2
Translation, linguistic commitment and cognition

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2.1 Introduction

Cognitive translation and interpreting studies (henceforth CTIS), though it goes by different names and is construed with quite considerable differences in scope, has broadly concerned itself with questions pertaining to “the translating mind” (Jääskeläinen & Lacruz, 2018, p. 2). In a recent publication, Jääskeläinen and Lacruz state that “[c]ognitive research in translation and interpreting has reached a critical threshold of maturity that is triggering rapid expansion along several innovative paths” (2019, p. 1). This maturity is witnessed by the rapidly growing number of publications of various kinds, including handbooks of the present type, as well as the introduction of dedicated journals, conferences and competitively funded projects. An interesting parallel to this growth is the slow emergence of clearer lines of demarcation between major approaches to the study of cognition in general and to the study of translational cognition in particular.

In a number of publications, Muñoz Martín (2010, 2016; see also Muñoz Martín & Martín de León, this volume) has articulated the key differences between three main approaches, which he refers to as the “cognitivist approach” (also sometimes referred to as a “computational” approach), the “connectionist approach” and “cognitive translatologies” (see also Alves, 2015; Marín García, 2017; Risku, 2013). The differences between the different programmes are quite fundamental, as they bear upon such basic issues as the following: What are the roles of mind and body in cognitive processes? What is the relationship between general and domain-specific cognitive processes? What does linguistic processing involve? and How should “(linguistic) meaning” be conceptualized? The two predominant positions, the first and third on the list, are diametrically opposed on most of these questions.

As summarized by Muñoz Martín, the two main positions, which follow the distinction in cognitive science between traditional cognitivism and so-called “situated cognition”, or sometimes “4EA (embodied, embedded, enacted, extended, affective) cognition”, line up as follows. For cognitivist/ computational approaches:

Thought is (mostly) conscious, rational and logical. The mind is modular, with independent modules in charge of, or (almost) exclusively devoted to different tasks or faculties. One such faculty is language, which allows us to engage in linguistic behaviour by combining finite
sets of symbols. By and large, the mind works serially, as a neutral problem-solving device
that manipulates symbols. […] Linguistic symbols carry stable, self-contained meaning
or content. The purpose of language is to build or to prompt internal representations of
messages. Denotative or conceptual meaning is objective but arbitrary, because it does not
resemble the object or concept it stands for (e.g. Monday, green). Pragmatic, affective, or
connotative meanings consist of modifications and additions of meaning induced by the
context.

Muñoz Martín, 2017, p. 561

The view from cognitive translatology is quite different. As Muñoz Martín outlines, within this
approach, the brain is viewed as a “huge, plastic (i.e. modifiable) learning machine that slowly adapts
its wiring to steady demands” (2017, p. 564). Moreover, rather than consisting of separate modules,
the assumption is that higher cognitive functions (planning, decision making, attention control,
etc.) rely on and are integrated with more elementary cognitive functions such as perception and
motor functions. In short, “thinking is thinking-for-action, and it is done not only in the brain but
by the brain in interaction with the body and the environment” (ibid., author’s emphasis). From this
perspective, language is seen as a set of prompts to activate mental routines, which may be more or
less well established. Language processing involves spreading activation, and meaning is “a process,
not a thing” (ibid.): it involves structured networks covering in principle unlimited encyclopaedic
information of a wide variety of types (see also Langacker, 1987/1991, 2008).

It is difficult to do these positions justice in a brief chapter such as this, and their characteristics
and content have already been explicated in previous work. Readers are referred to Lakoff
(1987) and Langacker (1987/1991) for the linguistics perspective, and the two alternatives are
also discussed within the context of CTIS by Muñoz Martín and Rojo López (2018), in addition
to the references already cited. This brief introduction of the two key approaches serves a specific
purpose in the context of the present discussion. As has been pointed out by Muñoz Martín
(2017), CTIS is at a critical juncture in its development, and there is an obvious imbalance in
the degree of development and internal coherence within the newer, cognitive translatological
approach as opposed to its more established computational counterpart. It has been claimed
that the translatological approach is fragmented and incomplete and that much work is required
before it can present a true challenge to the more well-developed computational approaches
(Muñoz Martín, 2017, pp. 564–565). This chapter may be taken as one response to this situation,
and the arguments put forward here are intended to serve as a basis for the further development
of this alternative and at the same time to enable more targeted contrasting and testing of the
two approaches, as called for by Marín García (2017).

