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Meaning-(re)making in a World of Untranslated Signs: Towards a Research Agenda on Multimodality, Culture, and Translation

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1. Introduction

Multimodality has always been "the normal state of human communication" (Kress 2010, 1). From face-to-face interaction combining resources such as gesture, body movement, and face expression, to disembodied representations combining image with writing, multimodal texts (and the need to translate them) have always been integral to (intercultural) communication. In recent years, technological development has made this only the more manifest by facilitating multimodal text production in a myriad of platforms.

This has led disciplines like Translation Studies (TS), traditionally focused on the verbal, to turn to the recent field of Multimodal Studies (MS) for adequate methodologies and analytical frameworks that can ground research on the translation of multimodal texts such as films, websites, or comics. A new multimodal turn in TS has adopted some of the analytical tools and concepts developed within the area of multimodality, yet with little in-depth reflection on the principles upon which those tools have been built or on what accepting those principles means for TS. As a result, translation theories remain mostly focused on the verbal while limiting the discussion of all other semiotic resources (integral to meaning-making in multimodal texts) to a contextualising role.

The link between TS and MS is—or should be—bidirectional. Globalisation and the consequent rising transnational circulation of goods, people, and cultural artefacts has increasingly exposed us to visual, auditory, and material resources produced in other areas of the world, while contributing to a multiplication and fragmentation of communities with specific sign making practices (New London Group 1996). This questions the idea of homogenous nation- and language-bound communities sharing the same cultural background for meaning interpretation. Yet MS has not yet tackled the issue of "culture" in relation to resources other than language. Not only is there a lack of studies on the use of semiotic resources with a cross-cultural comparative take as well as in intercultural contexts, but also, while it is assumed that modes are culture-specific resources (Kress 2010), the notion of culture remains under-defined and under-explored (Adami 2017; Hawkins 2018). MS has yet to focus on the meaning-making dynamics of transnational circulation, that is, on how multimodal resources are (re)interpreted and (re)signified when they move across place, time, and social groups, including "small and big cultures" (Holliday 1999).

Because of the changed and fast-changing social semiotic landscape, both MS and TS need to start working on new assumptions and address a series of disciplinary gaps, which can be filled only through a joint transdisciplinary enterprise. In this chapter we aim to sketch a joint semiotic and translation research agenda, to develop understanding of meaning-making practices in a changed, increasingly transnational, social semiotic landscape. We conceive this undertaking as a pre-requisite to derive implications for TS and provide indications that can support

translation practice and training in today's communicative landscape. We will start by revising some of MS's principles in order to identify the gaps in and most immediate issues for Social Semiotic research. We will then discuss the implications for TS of adopting a multimodal approach. In this effort, we will review some of the basic concepts of TS and raise several questions we believe should be at the center of the discipline. We will finish by proposing the sketch lines of a research agenda that would allow MS and TS to address the issues previously brought forward.

2. Issues for a way forward in Social Semiotic research

By moving away from structuralist semiotics centred on codes, Social Semiotics (Hodge and Kress 1988; van Leeuwen 2005; Kress 2010) elaborated the notion of multimodality and introduced the concept of "mode", following Halliday's (1978) use of the term to distinguish between speech and writing. Modes are conceived as "a socially and culturally shaped set of resources for making meaning" (Bezemer and Kress 2008, 6), which have different affordances deriving from their materiality and the ways they have been shaped historically in different social groups to fulfil specific communicative needs.

Social Semiotic research has undermined the assumption of the arbitrariness of language (Kress 1993) vs. an assumed iconicity of nonverbal resources. Relevant to our discussion is the understanding that resources like image, often referred to as iconic, do not have a more "natural" relation (of resemblance) with the world than language, and do not make meaning universally. The meaning potentials of any given semiotic resource result from the history of its past uses in given social groups; hence knowledge is required for its interpretation, or better, to formulate hypotheses on the meaning expressed by a given use of the resource (given that, in each specific instance, sign-makers have agency in associating a given form as most apt to represent the meaning that they want to express).

Figure 1. Bleeding nose used in anime to signify sexual arousal. (Original anime: Karin)

As two banal examples, the "floppy-disk" shaped button in software interfaces has no more "natural" or "universal" resemblance to its signified than its equivalent written label "save". To understand the meaning of an anime character's sudden bleeding nose (Fig. 1), viewers need to know the "conventions" for that specific use of image in anime, used to signify "sexual arousal". These conventions are neither arbitrary nor the result of natural resemblance; in both cases, the relation between the signifier/form and its signified/meaning is motivated (Kress and van Leeuwen 1996; Kress 2010); and the motivation lies as much in the materiality as in the past uses of that specific signifier in given social groups.[1]

Dismantling a presumed universally-understood relation of resemblance with the world for resources other than language brings two issues to the fore, namely the need for a redefinition of "context" vs. "co-text", and that of shared/non-shared "culture", as semiotically conceived. Let us examine each in detail.

2.1 The "context" vs. "co-text" approach

A first issue concerns the question of conceiving of resources that come together with speech and writing as either "context" or "co-text". In this work, we use "text" to define any multimodally-composed meaningful whole (or multimodal ensemble), rather than restricting it to writing. By "context" we mean the social semiotic environment for the design, production, distribution/circulation of and engagement with so-defined texts (including participants in each of these processes, and the social and semiotic resources available to make signs and meanings); by "co-text" we mean signs (in any mode and their combinations) co-occurring with those that are the momentary focus of attention in a text.

Linguistics and translation traditionally adopt the "context" approach, and consider what they normally term as "nonverbal"[2] resources not as signs (forms associated with meaning) but as a mere issue of cultural reference. In this approach what is shown visually, for example, *is* (rather than *represents*) a certain phenomenon in the world, which may be more or less culture specific or shared.

