimes particular terms are used in different ways by different writers”. According to Stockwell (2007: 11), most people “have a repertoire of codes” that even those who are monolingual are capable of switching codes “from casual to formal class”. Wardhaugh (2006: 101) has indicated that it is “unusual” for a person “to have command of, or use, only one [...] code or system”. Whether this command is “a dialect, style, or register”, it would be “an extremely rare phenomenon”. Thus, for him bilingualism or even multilingualism “is the norm for people around the world rather than unilingualism”. “People [...] select a particular code whenever they choose to speak [or] shift from code to another or to mix codes even within sometimes very short utterances and thereby create a new code in a process known as [code-switching]” (Wardhaugh 2006: 101). Romaine (2000:55-9) defines code-switching as a “normal process for growing up bilingually and acquiring competence in more than one language”. She says that many linguists have considered code-switching a natural “communicative option” that is available to bilinguals the same as “switching between styles and dialects is an option” for monolinguals. She deems that for both of them, switching “serves an expressive function and has meaning”. In addition she believes that most linguists resort to the term ‘code’ to refer to the phenomenon of code-switching because it is like ‘variety; “a neutral one and does not commit us to taking a decision as to whether the varieties or codes concerned constitute languages or dialects” (Romaine 2000: 61-2).

There are different forms of code-switching. It can take place “between speakers’ turns and even within a speaker’s turn”. As for the second case, code-switching “can occur between sentences”—this is called inter-sentential code-switching-or “within a single sentence”, which is intra-sentential code-switching (Wardhaugh 2006: 101). Stockwell (2007: 12) differentiates

between another two types of code-switching, situational code-switching and metaphorical code-switching. Situational code-switching is “[w]hen a speaker moves from one domain to another, and changes their code as a result” and when a speaker “can deliberately change codes in the middle of a situation, in order to indicate to the hearer that they consider a new domain to be in operation”, this is called metaphorical code-switching. In the latter kind, it is done to achieve certain effects; aware of the shifts, while in the first people are usually unaware of it. In addition, Romaine draws a “symbolic distinction” between the ‘we’ code and the ‘they’ code as “embodied in the choice of varieties”. As a general rule, “the tendency is for the minority language to be regarded as the ‘we’ and the majority language as the ‘they’ variety. The ‘we’ variety typically signifies in-group, personalized activities, while the ‘they’ variety marks out-groups, more formal relations” (Romaine 2000:60).

Moreover, Myers-Scotton (1995:113-43) provides three subcategories within the negotiation principle that is modeled according to Myers-Scotton, after Grice’s “co-operative” principle. Myers-Scotton believes that the negotiation principle underlies all code choices, meanwhile, it “embodies the strongest and central claim of the [Markedness model]: that all code choices can ultimately be explained in terms of such speaker motivations”. As for the subcategories they are the ‘unmarked choice maxim’, the ‘marked choice maxim’ and the ‘exploratory choice maxim’.

Auer (1995: 115-16) provides another type of code-switching in his theory of conversational code-alternation, “which should be applicable to a wide range of conversational phenomena”. Thus, the meaning of code-alternation is conditioned by its ‘sequential condition’, in other words, conversational interaction.

Previous studies

Al Rousan et al. (2011), Iqbal (2010) and Dunn and Dunn (2007) all provide insights on gender differences in mobile phone use and show that men and women are unlike in their motives and use of language. As for the findings related to text messages, Dunn and Dunn (2007: 9) report that in Jamaica, “younger respondents were far more active users of SMS text messaging than older respondents” and that “women tend to send more SMS text messages than men”. Iqbal (2010) indicates that men and women have different communication motives for using SMS messages. Jagero and Odongo locate “obvious distinctive code-switching pattern between the two genders” in different ranks and age groups in Nairobi Kenya (Jagero and Odongo 2011: 10).

Wong (2006) discusses gender differences from the constructionist view that differences among men and women should not be studied apart from the

cultural and social backgrounds, as the differences are not only located between men and women but within the same gender as well (Wong 2006: 57).

Rafi (2012: 1) “examines the assumption that a great motor of SMS lives among females whose lexical and morpho-syntactic choices are different from males”. In their study of code-switching on the Facebook wall-posts of 24 Indonesian students, Sukyadi et al. (2012) find differences in code-switching behaviors of men and women. They also detect differences in the language used by the same sex, which could be relevant to the constructionist view and to the findings of Wong (2006) as well.

Al-Khatib and Sabbah (2008) and Warschauer et al. (2002) are among the rare studies, or perhaps the only ones in the Arab world, that examine written code-switching behavior between Arabic and English in computer-mediated communication. Al-Khatib and Sabbah (2008: 1) is the only study that spots gender differences in SMS messages among university students, although it has a different approach from our research: it basically aims at examining the functions of the SMS code-switching in addition to “investigating the distribution of the switched elements by syntactic category”.

Research question and hypotheses

This study aims to answer questions about code-switching in the SMS messages of undergraduates, both men and women. The main research question is whether there are gender differences in these messages. This question gives rise to the hypothesis that language background (monolingual or bilingual) affects the percentage of code-switching among men and women in different ways. A second hypothesis is that the more languages the participants are acquainted with, the higher the percentage of code-switching.