Keeping this motivation in mind, this chapter has one overall objective, which is to argue that
all cognitive translational research programmes must build on a clearly articulated commitment
to a view of language and language processing in translation; or, in other words, that language
must be central to our fundamental ontology in all cognitive approaches to translation. In
considering the status quo, it will be suggested that some cognitive translatological approaches,
in their eagerness to establish a new research programme and to distinguish it from the old, have
in some ways neglected, or may even be unwilling, to give adequate space or priority to lan-
guage. I will argue that this constitutes a risk to the programme as such, for reasons that will be
given. The argument will be developed by looking first at how the two dominant approaches
to translational cognition do or do not incorporate an ontological position regarding language.
The next step is to outline the epistemological problems that follow from the current situation
in cognitive translatology. In the closing remarks, the overarching argument is considered in light
of discussions of ontology and epistemology in TIS more broadly.
2.2 CTIS and the position of language

This discussion adopts Laudan’s approach to epistemology (Laudan, 1977) as a starting point. Laudan outlines a non-positivist, sociological philosophy of science in which scientific progress is conceived of as a continued process of solving conceptual and empirical problems. The identification and resolution of such problems is a central task, and more specifically, progress is achieved through the continued comparison of alternative theories, and the theory that provides the better solution to a problem or problems is considered to be the better theory. Within this view, the function of a theory is to “resolve ambiguity, to reduce irregularity to uniformity, to show that what happens is somehow intelligible and predictable” (ibid., p. 13). In scientific practice, however, Laudan emphasizes that it is important to distinguish between “theory”, which in his view should denote

a very specific set of related doctrines (commonly called “hypotheses”, or “axioms” or “principles”) which can be utilized for making specific experimental predictions and for giving detailed explanations of natural phenomena.

Laudan, 1977, p. 11

and “research traditions”, a term intended to capture “more general, much less easily testable, sets of doctrines or assumptions” (ibid.). In Laudan’s terms, a “research tradition” provides both an ontology, a specification of, “the types of fundamental entities which exist in the domain or domains within which the research tradition is embedded” as well as a set of methodological commitments regarding how best the domain may be investigated (1977, pp. 78–81). Within a research tradition, there may be any number of more specific theories linked to specific domains of enquiry. To add to Laudan, we might also suggest that theories, in turn, may comprise any number of “constructs”, which are understood as conceptual elements of the theory that have been operationalized such that they may be empirically investigated.

Laudan’s approach has been used to compare theories within the two alternative approaches to translational cognition in the dissertation by Marín García (2017). Like Marín García, I consider cognitivist/computationalist and cognitive translatological approaches to constitute two distinct research traditions. It is not within the scope of this discussion to compare all the ontological or methodological commitments that characterize the two traditions. Some of the ontological ones are evident in the descriptions cited from Muñoz Martín. The methodological commitments are not often overtly articulated as such and must be derived from the evidence represented by common practices. It is also important to note that many of the fundamental assumptions are imported into CTIS covertly, through the adoption of concepts or methods from cognitive psychology or psycholinguistics. It is not always clear whether such covert, imported assumptions have been critically examined or fully appreciated, as is also pointed out by Marín García (2017, p. v). At the same time, it is only fair to recall that, as Laudan puts it, “a theory, taken abstractly, does not have its ‘parent’ research tradition stamped all over it” (1977, p. 86). The bottom line is that while specific theories or hypotheses within CTIS may not have flagged all their philosophical loyalties, at a certain point in the evolution of a research tradition, it becomes urgent that some scholars within that tradition do so. The present discussion aims to contribute to that project.

In the following two sections, both ontological and methodological assumptions are used diagnostically in studying the content and function of language constructs within the two research traditions.
2.2.1 Cognitivist approaches

In a recent publication, Shreve and Diamond (2016) provide a detailed presentation of the cognitivist/computational, information processing approach to Cognitive Translation Studies. This comprehensive account provides a detailed summary and overview of the main elements of this research tradition, and will thus be taken as representative of this approach. As the authors state, this approach “has been wholeheartedly adopted by cognitive translation scholars” (ibid., p. 141). In the following, the language construct inherent in this tradition will be defined first, as a key element of its ontology. Secondly, some of the methodological practices related to this view are presented.

From the perspective of Shreve and Diamond, this tradition, like others within the broader field of cognitive science, studies “the mental processes that organisms with brains can carry out. These processes underlie our ability to acquire, store, generate, manipulate and use knowledge as well as our ability to act on that knowledge in the world” (2016, p. 143). In their view, cognition, including translational cognition, is best understood as “the result of ‘computational’ procedures that operate on representational structures in the mind” (ibid.). As far as language is concerned, it must be assumed that it is the representational structure that is the subject of mental computations. The translation process is described as consisting of the stages of comprehension, transfer and production (ibid., p. 150), and “language use” is conceived of as one of many “primary mental processes” that make up those three stages, along with attention, memory, perception, metacognition and problem solving (ibid.). Here is clear evidence of the modularity that was mentioned in the introductory remarks (language is separate from other cognitive processes).