In turn, Social Semiotics treats all communicative manifestations as signs. This view adopts a "co-text approach", which considers all resources co-occurring with writing or speech as signifying elements that make meaning on their own and in relation to each other. Rather than cultural references, semiotic resources are conceived as forms of expression (i.e., signifiers that are associated to meanings/signifieds to make signs), fully capable of a range of meaning potentials, which have accumulated through past uses among specific social groups. These socially-shaped (culture-specific) meaning potentials are not only denotational, but also affective, identity shaping, and constructing of register, tone and style, mood and modality, as well as cohesion and coherence within the overall representation. Taking the example of the anime bleeding nose (Fig.1), the way the bleeding is represented (as a burst or as a dropping, etc.) and its relation with the character's face expression and body movement modulate the (sexual arousal) feeling expressed as well as the character's positioning towards it; its relation with the soundtrack and other filmic effects (e.g., stills, flashes etc.), shapes the overall tone of the scene (e.g., as dramatic, romantic, or humorous).

Adopting either the context or the co-text approach involves crucial epistemological differences, and consequences in terms of the decisions to be made in translation. Following the "context" approach, when considering, for example, visuals to be circulated to different

audiences, it is a matter of deciding whether and how to fill the gap of shared/background knowledge needed to understand the cultural reference, as when facing cultural references in language; it is in sum a matter of knowledge about the world that is depicted in the visual (i.e., *cultural* knowledge), rather than knowledge of *how* the visual shapes the world that it depicts (i.e., *semiotic* knowledge).

When adopting the "co-text" approach, by considering all semiotic resources as signs, questions open not only for the cultural knowledge needed to understand the referential/denotational meaning (i.e., to grasp the cultural reference). They involve the required *semiotic* knowledge, i.e., the knowledge needed to understand how resources are used to make meaning at all levels. This means considering the meaning potentials of specific gestures, face expressions, proxemics, music, filmic effects, camera angles, colour, clothing, and so on (as well as their combination) to represent reality, shape affect, identity, politeness/distance, formality/informality, and to modulate truth values, for example.

In sum, in considering meaning as multimodally constituted and orchestrated, the co-text approach assumes complementarity of resources in a multimodal complex; hence, in a representation, all resources are used following or innovating from past uses for meaning-making in all its aspects. These interact with all others present, requiring translators to make holistic multimodal choices as to what needs to be translated, from which modal resource, into which other modal resource, on the basis of an assessment of the target audience's semiotic knowledge in all modes, rather than solely of their knowledge of the cultural references of the source text. From this derives a second issue, which is yet to be tackled in Social Semiotic research, as to the mapping of semiotic knowledge across "cultures", and hence to defining culture in semiotic terms.

2.2 Semiotic knowledge and the issue of culture

If, to understand each other, meaning makers need to share (some extent of) semiotic knowledge, that is, knowledge of semiotic practices in all modes at play (rather than only cultural references), then, the issue of what is shared/non-shared in any form of expression achieves primary significance. This is true in all communicative events (as when assessing how an interlocutor will interpret a certain gesture in face-to-face interaction), and becomes crucial when designing or adapting multimodal texts for transnational circulation, since we can hypothesize that as circulation widens, so the range of meaning possibilities increases (Rymes 2014).

A main assumption to be questioned is that boundaries in shared uses of semiotic resources such as image or music match linguistic boundaries/communities; this assumption is not grounded empirically, yet it is widely present both in studies on intercultural communication and in localisation practices (e.g., when replacing images on different language versions of a company website). Questioning (or verifying) it involves considering the historically different dynamics of circulation of resources other than (what has been normalised as) language. This has been underexplored in Social Semiotic research, while disciplines such as musicology or iconography have specialised only on individual modes; yet it is, we argue, of primary importance for the examination of the relation between translation and multimodality in today's globalized world.

2.2.1 Language as an exception: National codification and translation tradition

Nation states have historically devoted extensive political, economic, and educational effort into codifying language use among their citizens,[3] through a series of homogenizing forces, including dictionaries, grammars, and literacy enterprises through the education system and national mass media. Ideologically-shaped notions of "national languages" (or standards) have been constructed through selective normativity on the mode of writing (imposed also onto the mode of speech, particularly in prestige forms and formal contexts, as "correct" usage). National codification and standardization of linguistic form/meaning associations have been strengthened also through cross-linguistic comparison, the production of bilingual dictionaries, and foreign language education. By establishing systems of equivalence between national languages, these mono-, bi- and multi-lingual literacy enterprises have taught us how to read, interpret and use linguistic resources, thus constraining their range of meaning-making possibilities.[4]

Other semiotic resources have not been subject to the same systematic extent of national codification. Nation states have not put the same effort into codifying gestures, music, or filmic conventions as in codifying writing. The propagation of hegemonic uses of different semiotic resources varies; so, certain modes have generated conventions of use in certain practices because of their professionally-oriented centres of prestige (e.g., influential groups of film-makers, photographers, musicians, graphic or fashion designers), while certain others, like gestures and face expressions, have developed more through face-to-face contact (and then circulated in visual representations), possibly standardised as best/correct practices of behaviour in certain contexts (e.g., "etiquette"). Yet, centres of prestige for sign-making practices in nonverbal modes have historically been more transnationally connected. Descriptions of "prestige/authoritative" uses of specific semiotic resources from authoritative practitioners and critics (e.g., manuals and treatises on graphic design, photography, film, architecture, and music) have normally originated and circulated from internationally influential centres/schools/traditions (consider, for 'Western' areas of the world, e.g., the reach of Christian iconography for image since pre-nation state times, the circulation of dress codes around Europe and through colonisation, up to, e.g., Hollywood for films). More significantly, nonverbal modes did not undergo national standardization through literacy enterprises, and have been therefore less influenced by national homogenizing forces and systems of equivalence in form-meaning associations.