Methodology

In order to test this hypothesis, a pilot study was conducted.

A corpus of SMS text messages

A corpus of 606 SMS messages from a time span of two weeks to one month was collected from 18 undergraduates, 8 men and 10 women. There were 220 messages from men and 386 from women. All of the messages that included Arabic, even those that were totally written in Arabic, were written in

Romanized script. The Arabic that was used in the SMS messages was written in the Lebanese dialect, which is the language of communication in Lebanon.

Participants

There were 18 participants, 8 men and 10 women, from three different Lebanese universities, distributed as follows:

- Lebanese International University (LIU): 8 participants, 4 men and 4 women.
- Islamic University of Lebanon (IUL): 4 participants, 1 man and 3 women.
- Notre Dame University (NDU): 8 participants, 3 men and 3 women.

The participants will be referred to as LIU F1, NDU M2, etc. All of the participants are bilingual or multilingual Lebanese students whose native language is Arabic, except LIU F4 who is Lebanese-Armenian. All of them are students at Anglophone universities, and are either junior or sophomore students, except for LIU M3 who is a senior student.

Procedure

The students were asked to save and copy the SMS messages sent by them. They were informed that they should only submit the messages sent by them and not the ones they received (for reasons of privacy of information). The students were also informed that they had the right to delete any private messages they did not want to disclose, and that the content of their messages would be confidential and that their identities would remain anonymous. They were asked to categorize the receiver of each message: for example, a family member, a friend from the university or outside the university, a professor or others. They were also asked to identify the gender of the receivers, whether men or women. The SMS messages were then analyzed according to the research question and hypotheses.

This analysis was followed by a questionnaire and an interview with each subject.

Findings and Analysis

Upon collecting and analyzing the SMS messages, the findings show clearly that there is a difference in the code-switching of men and women when both language background and linguistic repertoire are examined.

Language background

The language background of the students was classified as bilingual or monolingual. This was deduced from the SMS messages, the questionnaire and the interview. The data are distributed as follows:

Table 1: Percentage of code-switching messages in code-switching messages of monolingual background men

Men	Messages	Messages with CS	Messages without CS
LIU M2	11	10	1
LIU M3	20	8	12
LIU M4	38	4	34
Total	69	22	47
%		32%	68%

Table 1 and Table 2 show that the percentage of code-switching in the SMS messages of monolingual background men is 32% while it is 28% in the messages sent by men with a bilingual background.

Table 2: Percentage of code-switching messages in code-switching messages of bilingual background men

Men	Messages	Messages with CS	Messages without CS
LIU M1	34	21	13
IUL M1	18	14	4
NDU M1	49	4	45
NDU M2	22	3	19
NDU M3	28	0	28
Total	151	42	109
%		28%	72%

Table 3 and Table 4 show that the percentage of code-switching in the SMS messages of monolingual background women is 39% while it is 65% in the messages sent by women with bilingual backgrounds.

Table 3: Percentage of code-switching messages in code-switching messages of monolingual background women

Women	Messages	Messages with CS	Messages without CS
LIU F2	73	30	43
LIU F3	47	15	32
IUL F1	52	17	35
IUL F2	24	14	10
Total	196	76	120
%		39%	61%

Table 4: Percentage of code-switching messages in code-switching messages of women with bilingual backgrounds

Women	Messages	Messages with CS	Messages without CS
LIU F1	46	32	14
LIU F4	30	19	11
IUL F3	22	15	7
NDU F1	29	13	16
NDU F2	26	19	7
NDU F3	37	25	12
Total	190	123	67
%		65%	35%

Table 5 and Table 6 show that the percentage of code-switching in the SMS messages of men and women with monolingual backgrounds is 37% while it is 48% in the messages sent by men and women with bilingual backgrounds.

Table 5: Percentage of code-switching messages in code-switching messages of women and men with monolingual background

Women and men	Messages	Messages with CS	Messages without CS
Total	265	98	167
%		37%	63%

Table 6: Percentage of code-switching messages in code-switching messages of women and men with bilingual backgrounds

Women and men	Messages	Messages with CS	Messages without CS
Total	341	165	176
%		48%	52%

From all of the above tables, it is obvious that subjects from a bilingual background code-switch more than those from a monolingual background; 39% and 65% for groups of women and 37% and 48% for groups of men and women. However, the findings suggest that men from bilingual backgrounds code-switch less than men from monolingual backgrounds: 32% and 28% respectively. These results confirm that code-switching in SMS messages is not the same among men and women, and that it differs according to the language background.

Linguistic repertoire

In this part, I will discuss the effect of multilingualism on code-switching in these SMS messages. By multilingualism I mean the use of more than two languages. In the case of our participants, all NDU students, men and women, in addition to LIU F4, who is an Armenian native speaker, are fluent in

French. For this purpose, I will compare the percentage of code-switching among the multilingual participants, both men and women, with those who are bilinguals.

Table 7 and Table 8 show that the percentage of code-switching in the SMS messages of bilingual men is 47% while it is only 7% in the messages sent by multilingual men.