Another body of work that is typical of this research tradition is exemplified in Carl (2013) and Schaeffer and Carl (2017). In Carl (2013), two different computational alternatives are considered: the ACT-R model and a statistical model. The former models human translation through a set of five “production rules”. These function in an algorithmic procedure operating on words. The statistical model is offered as a means of calculating probable processing sequences on the basis of data for reading and writing processes (which are constituents of the composite translation process). Here, too, translation is seen as a decomposable, algorithmic process.

In Schaeffer and Carl (2017), the authors use translation and post-editing data to derive an interactive model of these two related activities. Both processes are modelled as a “transition network” in which four alternative states are connected in a series of iterative state transitions. The authors then calculate the distribution of the four states—source-text reading, target-text reading, target-text writing and pausing—in a dataset including keystroke and gaze data, and use this distribution to model a process consisting of potential state changes. This too is a typical algorithmic approach, building on a fully computational language construct.

Shreve and Diamond (2016) provide a comprehensive overview of the methodological consequences of this view of translational cognition, mentioning the adoption of keystroke logging and eye-tracking methods to study the time course of translating activity, including pauses and regressions as indicators of processing effort or a focus of attention and the identification of stages in the process. Strikingly, the authors state:

Indeed, one could argue that the advent of more precise methodologies for collecting and analyzing behavioral data accelerated a process of integration with the cognitive sciences and the dominant information-processing model that had already begun years before.

*Shreve & Diamond, 2016, p. 149*
Language is central to the cognitivist approach to cognition, as it is often considered to be the quintessential representational system. Similarly, algorithmic operations on symbols are a recognizable and commonly adopted description of syntactic processes, among other things. Given the dominance of this research program in CTIS, this particular view of language is commonly adopted, either explicitly or implicitly.

2.2.2 Cognitive Translatology

A commitment to a view of language is much less evident within cognitive translatological approaches. A good deal of research emphasis within this research tradition has been on implementing broader models of cognition, in which language is only one of many elements, and not necessarily a prominent one (e.g., Risku et al., 2013; Risku & Windhager, 2013). In Risku et al.’s network model of translatorial cognition and action, for instance, communicative action, including translation, is modelled as the dynamic interplay of cognitions, actions, interests, social structure, material and artefacts in integrated environments (ibid.; see also Risku & Windhager, 2013). Knowledge of languages is taken to be part of cognition, though it may also possibly be involved in mental artefacts such as “checklists” or “guidelines” (2013, p. 163). Language or linguistic processing as such is not highly visible in the network model.

Ontological/methodological commitments to 4EA cognition are also in evidence in a body of work that focuses on the interaction of the translator and her physical environment (Ehrensberger-Dow, 2017; Risku, 2014; Risku & Windhager, 2013). In some studies of this type, ethnographic methods are added to the repertoire and complement experimental or quasi-experimental methods designed to collect data on cognitive processes. The ethnographic complement integrates observations of translators’ interactions with other people, with various elements of their physical environment and with a range of artefacts, including translation technologies. Interview data can also contribute to the investigation of translator environments and interactions.

In another strand within this research tradition, the non-modular view of cognition (fundamental to this tradition) has led to increased research interest in other areas of translator psychology, i.e. areas that are often excluded if linguistic processes are taken to be cognitively distinct, as is claimed by modularity. Examples of this work include studies of such psychological phenomena as emotion, creativity, tolerance of ambiguity and self-confidence as related to translators and translational action, also including responses to translations (Bontempo et al., 2014; Del Mar Haro-Soler, 2018; Hubscher-Davidson, 2013, 2016, 2018; Lehr, 2014; Rojo López, 2017a, 2017b; Rojo López & Ramos Caro, 2018). In much of this work, linguistic production is tested in investigations of the possible translational effects of various types of personality traits or emotional states of varying duration and type. Language constructs are not often problematized, and in some work the linguistic nature of the task is not in focus at all, as the variables are primarily psychological ones, such as those mentioned earlier, or additional variables such as expertise or translator competence.

Another strand of research within cognitive translatology incorporates the fundamental assumptions of cognitive linguistics. The language construct adopted here is of the type described in the introductory remarks and is exemplified in a volume of papers edited by Rojo and Ibarresta-Antuñano (2013). In addition to the editors’ own account of the potential of cognitive linguistics for the study of translation (2013, pp. 1–30), the papers illustrate the use of cognitive theoretical tools for the investigation of lexical and grammatical patterns, metonymy and a range of other themes related to meaning construction in translation. The ontological commitments that underlie this type of work are clearly articulated in the introduction to the 2013 volume:
• “language is an integral part of cognition, and thus a product of general cognitive abilities” (2013, p. 11)
• “human language is symbolic in nature” (ibid.)
• language is usage based (ibid.)