Only writing (and speech), particularly in its ideological notion of "national language", has systematically been subject to a history of (intra-semiotic) translation. Translation of language too, while mediating between different languages, has paradoxically also contributed to strengthening the divide between national linguistic communities, who received representations mediated into "their" language, rather than being exposed to the language of "others" and forced to make (their own) meaning out of it, as happened with visual representations or music, for example. The exceptional history of codification and translation that language has undergone has ultimately contributed to determining different dynamics of circulation and meaning-making of language than of other resources.

2.3 Meaning-making in a world of untranslated signs

If we adopt a semiotic perspective, and conceive of anything in our environments as a potential sign, we come to realise that we live in a communicative world of mainly untranslated signs; not only is language an exception, because of its historical national codification processes, but

so is translation, as a form of cultural and semiotic mediation. With the exception of writing and speech, we normally make meaning without anybody or anything mediating between us and the semiotic environment. Rather than making signs in nonverbal resources more universally understood, this makes interpretation of form/meaning association at the same time more individualised, and shared within social groupings that cross national boundaries.

Hence the coincidence of semiotic knowledge in these modes with a nationally-defined linguistic knowledge is a problematic assumption (and ultimately reinforces an essentialist view of culture, long-time dismissed in culture research). Further enhanced by the transnational and fragmented/multiplied character of communities and "affinity spaces" (Gee 2005) in today's globalised world, a given target audience identified for language translation cannot be assumed to be homogeneous in their interpretation of other resources. With blurred boundaries between foreign and local signs, intersectional variables may be more significant in driving interpretation, along with individuals' personal trajectories, in terms of which communities of practice/interest and affinity spaces specific individuals participate in, and of which sign-making practices they have been more exposed to and have become more familiar with, and hence have entered their semiotic (rather than linguistic-only) repertoires. In the example of the anime nosebleed mentioned earlier, its association with "sexual arousal" may be known to anime fans speaking different languages and yet not known to a Japanese speaker who comes across that sign in anime for the first time. In other terms, sharing (more or less) the "same" language does not necessarily coincide with the sharing of semiotic knowledge for image or music, for example, and the meaning the latter two construct in their relation with language.

Adopting a co-text approach to meaning as multimodally constituted and considering issues of shared/non-shared semiotic knowledge across linguistic communities (because of the different circulation dynamics of resources other than language) has far-reaching implications both for MS and TS. On the one hand, while what we label here a co-text approach is a long-established assumption in MS, the issues of transnational circulation and national codification have not been adequately reflected upon in the field, precisely because of its little concern so far with translation as broadly defined; in this sense, a joint discussion and investigation with TS (eminently concerned with issues of "culture") can help Social Semiotic research to fill the gap, as proposed in the research agenda in section 4. On the other hand, adopting a co-text approach and considering shared/non-shared semiotic knowledge in all resources constitutes a crucial epistemological shift for TS, with far-reaching implications not just for research, but also for translation practice and training. In section 3 we discuss how adopting such an approach forces us to broaden the limits of translation and revisit some of the most fundamental concepts in TS.

3. Issues for a way forward in translation

To acknowledge the multimodal nature of communication means accepting that the realms of translation and TS include more than words in context. It means accepting that translation needs to consider all modes and the meanings they promote (on their own and in relation to other modes) but also that all resources co-occurring with writing/speech are signs in their own right that might present different challenges to (different) viewers. This constitutes a fundamental shift which implies a different understanding of translation and leads us to revisit fundamental concepts such as "text", "source text" and "target text", or "equivalence". It also opens the question on whether, as socioculturally-shaped resources, modes other than writing and speech might need to be translated and how that could be achieved. The discussion on the (non-)translation of nonverbal resources comes hand-in-hand with issues to do with the aesthetics,

authorship, prestige, and function of multimodal texts, which are in fact some of the issues we would like to raise in this chapter.

Some of these questions have been asked by the first scholars in the field of Audiovisual Translation (AVT) who tried to reflect on what it meant for TS to expand its basic concepts and include products composed by speech/writing along with image, sound, or movement (Gambier 2003). The discussion, however, has not matured much beyond the initial questioning, and nonverbal resources have remained reductively considered only as contextual elements (see section 2.1). Multidisciplinary approaches have been suggested (Cattrysse 1992; Remael 2001; Gambier 2013; Pérez-González 2014), and MS is one of the areas that researchers have turned to on their quest for new analytical tools/frameworks purposely developed to examine multimodal texts. However, taking advantage of the analytical frameworks of a different area of study demands reflection on the implications deriving from the assumptions underpinning those frameworks. In the next section we will reflect on the implications that the issues introduced in Section 2 have for TS.

3.1 Multimodality and the concept of translation

As a first crucial question, if meaning is achieved through intermodal relations that are culturally specific, how can we assume that the target audience can access such meaning when only one of those modes is translated? Setting any reservations around issues of "meaning transfer" (for which we may prefer Kress's phrase "transposing meaning" – see his chapter in this volume, Chapter 1) and "equivalence" aside, it must be recognized however that practices translating only the verbal (e.g. subtitling, dubbing, translation of comics) implicitly or explicitly assume that (1) nonverbal resources are universal and easily interpreted without any further mediation; and that, as a result, (2) no new intermodal relations and meanings are introduced when the verbal resources are replaced by verbal resources in another language. These assumptions seem difficult to reconcile with the founding notion that translation is about meaning in context, leading us to revisit concepts such as "text", now including multimodal products, as well as "source text" and "equivalence", given that all modes are included in what is considered for translation, and equivalence is sought for verbal and nonverbal modes alike as well as the meanings erected through intermodal relations.