Table 7: Percentage of code-switching messages in code-switching messages of bilingual men

Bilingual Men	Messages	Messages with CS
LIU M1	34	21
LIU M2	11	10
LIU M3	20	8
LIU M4	38	4
IUL M1	18	14
Total	121	57
%		47%

Table 8: Percentage of code-switching messages in code-switching messages of multilingual men

Multilingual Men	Messages	Messages with CS
NDU M1	49	4
NDU M2	22	3
NDU M3	28	0
Total	99	7
%		7%

Table 9 and Table 10 show that the percentage of code-switching in SMS messages of bilingual women is 47%, while it is 62% in the case of multilingual women.

Table 9: Percentage of code-switching messages in code-switching messages of bilingual women

Bilingual Women	Messages	Messages with CS
LIU F1	46	32
LIU F2	73	30
LIU F3	47	15
IUL F1	52	17
IUL F2	24	14
IUL F3	22	15
Total	264	123
%		47%

Table 10: Percentage of code-switching messages in code-switching messages of multilingual women

Multilingual Women	Messages	Messages with CS
LIU F4	30	19
NDU F1	29	13
NDU F2	26	19
NDU F3	37	25
Total	122	76
%		62%

Table 11 and Table 12 show that the percentage of code-switching in the SMS messages of bilingual men and women is 47%, while it is 38% in the messages sent by multilingual men and women.

Table 11: Percentage of code-switching messages in code-switching messages of bilinguals

Bilinguals	Messages	Messages with CS
LIU F1	46	32
LIU F2	73	30
LIU F3	47	15
IUL F1	52	17
IUL F2	24	14
IUL F3	22	15
LIU M1	34	21
LIU M2	11	10
LIU M3	20	8
LIU M4	38	4
IUL M1	18	14
total	385	180
%		47%

Table 12: Percentage of of code-switching messages in code-switching messages of multilinguals

Multilinguals	Messages	Messages with CS
LIU F4	30	19
NDU F1	29	13
NDU F2	26	19
NDU F3	37	25
NDU M1	49	4
NDU M2	22	3
NDU M3	28	0
Total	221	83
%		38%

Again, the findings show that there are clear gender differences in the SMS code-switching: multilingual women code-switch much more than multilingual men (62% and 7% respectively). On the other hand, the group of multilingual men and women code-switch less than the bilingual group (38%

and 47%). However, there are no gender differences in the SMS code-switching of bilingual men and women: the percentage is 47% for both groups. Once more, these results indicate that the linguistic repertoire has a role to play in the phenomenon of SMS code-switching.

Discussion

In the results of the last section, gender has been found to correlate with various sociolinguistic variables that are interwoven in such a way that it is difficult to study the code-switching of men and women separately. As Gardner-Chloros (2009: 82) puts it, “[c]ode-switching cannot be correlated in any direct way with gender, but interacts with a large number of intervening variables which are themselves connected with gender issues”. The findings of this study are similar to those of Jagero and Odongo (2011), who detected clear differences in code-switching between the genders. Similarly, in their study of code-switching on the Facebook wall posts of Indonesian students, Sukyadi et al. (2012) found differences in the code-switching behavior of men and women.

Various gender differences have been tackled in the analysis of the data. First, the results show that language background affects the percentage of code-switching among men and women, confirming my initial hypothesis.

In general, bilinguals have reported a higher percentage of code-switching, but when gender is taken as a variable, the results are different. Multilingual women have a higher percentage of code-switching than bilingual women; on the other hand, bilingual men code-switch more than multilingual men. Further, the percentage of code-switching in the messages of the multilingual group is less than that of the bilingual group. In the light of these results, the second hypothesis, that the more languages the participants are acquainted with, the higher the percentage of code-switching, has been proven valid only when women are concerned. This is closely correlated with Eckert’s famous study on the “Jocks” and “Burnouts” in a high school in Detroit, where she found that “gender does not have a uniform effect on linguistic behavior for the community as a whole, across variables, or for that matter for any individual [and that it] is a social construction and may enter into any of a variety of interactions with other social phenomena” (Eckert 1989: 258).

Conclusion

As texting has become a worldwide phenomenon, research has tackled distinctions within these SMS messages. Differences “have been noted between youngsters and adults” (Crystal 2008: 32). Huffaker and Calvert

believe that adolescents are capable of forming their “online identity” through “gender similarities and differences in language use” (2005).

New studies have revealed that code-switching in young people’s SMS messages is governed by diverse factors and reflects different aspects of the users. Indeed, the bilingualism that has shaped many societies around the world has also reshaped the way teenagers write their SMS messages, to an extent that code-switching has become the norm in these messages.

The findings of this study have revealed that gender differences in code-switching in these text messages are not that simple, and that they are interwoven within a set of sociolinguistic variables concerning language background. This suggests that there is something inadequate in traditional approaches that generalize gender differences internationally. As Wong (2006: 12) puts it, “researchers should pay more attention to the interaction of gender and other social constructions of identities in a particular culture rather than focusing on gender as a global category.”

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