In their discussion of these commitments and the potential of cognitive linguistics (henceforth CL) in the study of translation, the authors claim that the CL approach is commensurable with (“can be bridged to”) translation studies (TS); that CL has the tools required for TS; that CL tools and concepts can help investigate underexplored areas and issues within TS; and that insights from cognitive TS can also enrich CL. In these authors’ view, CL can serve as the linguistic foundation for a broad cognitive theory of translation (2013, pp. 18–26).

Finally, it has also been argued within this research tradition that the role of language in translation has been overstated, and that cognitive theorizing on translation is better served by giving pride of place to constructs such as “meaning” or “communication” (Muñoz Martín & Martín de León, this volume). The authors’ view is quite clearly stated in the following:

if we agree that meaning is encyclopedic; that the mental organization of stored information is sub symbolic; that each language symbol may trigger the activation of a network of sub symbolic nodes that will never be identical due to the interaction with other activated nodes through spreading activation; if we agree that language underspecifies meaning in that what we experience mentally is far richer than what is meant with language symbols; that meaning is an active process that will use any kind of inputs and stored information: then we will necessarily conclude that translating is not a matter of language, but rather a matter of meaning or of communication.

ibid.

The view of language, meaning and communication sketched out here is a fair representation of the view taken by most scholars within the cognitive translatological research tradition. However, the conclusion drawn by these scholars is not a necessary conclusion at all. In fact, the exact opposite position may also be logically taken. The reasoning behind this position is outlined in Section 2.3.

The difference in ontological assumptions within the cognitive translatological research tradition is, as expected, linked to a difference in the research methods used. Investigations of translational ergonomics (see Ehrensberger-Dow, 2017, for survey) have led to an increase in the use of ethnographic methods, including various observational techniques, interviews, etc. Interest in translator psychology has led to the introduction of various psychometric techniques and instruments. Cognitive linguistic studies have investigated corpus data and elicited data of different types. Some of the production data used in computational studies are also used here (e.g. keystroke logs and eye-tracking data), sometimes in combination with a range of other data types (see Halverson, 2017). The sketch provided here demonstrates some of the fragmentation that currently characterizes the cognitive translatological research program in CTIS as regards central theoretical concepts and theories. In some general models, a language construct is not visible or is identifiable only as an inferred component of another construct (e.g. Risku et al., 2013). In work on the impact of various translator characteristics or states, a language construct underlies certain variables, such as “accuracy” or “creativity” or “ambiguity”, but is not explicitly developed or referred to in individual studies. In one central volume of work, cognitive linguistic theory is put forward as an appropriate grounding language theory, and the potential of that theory is demonstrated in a collection of studies. In a quite recent paper (Muñoz Martín & Martín de León,
this volume), there is a call for a change in priorities and a move away from language as a central concern. Clearly, if this research programme is to become more fully developed and internally consistent, some work is required to either articulate the coherence that is there or to pinpoint areas of disagreement or inconsistency in order to facilitate the resolution of conceptual and/or empirical problems.

At the end of this outline of the two main research traditions within CTIS, it is important to note that while there are obvious differences in the content of the two traditions, these differences are rooted in fundamental ontological commitments, and it is these commitments that are of primary interest here. In principle, it is not impossible to model translational cognition in a computational manner and also include both situational parameters and personality-related ones. Conversely, it is not impossible to investigate core linguistic processes from a cognitive translatological (situated cognition) starting point (for discussion and research findings, see Spivey & Richardson, 2009). However, the causal role played by environmental factors or parameters related to the translator psychology is less obvious in a modular view of language processing and is external to the central translational processes. In the cognitive translatological view, on the other hand, translational cognition fundamentally includes translator psychology and extends into, and is embedded in, the translator’s environment. The two research traditions require different concepts and theories, and they investigate different data in different ways. In order for the cognitive translatological programme to consolidate into a fully-fledged alternative to computationalism, it is imperative that the precise relationship between translational linguistic processing and other cognitive psychological and environmental factors in translational task settings be theorized in more specific detail. It is also imperative that the foundational constructs that unite the research tradition be clearly articulated and debated. An additional issue is that of scope: there is a clear contrast between the specific investigations of translator psychology and/or ergonomics, for instance, and more general models such as Risku et al.’s (2013). The point of interest here is the need for some means of dialoguing across study types and of ensuring at least a minimum of coherence within the research tradition. A principled view of language and linguistic processing could serve as the necessary hinge or nexus.