Such logocentric assumptions do not seem to be true in all areas of translation or to all translation practitioners. Those involved in fansubbing, for example, openly recognise the role played by nonverbal resources in meaning creation along with the difficulty users might have in interpreting them. The subtitling developed in this context has challenged professional practice (deemed unable to account for the complexity and multitude of levels of meaning put forward by the source text) and boasts an innovative set of mediating/translation procedures of verbal and nonverbal resources alike. Another case in point, within professional practice, is localisation. In this context, a high-level manipulation of the source text is accepted and strategies of mediation/translation are extended to nonverbal resources (alongside verbal ones), including, at times, the replacement of source nonverbal resources by target nonverbal resources, if deemed necessary in the context of the translation brief. Even if only at a glance, the discussion of these two cases immediately reveals a symptomatic difference between professional and non-professional practice with regard to their understanding of translation. Non-professional translation results from a widening of the concept of translation beyond the verbal. Professional practice either does not consider the potential need to translate meaning nonverbally expressed or, when it does, it does not consider it within the boundaries of

translation. Revealing in this sense is the fact that localisation is acknowledged not as a form of translation (Esslink 2000) but as a broader process that includes the translation of the verbal mode and the "adaptation" of nonverbal modes. While replacing one language with another is considered as a necessary change, mediating/translating an image (whatever the procedure used), for example, is considered to be a high-level intervention which is referred to in the industry with words such as "creative", "free", and "adaptation" (Jiménez-Crespo 2013). The development of different terms certainly indexes the need to distinguish a type of translation in which function and commercial purpose are the priorities, but it also expresses the need for a different set of knowledge and skills than the ones translators traditionally have, as well as a different set of tools and the extra associated costs. In this context, translation remains defined within an understanding of equivalence limited to the verbal mode and one in which other resources, given their assumed iconicity/universality, are to be engaged with directly, in an unmediated way, or else their "original" meaning would be lost. However, the consideration of resources other than the verbal, the different possible levels of intervention according to translation brief, prestige, or symbolic capital associated to the author or source text are something that translation theory should be able to account for within functional approaches to translation. After all, the existence of different translations following different strategies to cater to different audiences or fulfil different functions is not a new phenomenon for Translation Studies. Yet, to extend such considerations to resources other than the verbal, a new paradigm or conceptualisation of translation is needed.

Further research on meaning-making practices is needed to allow the discussion on translation and equivalence to broaden its scope and consider not only the meanings expressed by all resources, but also the possible unexpected results of current translation practices. Target multimodal texts might be assuming a different profile than the one expected due to the fact that, contrary to common assumption, the newly translated verbal resources establish a new multimodal ensemble in the target context when co-occurring with non-mediated nonverbal resources. Another important aspect calling for further conceptual and empirical analysis is the fact that recent technological developments have made manipulation of nonverbal resources both easier than before and a common practice with a growing number of text types. Replacing source images by target images is recurrently being used in the localisation of animated films (as in the case of *Doraemon* in which a bento box was replaced by a pizza, Chaume 2016), without the corresponding theoretical and empirical analysis to ground the mediation process.

3.2 Translation of meaning rather than elements

Another crucial question deriving from considering meaning as multimodally constituted is then "what" to translate when a text needs to reach a different audience. Considering elements such as images, gestures, or sounds as socially-situated signs means acknowledging that (1) their meaning is positioned in time and space; (2) it is mediated by specific traditions of use within that specific (target) context (which in turn shape audience's expectations/interpretations), and (3) part of what is being expressed comes from the purposeful selection and organisation of specific resources in the context of a given product. The reality instead is that target audiences are left to make meaning without any type of mediation between them and what can be very complex semiotic environments.

Different levels of meaning pose specific challenges to viewers from a different context. Drawing on previous work (Kovačič 1995; Chesterman 2005, 2007; Gambier 2013; Ramos Pinto 2018) we propose three levels of meaning, adapted from the "representational",

"interpersonal", and "textual" metafunctions used in Social Semiotics. The first level is the most obvious one, i.e., what is being represented, and the difficulties the audience might have in identifying a given gesture or object, like a floppy disk in a 1980s advert, for example. The inability of a younger generation to identify floppy disks has even been used for humorous purposes, as seen in a popular Internet meme with the sentence "I showed my 12 year old son an old floppy disk… He said: 'WOW… Cool… You 3D printed the save icon!'"[5] Visual and aural elements, for example, might often allow for a more immediate first-level identification by appealing to the audience's knowledge of the world; however, this may not always be true, either because the sign is not part of the audience's context (like floppy disks for 12-year-olds), or because there is no natural resemblance with the world (e.g. blue curved stripes used to signify [waves of] freshness in a toothpaste package).

The second level refers to the social meaning associated to a given object, sound or gesture and the difficulties an audience might face not because they cannot identify the referents in question, but because they might not share the necessary socially-shaped semiotic knowledge to interpret them. In the television series *The Big Bang Theory* (s11, ep22), the character Amy, after trying out several wedding dresses that, following (Western) mainstream socio-cultural fashion trends, could be interpreted as "modern/fashionable/sexy" (Fig. 2), decides on a dress (Fig. 3) that causes surprise to her friends (Fig. 4). The viewer is only able to understand this reaction if able to interpret the chosen dress's social meaning as "old-fashioned/tacky/not-sexy."

Figures 2, 3 and 4. Amy, Penny and Bernadette go wedding dress shopping (*The Big Bang Theory*, s11, ep22, 00:07:39—00:08:22)

Notwithstanding the different affordances of subtitling and dubbing, the challenge for translation thus comes from the fact that, even when nonverbal resources build on a shared resemblance with the world (identifying the dress as a wedding dress would not be challenging to most viewers), presenting them as in the source text without further mediation might not ensure cross-cultural transfer at the level of social meaning: this type of wedding dress can be instead common in certain social groups, who, if not accustomed to current Western fashion trends, may interpret it as "beautiful" and find it challenging to understand Amy's friends' reaction. Perhaps more importantly, due to the common belief in the universality of nonverbal resources and the common practice of being left alone to interpret them, the audience may not recognise the existent "cultural bump" (Leppihalme 1997) and proceed interpreting on the basis of the social meaning promoted in the target context. This is the case for lay persons, but also for translators whose training does not traditionally include multimodal analysis as discussed in this chapter. Translation practices such as professional subtitling seem to deny such potential for confusion, but practices such as localisation and fansubbing together with recent reception data (Chiaro 2014) seem to point otherwise.