2.3 Epistemological challenges for cognitive translatology

This section is concerned with the epistemological challenges that follow from the current situation of fragmentation in cognitive translatology. In Section 2.3.1, ontological assumptions from 4EA cognition are put forward to argue for the centrality of a language construct, and Section 2.3.2 provides an illustration of how a language construct can ground work towards resolving conceptual or empirical problems within this research tradition. The final part of this section, Section 2.3.3, presents a call for a linguistic commitment for cognitive translatology.

2.3.1 Why language: Arguments from ontology

In their chapter in this volume, Muñoz Martín and Martín de León refer to the distinction in cognitive science between “microcognition” and “macrocognition”. The former term is used to refer to actions and activities on a small time scale and is usually investigated in experimental, laboratory settings. “Macroognition” refers to “complex cognitive functions (…) in natural settings” (ibid.: p. 57) and often employs ecologically situated investigations of situated decision making. The two are sometimes seen as antagonistic and sometimes as complementary: there is no consensus. Nor is there complete agreement on the utility of the distinction itself. Muñoz Martín and Martín de León, following Flach (2008), argue that CTIS would be best served by
rejecting the distinction and adopting an integrated, ecologically situated approach to cognition, i.e. the view that macrocognition is primary. This is the philosophy that underlies most work within cognitive translatology today.

The “ecological/situated cognition” view that Flach supports “argues for one reality and claims that the reality is grounded in the physics of ecologies or situations” (2008, p. 34). On this view, also laboratory experiments (which remain viable) must be grounded in the ontologically prior ecology of real-world situations. Flach continues to outline three implications of adopting this view. The first of these is of key interest in the present context. Flach states that research on cognition must “start with the phenomena as they are lived” (2008, p. 36). In other words, in Flach’s view, epistemology must start with a human-based, naturalistic approach to lived reality. We might add translation and interpreting to his list of “the natural phenomena of cognition”, examples of which include firefighting, meteorology, piloting, ship navigation, military command, etc. (ibid.)

If translation and interpreting are also “natural phenomena” of cognition, and if we are to investigate these phenomena “as they are lived”, then it seems obvious that language must be an absolutely central element of the ecology. Indeed, the bulk of the activity that is referred to by the terms “translating” or “interpreting”, or their counterparts in other human languages, involves phenomena that must be included in a language construct; for example, the raw material of language (graphological encodings, sound waves), the mental actions involving linguistic material, and the linguistically related communicative objectives and settings in which translation is embedded. This seems almost too obvious. Evidence of the ubiquity of language in translating and interpreting is found everywhere in empirical studies of translational/interpreting activity. The raw material of language is visible in anterior texts, whether they are written or spoken. The translator/interpreter attends to this material and also produces new linguistic material in a selected production mode while engaging in mental activity involving language. Linguistic elements are selected, rejected, added or deleted often in response to environmental stimuli, either real or inferred. To the extent that the translator/interpreter verbalizes his/her process, s/he refers to linguistic elements, processes or relationships (see Halverson, 2018 on metalinguistic awareness in translation). To the extent that the translator reflects upon the nature of the task itself, reference is made to linguistic elements or relationships and the communicative situations in which they are or can be employed (Presas, 2017).

If the aim is to consolidate and develop a situated/4EA research tradition for CTIS, built on the ontology that is being developed within this tradition within cognitive science, then the cognitive translatological research tradition must have a central language construct if it is to investigate “the phenomena as they are lived”. It might be helpful to recall that within a research tradition, numerous theories may aim to account for different phenomena and/or at different levels of abstraction or with differences in scope. Thus, a theory of translational ergonomics, or of the relationship between translation performance and affect, would probably have quite different contents (cf. Laudan, 1977, pp. 81–86). On the other hand, in a viable research tradition, different theories would share assumptions and tenets regarding the fundamental phenomena in their segment of reality as it is lived. These shared foundations are the bedrock on which a research tradition must be built, and it seems counterproductive to try to build a research program that does not recognize the central role that language plays in the reality of translation and interpreting.

As an addendum, however, it is important to point out that the approach to language represented by CL builds on assumptions that are shared with a broader approach to cognitive semiotics (see Zlatev, 2011). In other words, the fundamental meaning-making apparatus devised for language in the CL view is also valid for other semiotic systems that might be of interest. This
means that a research tradition based on a 4EA view of translational cognition, with a centrally positioned, appropriately conceived set of assumptions regarding language, is perfectly capable of accommodating other semiotic systems within its remit. Translation and interpreting can be conceptualized with reference to meaning negotiation across any codified semiotic system. This issue will be discussed also in the concluding remarks in Section 2.4.

2.3.2 Grounding for resolution of conceptual and empirical problems

A consensus on the central role of language in our fundamental conceptualization of translation could play a central role in consolidating cognitive translatology as a fully-fledged research tradition (a programmatic position most thoroughly articulated in Muñoz Martín, 2010). In arguing this case, the current discussion adopts Laudan’s view of scientific progress, as outlined in his 1977 volume. In that work, Laudan articulates the differences between broad research traditions, as mentioned in Section 2.2, and the theories that are associated with such traditions. In order to take a closer look at the epistemological need for a shared and centrally positioned view of language, we shall consider the relationship between the research tradition itself (and its fundamental ontology) and the theories that constitute it. According to Laudan, there are two specific “modes” in which broad research traditions and the theories that constitute them may be related: historically (through the specific allegiances and views of particular scholars working within established or emerging traditions) and conceptually. Conceptual relationships are best understood by looking at the ways in which research traditions and theories interact (Laudan, 1977, pp. 81–93). Laudan describes four ways in which research traditions influence the theories that constitute them: i) by “strongly influencing […] the range and the weighting of the empirical problems with which its theories must grapple” (1977, p. 86) or the conceptual problems they must resolve, ii) by constraining the domain of the theories, iii) by serving as a heuristic for the development of new theories, and iv) by justifying or rationalizing theories.

The discussion in Section 2.2 demonstrated how the two research traditions in cognitive science, and subsequently within CTIS, are constituted by quite different sets of empirical problems and research domains. As was discussed, the domain of cognitive translatology, given its non-modular view of cognition, is much broader than that of the cognitivist tradition. The development of the construct of “default translation” by the present author (Halverson, 2019) is an example of the research tradition serving as a heuristic for the development of new theories or constructs. Of course, it was a particular view of language that served the heuristic purpose in this effort.

It is also important to recall, as mentioned in Section 2.2, that in Laudan’s view, scientific progress is achieved through careful comparison of alternative theories to see which provides a better solution to a conceptual or empirical problem. Such comparisons may take place within or across research traditions. It seems reasonable to assume that the more coherent and fully developed a research tradition is, with clearly articulated foundational tenets, the more robust and meaningful the comparison will be.

One example of a comparison of this type is Marín García’s (2017) comparison of the constructs of translational competence and expertise. In his analysis, the focus is on the two versions of the construct as applied within cognitive translatology, and the analysis made use of a conceptual performance model developed by the author. This analysis is a prime example of how research traditions might progress through careful comparative analysis and grounding.

In the current context, however, the point is to illustrate the role of foundational (ontological) assumptions in such comparisons. To reiterate: in Laudan’s view, the comparison of contending accounts must take place at the level of the theory or construct, not the research
tradition as such. However, uncertainty about the underlying world view, or ontology, may impact the feasibility of carrying out comparisons of this type, especially if the fundamental element that is either missing or underdeveloped is one that the specific theory itself does not articulate. To take a fictitious example, but a realistic one: it has been proposed that translators choose alternatives in their production that are simpler, more explicit, “equalizing” (non-extreme), as a means of avoiding risk (Pym, 2015, p. 76). Aggregate tendencies such as these (and other, similar ones) have long been recognized as being within the remit of Translation Studies, and the cognitive basis of this behaviour has long been sought. Cognitive theories to account for this behaviour must propose a risk construct that manifests both socio-cultural and cognitive aspects and must also posit a causal mechanism to account for the ways in which “risk” affects the cognitive processes resulting in specific linguistic choices. To the best of this author’s knowledge, no cognitive theory has yet been proposed for this purpose. Moreover, it is quite clear that cognitivist and 4EA views of cognition would have to go about this task in quite different ways. For CTIS, it is not possible to build theories to capture socio-cognitive entities such as “risk”, or “norm” or “ideology” for that matter, without a fundamental position on language to make these ideas relevant for translation. If the underlying view of language is dubious or unclear, theories and hypotheses cannot be compared, new theories cannot be developed and existing ones cannot be justified.

A final challenge for cognitive translatology has more to do with interdisciplinary relationships and less to do with the internal development of the research tradition itself. As has been made amply clear in the work by Muñoz Martín cited in the introduction, the two main approaches to translational cognition share many assumptions, theories and constructs from their counterparts in cognitive science. This was also pointed out for the cognitivist tradition in the article by Shreve and Diamond (2016), cited in Section 2.2.1. Of particular concern in the present discussion, related to the diagnosis of fragmentation and immaturity given in Muñoz Martín (2017), is the fact that the research program of 4EA cognition is itself engaged in debates about the interpretation and implementation of some of its own fundamental concepts. Both “embodiment” and “extended cognition” are the subject of disagreement, and the programme as such is thus not fully developed with regard to these ideas (see e.g. Kiverstein, 2012; Wilson & Golonka, 2013; Wheeler, 2014). At the very least, cognitive translatology must acknowledge these uncertainties; it must not proceed as though the 4EA programme were pret-a-porter. On a more positive note, this status quo makes it distinctly possible that CTIS can contribute to the investigation and possible resolution of these issues.