The final level refers to the meaning resulting from the intermodal relations established between the different modes for specific diegetic purposes. In the wedding dress scene, the verbal mode

with Amy saying "This is it. This is the one!", combined with the dress-as-sign, with its specific social meaning, and the friends' face expressions of surprise, produce a comedic moment (supported by a live audience's laughter) that reinforces specific diegetic meaning, namely Amy's characterisation as "geek" and hence peculiarly not-associated with the social world of the other characters (which viewers are required to recognise).[6]

The challenge thus comes from the need to ensure that the audience is able not only to identify the elements in the image, but also their social and diegetic meanings. This discussion has not had the attention it deserves in professional practice; even translation practices focused on accessibility such as Subtitling for the Deaf and Hard of hearing and audiodescription (which have long called attention to the importance of nonverbal modes) often show a strong focus on describing sounds or images to ensure identification, undervaluing considerations of the audience's (in)ability to interpret the social or diegetic meaning even after identification has been made possible.

The intricate relationship between the different modes brings an additional challenge related to the difficulty in distinguishing the contribution provided by each mode and to have clearly defined translation units. Notwithstanding the doubts raised by Stöckl (2004) regarding the independent existence of contributions, one possible way forward might come from results in perceptual psychology, which suggest that perception is selective, i.e., that "we attend to objects that bear salient meaning for certain goals" (Gibson 1979, 48). Furthering our understanding of relevance and narrative salience, expanding it to meaning produced multimodally (cf. Section 4) could be helpful in this context, as well as integrating the contribution from specific disciplines for different genres (like film studies and media studies).

3.3 Translation without nationally codified resources

Alongside the "what" to translate, comes the issue of "how" to translate nonverbal resources. In localisation practices, source nonverbal elements are often replaced by other elements of the same mode more familiar to the target audience (e.g., images or colours used in packaging). Similar procedures of substitution involving image manipulation are sometimes used in other genres such as comics (e.g. when someone bangs Asterix in the head, he sees "birds" in the French edition and "stars" in the Portuguese, Zanettin 2014) or children's literature (e.g. Arabic editions of Disney's Cinderella often present female characters wearing a *hijab*, Zitawi 2014). Non-professional practices such as fansubbing present other solutions by taking advantage of headtitles and pop-up balloons for annotation of nonverbal meaning or different colours for character or tone identification (Pérez-González 2014). While localisation seems to assume that nonverbal resources are to be translated by target resources of the same nature, the use of colours and verbal headtitles in fansubbing suggests that the meaning expressed in one mode can be translated by resources in a different mode. These practices, however, have been (and still are) developed on the basis of intuition and most often not by translators or trained professionals. To enable informed decisions, data are needed on the effects of existing and new translation strategies onto meaning-making.

With the lack of national codification of nonverbal resources, translators cannot draw on a system of equivalence to inform translation practice or a translation tradition against which positioning their choices. Some genres have developed specific conventions of use that audiences assimilate through exposure; besides the already mentioned example of anime, comics developed a tradition on reading direction and representation of sounds (Zanettin 2014),

and the same applies to expectations built up by music in horror films (Bordwell and Thompson 1979). Such convention development does not follow the language boundaries in which the translation and distribution industry is organised. The multimodal nature of texts seems thus to bring additional layers of complexity to the already challenging concept of "target audience"; the heterogeneous character of a product's audience is multiplied, given that this might differ in semiotic knowledge, making it more difficult to make decisions, and leaving the translator at the crossroads of different traditions. The lack of research on shared/non-shared semiotic knowledge will continue to leave practitioners without a way forward or enough data to consider the implications of their decisions.

3.4 Translation of nonverbal resources as a mediated activity

As with any decision-making process in translation, the (non-)translation of nonverbal resources will also be mediated by contextual factors. As previously mentioned, the technological development of recent years has opened a number of options ranging from image manipulation to pop-up balloons and dynamic subtitles, meaning that the nonverbal nature of certain resources no longer immediately constrains the mediation processes or define the translation strategy (and its higher/lower degree of manipulation or no manipulation). Other contextual factors need to be considered in this respect. Given our tolerance to image manipulation in advertising, for example, and the likely rejection of such strategy when translating a film, it will be important to investigate the correlation between translation strategies, translators'/viewers' attitudes and issues such as genre, authorship, prestige (of the director and film), function of the text, and audience expectations.

4. Conclusions: A joint research agenda

With seeing the world as a multimodally-orchestrated meaningful reality comes the realization that actual translation is infinitesimal compared to the signs presented to us or surrounding us that are not translated. If this has always been the case without being perceived as an issue, then why do we need to further research on "multimodality and translation"? Without wanting to frame the issue of "equivalence" in terms of faithfulness, we believe that questions need to be asked regarding the profile of the texts target audiences have access to, but also how this might be indirectly reinforcing power imbalances. After all, due to their transnational prestige and wide distribution, Western sign-making practices are possibly more easily interpreted (and their underlying values and ideologies absorbed), as in the case of *The Big Bang Theory* examined earlier. This might lead to standardization of meaning-making practices in favour of Western practices, while pushing divergent practices (and the "other" behind them) to the periphery, which we have more difficulty accessing and interpreting.