Investigating translation and interpreting, particularly in a highly technologized environment such as the one most translators work in today, using an appropriately framed language-based framework, would provide a highly relevant test ground for key issues related to both cognitive extension and embodiment. For instance, a study by Schaeffer et al. (2019) investigated the impact of removing the visual representation of the emerging translation on the computer screen. One of the interesting findings was that translators, in certain circumstances, fixate on the empty screen (or rather on the area of the screen where the emerging text would be, as indicated by the cursor). Though this paper did not discuss an interpretation in terms of spatial indexing (as a form of external memory support), this is a relevant notion for the further investigation of such phenomena. The basic idea here is that language processing can involve spatially indexing meaning content (for instance in a location on a computer screen) as a means of supporting memory (Spivey & Richardson, 2009). Studies such as Schaeffer et al.’s represent an area in which translation research could contribute to the debate on what it means for cognition to be “extended” into the environment. A language construct must be implicated in such studies.
Another issue which cognitive translatoology could address is that of mental representations. Martín de León (2017) has discussed this issue at some length, pointing out the various positions within cognitive science. As she points out, there are also differences within the 4EA tradition regarding the need for, and possible form of, mental representations (see also Rowlands, 2009). Martín de León outlines the cognitive translatoological position on mental representations, stating:

> However, translation takes place decoupled from the communicative processes that it makes possible, and it involves representation-hungry tasks, such as text comprehension or addressee profiling, which may require the support of dynamic, action-oriented mental representations. These can be regarded as internal scaffolding that supports meaning construction and translation processes in a dynamic, situated, even distributed way.

*Martín de León, 2017, p. 120*

The “representation-hungry” constituents of translational cognition, for example text comprehension or addressee profiling, mentioned in the extract are linguistic tasks and must be theorized with reference to linguistic processing. The differences between cognitivist and cognitive translatoological views of representation can be clearly illuminated through contrastive theory testing, which must be linguistically grounded.

### 2.3.3 A linguistic commitment for cognitive translatoology

Cognitive linguistics (of the type advocated for CTIS by Rojo and Ibarreste-Antuñano as well as the present author) emerged in the 1970s as a reaction to formalist linguistics, including the cognitivist programme of generative linguistics. In the early stages of its development, the founding scholars expended considerable effort in positioning the project relative to its competitors and in building a foundation for the programme in a viable ontology and epistemology (Johnson, 1987; Lakoff, 1987; Lakoff & Johnson, 1980, 1999). As part of that effort, Lakoff articulated two key commitments for the field: the cognitive commitment and the generalization commitment (1990). The cognitive commitment deals with the relationship between linguistics and other areas of cognitive science and enquiry. The generalization commitment articulates the aim to elaborate general principles that apply to all aspects of human language. The cognitive commitment is relevant in the current discussion: it requires cognitive linguists to “make one’s account of language accord with what is generally known about the mind and brain from disciplines other than linguistics” (Lakoff, 1990, p. 50). This commitment is not only an expression of desired disciplinary relationships or practices: it is also fundamentally an expression of how linguistic cognition is conceived of within this research tradition. The commitment is entailed by the adopted view of linguistic cognition: if linguistic cognition is believed to build on and be integrated with other general cognitive processes, then this commitment is a necessary consequence.

An adapted version of Lakoff’s cognitive commitment has been proposed as one of the foundational tenets for cognitive translatoology (Muñoz Martín, 2010, p. 174). This proposal is firmly endorsed here. The current argument is an extrapolation of that position. As suggested in Section 2.2, a language construct has always been a central element of the cognitivist tradition, and this is also true of the cognitivist tradition within CTIS. In this author’s view, however, the cognitive translatological tradition is in need of a firm commitment to a fundamental language construct, for the reasons outlined in Sections 2.3.1 and 2.3.2. This call may be seen as the converse of Lakoff’s original cognitive commitment; in other words, a linguistic commitment for cognitive translatoology might be articulated in a reversal of Lakoff, as follows:
A linguistic commitment requires cognitive translation scholars to make their account of translational cognition accord with what is generally known about language and other signifying systems from cognitive linguistics and semiotics.