We hope to have highlighted the importance of considering translation beyond the verbal but, in doing so, we know how many unanswered questions we are left with. In TS, an increasing number of works analyse translation and localisation of multimodal products (O'Hagan and Mangiron 2013; Dicerto 2018); yet the cases examined are still very specific and isolated, making it difficult to compose a wider picture of generalizable significance for TS as a whole and day-to-day translation practice. Useful theoretical discussions have so far made sense of the state of the art on the issue (O'Sullivan and Jeffcote 2013; Pérez-González 2014; Gambier and Ramos Pinto 2016; Dicerto 2018); yet the lack of systematic investigations on the subject makes it difficult to derive broader frames/approaches that enable us to address the relation

between multimodality and translation more holistically. We strongly believe that it is no longer possible to move forward without a more robust theoretical framework grounded on relevant empirical data yet to be collated. In this concluding section we sketch the work needed in semiotic and translation research to further our understanding of the implications of multimodality for translation, to ground empirically the decisions to be made in translation practice, as well as to foresee their possible implications. We present the types of research questions and the lines and areas of enquiry, along with the methodological and theoretical integrations required to attempt to answer them.

4.1 Research questions

Faced with a semiotic landscape of transnationally-circulating untranslated signs (except language), the semiotician asks "how do people make meaning out of this?". While issues of culture-specificity in meaning-making have been so far disregarded, Social Semiotics needs to start also asking "who shares (some extent of) semiotic knowledge about the uses of specific resources, and for the meaning made through their relations?"; this means asking "what is shared/non-shared culture in a given semiotic landscape?", "how do the ways in which different resources and signs circulate influence the ways in which they are interpreted?", and "how does the participation in different affinity spaces/communities influence an individual's meaning-making of nonverbal resources?".

In conjunction with insights deriving from addressing the above questions, TS needs firstly to provide descriptions and explanations about past and current translation practice (following a historical and cultural approach), asking questions such as "how have multimodal products and non-verbal elements within them been approached in translation?", and "how has that mediated the circulation and reception of translated multimodal products as well as our understanding of the other(s)?". Secondly, and possibly grounded empirically on findings from all the above questions, TS needs to seek ways to provide support for informed decisions in translation practice, thus asking questions such as "how do we identify the elements in need of translation considering that meaning is multimodally constructed?", "how do people interpret translated multimodal products?" and "what is the impact of specific translation strategies in cross-relation with factors such as modes, media, genre, domain, audience, and purpose?".

We do not want to reduce the aims of Social Semiotics and TS research to a mere provision of indications for translation practice and training. Providing answers to the above questions can further understanding into the social dynamics of meaning-making and into the very nature of translation, while supporting better informed decisions in translation practice and kickstarting a reflection on how translation training could develop to answer today's challenges.

4.2 Lines and areas of research

To start addressing the questions above, a first broad line of enquiry involves investigating how shared/non-shared semiotic knowledge distributes across populations and individuals participating in different semiotic spaces. A second line of enquiry involves investigating how humans make meaning the first time they engage with specific signs.

4.2.1 Distribution of semiotic knowledge: modes, media, genres, and domains

The first line of enquiry requires examining sign-making and meaning-making practices in (at least) three intertwined areas. One area involves investigation of specific semiotic *modes* to understand their historical development and the extent of codification and dynamics of transnational circulation (which may be different for different modes). A second area involves investigating meaning produced multimodally in/across different *media*, as the way we make meaning may differ between a printed advertisement and a social media meme due to media-specific expectations regarding purpose, kinds of authorship, context, etc. A third area needs to examine sign- and meaning-making practices in specific *genres* and *domains*, with their own specific communities, how these differ and/or distribute transnationally (the resources of image have not undergone the same type of codification in e.g., technical drawing, cartoons, and maps; some theatre traditions, like the Japanese one, have had a different transnational reach and higher level of national codification than others), as well as how they influence each other across genres and domains.

A better understanding of meaning-making practices and how these circulate will assist translators in their own interpretation of the source text and evaluation of what needs to be translated. It will also assist TS in mapping the development/circulation of translated multimodal products and examination of translators' choices.

The intertwined areas of investigation (modes, media, genres and domains) on shared/non-shared semiotic knowledge need to be (a) situated in and across time/space, and (b) mapped onto and across linguistic communities, for multimodal texts that involve also (and require translation of) language. Investigation through time (which would give way to historical Social Semiotic research) needs to include multiple timescales (Lemke 2000, 2009), and be considered in its inseparable relation with space (as chronotopes, Bakhtin 1981). This involves a radical rethinking of notions of boundaries, which may often not coincide with language/national borders. Especially in today's globalized and technologically-connected societies, space needs to be less geographically (and linguistically) conceived and more socially defined (following conceptions of space and place that stem from Lefebvre 1984; for a review, Jaworski and Thurlow 2010). The mapping of semiotic knowledge onto (more or less linguistically-homogeneous) social groups can and needs to lead to a re-definition of social group in a transnationally-connected world (unevenly distributed between hegemonic and minoritized cultural flows). Given that individuals participate in multiple and multilingual spaces/communities/groups (as in the example of anime fans mentioned earlier), each with specific semiotic practices, investigation should test the advantages of adopting notions centred on spaces (as in Gee's 2005 affinity spaces) rather than those centred on groups/communities, possibly also contributing to a shift in perspective within TS from the problematic notion of source/target audiences to that of source/target spaces (of shared semiotic knowledge). A perspective on spaces where texts and semiotic practices and knowledge circulate would avoid associations to people's membership to communities (which trigger epistemologically dangerous national/local labelling, e.g., the Japanese, the Germans, etc.), while focusing on practices (rather than people's belonging) and embracing more immediately the fluid character of their circulation in, out, across, and through different spaces.