A commitment of this type would constitute a step towards consolidating a clear alternative to the cognitivist research tradition in CTIS. It would establish a necessary part of the shared foundation for this research tradition, in line with the characteristics outlined by Laudan (1977). Moreover, a commitment to a foundational language construct is not at all at odds with the view of meaning, communication and language referred to by Muñoz Martín and Martín de León (this volume). Though meaning and communication are not limited to language, they are intertwined with language in most of the forms of translation and interpreting activity that remain of predominant interest in the field. A centrally positioned, cognitive semiotic/linguistic view of language\(^3\) is exactly what is needed to ground and further a research tradition that views translation as an embodied, embedded, enacted, extended and affective cognitive activity.

### 2.4 Concluding remarks

The case being made in this chapter is that a view of language such as that proposed by CL (commensurate also with broader cognitive theories of semiotics) can function as a unifying and consolidating element in the cognitive translatological research tradition. The claim is that the tradition remains weak and fragmented without it. The arguments for making language central are based on ontological and epistemological considerations.

Several scholars have called for stronger epistemological foundations for translation and interpreting studies. The argument has been made recently by Marais (2014, pp. 77), by Gambier and van Doorslaer (2016, p. 4) and by Marín García (2017). The case made in the present discussion is narrower in scope and is directed primarily at the emerging research tradition of cognitive translatology. The articulation of a specific view of language and a particular position for language in a broader ontology is one that will serve this tradition first, but it will also serve the discipline at large in that it will facilitate better dialogue and comparison across research traditions, cognitive and otherwise. Regardless of whether one adopts Laudan’s view of scientific progress or not, dialogue on fundamental philosophical issues is almost always illuminating.

There is one final issue that must be returned to, as it is important to mitigate the risk of this argument being misunderstood. It may be reasonably expected that the call to prioritize language will be viewed as retrograde and counterproductive by some. It has become commonplace in translation and interpreting studies to dismiss linguistic approaches to translation as positivist, overly empiricist or, at best, extremely limited. Part of the response to this in the current discussion has been to emphasize the need for a phenomenological take on translational phenomena: a call to investigate translation and interpreting “as they are lived”. The second response is to point out that the view of language advocated here builds on a seamless link between language and other semiotic systems in terms of the cognitive processes involved. In the view pursued here, linguistic meaning and non-linguistic meaning are of the same stuff, and the representational material at our disposal is oftentimes very rich. Giving priority to language in the cognitive investigation of translation does not mean that meaning stemming from rich settings or other representational codes is not factored in: of course, it is.

Considering this issue from the perspective of Translation Studies at large, an interesting question is how cognitive explorations based on the view of language, semiotics and translational ecology advocated here might be fruitfully situated within a broader Translation Studies as envisaged by Marais and Kull in their discussion of translation and biosemiotics (2016). It would
seem that the approaches share an overarching interest in forms of and conditions for meaning making in living organisms and systems. There is no contradiction in calling for a linguistically/semiotically oriented cognitive translatology to study human translational processes and phenomena, while at the same time wishing to situate these processes within a broader, more encompassing world. The question is not whether to do so, but how.

Notes
1 The “connectionist” position is in some ways related to both the other two and thus constitutes something of a middle position. It does not view cognition as algorithmic symbol manipulation but as an “experiential, cultural act” (Risku, 2013), and thus departs from the cognitivist view on a very important issue. It is not concerned with the integrated role of environmental phenomena in cognition, as is the latter view, and thus cannot be entirely subsumed under this position either (see also Muñoz Martín, 2010).

2 Obviously, source and target texts also incorporate non-linguistic material in the form of visual elements of various kinds as well as contextual and encyclopaedic information that is in principle unlimited. This does not change the fact that most translational/interpreting activity is language dominant. This only means that we must have a language construct and theoretical frameworks that allow the integration of all of these elements into the meaning-creation process: it does not mean that language is less important.

3 While this chapter advocates a cognitive linguistic/semiotic approach, this is a specific realization of a broad group of linguistic approaches that are often characterized as “usage based”. Most of these approaches share a fundamental set of ontological and epistemological commitments, which is the important factor in the current discussion. In other words, cognitive translatology need not put all its eggs in the cognitive linguistic basket for philosophical purposes.

Further reading
A dissertation presenting a rare analysis of translation process research from a philosophy of science framework.

A recent overview with insightful commentary on expected developments in CTS.

A detailed presentation of the computationalist view of translational cognition.
See also the chapter on Translation and cognitive science by Ricardo Muñoz Martín and Celia Martín de León in the present Handbook for a state-of-the-art review which clearly identifies and situates cognitive scientific thinking within TS.

References

Halverson


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