4.2.2 Principles of semiosis

Investigation of how modes have developed specific uses, how signs circulate through different media and in specific genres and domains, how their meanings change across time/space, and how shared/non-shared semiotic knowledge distributes across affinity spaces, social groups and linguistic communities cannot be done through fixed categorizations, which would risk producing artificial inventories/taxonomies. These investigations need to be dynamically conceived; individuals' semiotic repertoires change and vary constantly as they encounter new signs/representations and engage in new interactions; in other terms, semiotic repertoires are relational, adaptive, and flexible (see applications of Complexity Theory to language development in Cameron and Larsen-Freeman 2007; Larsen-Freeman 2015).

Consequently, rather than compiling a set of formal tools of reference for, e.g., visual signs, a second line of enquiry needs to account for the dynamic complexity of human semiosis; thus, the mapping of shared/non-shared semiotic knowledge needs to be paired with research focused on understanding general/common meaning-making principles and strategies. If shared semiotic knowledge enables common ground of interpretation between sign- and meaning-maker (e.g., interpreting the floppy disk button as the "save" functionality), in-depth understanding of common principles of semiosis can enable the formulation of informed hypotheses on how a sign will be interpreted when it is engaged with for the first time (as when encountering a new symbol for the button of a given software functionality, or a new filmic effect), thus further supporting informed decisions in translation practice. This can be done by empirically testing current theories of semiosis, such as Kress's (1993; 2010) motivated sign (cf. Section 1), as well as by testing against the whole semiosis current theories on meaning-making developed for language, such as Relevance Theory (Sperber and Wilson 1986) and Conceptual Metaphor (Lakoff and Johnson 1980).

These two lines of enquiry, grounded in and across time/space, and situated in and across different modes, media and genres/domains, are the first necessary steps for an empirically-informed formulation of hypotheses on how a given resource will be interpreted by members of a given audience (or by appearing in a given affinity space), whether any mediation will be needed, and what kind of strategy would be most apt.

4.3 Methodological developments

The research that we envisage demands methodological development and integration to encompass exploration of (1) multimodal products and how these circulate, (2) the practices of multimodal text production and translation, and the discourses attached to them, as well as (3) practices of (re)interpretation and re-signification.

Investigating the research questions in the lines and areas of enquiry sketched above requires extensive descriptive studies on actual multimodal products. These demand new tools of multimodal analysis capable not only of integrating the investigation of all modes in equal terms, as well as the intermodal relations and their translation, but also of enabling quantitative analysis of larger datasets that can offer generalizable results. Traditional Social Semiotic multimodal analysis has developed tools for fine-grained investigation of small samples of multimodal texts. These findings can hardly be combined with those from textual corpora analysis (which takes advantage of quantitative data analysis), thus reinforcing even further the unequal treatment of nonverbal resources vs. language. Development of multimodal corpus

analysis requires implementation of software tools for data mining of nonverbal resources and integration of extant technologies for visual recognition.

Alongside larger-scale examinations of multimodal products and the identification of regularities in sign-making and its translation, it will be essential to investigate both ends of production and what is commonly termed as "reception" in TS. We need methodological integration to examine the discourses and practices of text production and translation as well as the audiences' interpretations and the impact of translation strategies on such interpretations. By cross-relating the regularities found in the analysis of multimodal products with contextual factors, we will be able to examine the social, economic, and cultural factors promoting specific multimodal sign-making and translation practices, as well as to map their development, circulation, and reception. This will require the undertaking of large sociological investigations that revisit Bourdieu's (1986) methods and variables for mapping "cultural capital" against the contemporary socio-semiotic landscape (for a problematisation of the concept, Adami 2018) as well as extensive reception studies focused on collecting data on meaning-making processes across different variables such as genre, purpose, and type of audience. Data collection methods range from interviews, surveys, and questionnaires to eye-tracking and memory recall protocols (for an overview, Pérez-González 2014).

Three further methodological issues need to be addressed. Firstly, most data-collection methods and means of academic dissemination are still heavily logocentric, forcing both research participants and researchers to describe multimodally-produced meaning almost exclusively through language (be it speech for participants' interviews in reception studies, or writing for both questionnaires and for academic publications). The exploration of meaning of nonverbal resources requires us to develop ways to elicit participants' feedback beyond verbal output to avoid possible risks of forcing meaning into hardly-apt linguistic categorizations (which, moreover, require certain levels of literacy and articulation). Some methodological attempts in this sense are being developed in Social Semiotics (as when asking participants to draw rather than to tell their meanings, e.g., Kress 2010) and in sensory research (for example, asking participants to gesture or make shapes to express what they taste).[7] These methods need to be systematically developed and adopted also in studies concerned with meaning of translated multimodal products. Parallel to forms of nonverbal data collection, we need new forms of multimodal dissemination of findings; research in "multimodality and translation" could contribute further to push the academic publishing system to promote (recognition of) forms of dissemination such as visual and video essays, as well as online publishing that exploits the hypertextual and multimedia affordances of the web (see the journal *Kairos*, http://kairos.technorhetoric.net/)

Secondly, even if very much needed to fill a gap in multimodal research, large scale quantitative investigations are not enough to address the research questions mentioned earlier. Big data analysis can incur the risk of overgeneralizing differences in meaning-making practices onto macro-categories, such as assumed "national cultures" or "linguistic communities," while screening out crucial micro-level variabilities. To explore how variables such as individuals' personal trajectories and participation in multiple semiotic spaces influence their meaning-making of nonverbal resources (and in their relation with language), there is a need for in-depth fine-grained qualitative research. This requires integration with ethnographic approaches, which is already underway in social semiotic multimodal analysis (e.g., Dicks et al. 2011 although not focusing on "culture/semiotic knowledge"), and could constitute a methodological innovation for TS, leading the way to an ethnography of translation. Findings at more

qualitative level could inform the testing of hypotheses at quantitative level, while the latter results could be further probed qualitatively, through iterative cycles of analysis.

Lastly, the type of multi-layered examination here proposed will only be possible if we embrace large-team (quantitative and qualitative) examinations involving both professional and "lay" designers and producers of multimodal products, as well as audiences, alongside researchers in Social Semiotics, TS, sociology, ethnography, cognitive linguistics, and statistics, among others. Research could thus explore participatory methods more extensively. Analogous to the role of citizen sociolinguists advocated by Rymes (2014), both semiotic and translation research should consider the value of today's distributed knowledge and start conceiving of contributions outside academia in the form of "citizen socio-semioticians" and "citizen translation scholars." We all reflect and meta-comment not only on our and other people's use of language, but also on images, clothing, font, music, architecture, and all sign-making practices that we encounter, as well as on actual translations and how we think these could better fulfill our needs. Given the breath and width of the phenomenon to be investigated and its research directions, knowledge and resources need necessarily be drawn also from outside the confines of academia.

4.3 Theoretical integration

Such a broad and articulated research enterprise needs necessarily to cross disciplinary boundaries, not only between Social Semiotics and TS. We list here four transdisciplinary directions:

- Integration is needed with linguistics in several respects. To the suggestions mentioned throughout the paper, we add the potential contribution of studies on relevance (in the tradition of Sperber & Wilson, 1986, yet re-defined in a co-text rather than context approach), narratology salience (Bortolussi and Dixon 2003), and cognitive load and processing (Kalyuga 2012), as well as a cultural mapping and comparative expansion of extant cognitive approaches to multimodality (e.g., Forceville and Urios-Aparisi 2009);
- knowledge on the development and circulation of specific semiotic resources in different contexts can be drawn from specialized fields, such as visual communication, media studies, graphic design, musicology, art history, and film studies, for example;
- transdisciplinary crossing is required also with studies on culture in anthropology, sociology, and intercultural communication, to test and re-define different notions of culture against a co-text rather than context approach. In this, Social Semiotics could use extant definitions of culture to verify variation in patterns of semiosis, while studies on culture could benefit from a semiotic perspective to redefine notions of culture (in a co-text rather than context approach). This transdisciplinary undertaking could also facilitate reconceptualizations of target audience/space in TS;
- because of the multiple dimensions of human semiosis, which involves not only social, but also psychological, biological, sensory/perceptual, and material aspects and variables, further transdisciplinary engagement is required with other disciplines, such as psychology, sensory ethnography, material semiotics, and cognitive neuroscience, each being equipped to investigate one specific aspect, while these need to be considered in their complex intertwining.

The joint semiotic/translation research enterprise sketched above is only preliminary; it requires refinement and further articulation, possible only once investigation has started; yet, as is, it is already indicative of its wide, broad, and extensively ambitious scope and reach. The whole enterprise is not exempt of risks; we would like to conclude by mentioning a caveat, which has started to concern us while discussing the possible implications of such an investigation. A mapping of shared/non-shared semiotic knowledge onto social groups risks producing selective descriptions, and hence prescriptions and regulations on uses, which may not only constrain individuals' agency in sign-making but also contribute to exacerbate the divide between hegemonic and minoritized cultural practices (impacting on the people associated to them). Analogously, description of multimodal translation practices and formulation of possible (inter- and intra-modal) translation strategies, may risk producing prescriptions and promoting practices that favour a supposedly easier-to-interpret domestication of nonverbal resources, thus risking to contribute to separating communities and constraining their meaning-making possibilities as well as their exposure to diversity in sign-making. Research in sociolinguistics and applied linguistics (e.g., García 2009; García and Wei 2014; Canagarajah 2017) has provided ample evidence of the negative effects of national codification, standardization, and prescription onto language use, pointing to their role in (re)producing social inequalities. Drawing on the insights of linguistic research on these themes, the investigative enterprise we are proposing/outlining needs to be entirely innovative and thoughtful of the possible implications, and not merely reproduce/adapt methods used for language in the past.

[1] The history of the nosebleed to signify sexual arousal in anime is uncertain and multiple explanations have been hypothesised; these range from tracing the use back to single authors (like manga artist Yasuji Tanioka in the 1970s), to unverified popular sayings in the Japanese tradition used to deter youths from sexual situations, up to identifying the nosebleed as a taboo-avoidance metaphor for male ejaculation (later extended also to female characters in anime); for a discussion, see https://kotaku.com/sexual-arousal-doesnt-cause-bloody-noses-says-medical-5953124 (Accessed 30 August 2018); an online search of 'anime nosebleed' (and their equivalent Japanese *hanaji* or 鼻血) generates dozens of different sources, discussions and hypotheses. The very range of these substantiates the Social Semiotic postulate on meaning-making/interpretation as an individual's hypothesis on the motivation underpinning the association of a form/signifier to a meaning/signified, on the basis of the combined materiality and past uses of a given resource.

[2] Social Semiotics avoids the label "nonverbal" for resources other than speech and writing, because of its implied subordination of these resources to language, and because the stem "verbal" assumes that writing and speech can be considered as one mode (as the label "language" supposes). We use it here as a shorthand way to label all resources that, unlike speech and writing, have been considered para- or extra-linguistic and hence context, in traditional linguistic research and TS.

[3] This has applied also to its non-citizen residents (as shown in current controversies on migrants' language literacy) and to colonized peoples (e.g. Canagarajah 2017).

[4] This is proved, through counter-evidence, by the fluidity of language use, meaning and perception among speakers of oral communities (see for example Goodchild and Weidl, 2018).

[5] Meme available from: https://me.me/i/i-showed-my-12-year-old-son-an-old-floppy-3250837 (Accessed 22 November 2018).

[6] We isolate one single sign and shot for exemplifying purposes; obviously, the more audiences are exposed to intertextual relations throughout the series, the more they will construct (shared) semiotic knowledge on the signs of "geeky-ness", as happens in all exposure of foreignizing translations.

[7] On sensory research, see work conducted by CenSes, The Centre for the Study of the Senses: https://philosophy.sas.ac.uk/centres/censes.

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