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Scientific maturity and epistemological reflection in Cognitive Translation and Interpreting Studies (CTIS)

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1. Reflections on a maturing field

The present volume gathers together ten contributions that problematize epistemological concerns in a maturing field, identifying and describing related challenges and, more importantly, proposing solutions through new, alternative models, epistemological stances and best practices.

Contributions range a number of themes and topics, including disciplinary boundaries and disciplinary integration, cornerstone constructs in the field and their methodological and empirical validity; the challenges of researching phenomena at the intersection of the social and the cognitive, and a collective discussion of what our aims as CTIS scholars are and how far we have come so far in attaining them. Thus, new philosophical perspectives are put forward to analyze theoretical integration of product and process research, as well as the implications of cognitive translatology assumptions such as the extended mind. The diversity of objects of study expanding the domain, of technological advances and variables, and of empirical and theoretical tools is also tackled, discussing the progress made as well as new frameworks to investigate construct status at the interface of the social and the mental, and to navigate and embrace plurality. Methodological issues analyzed include validity, and the implications of philosophical commitments and how they can bias our use of quantitative tools. CTIS disciplinary status as an applied science is also discussed, drawing attention to objectives that include improving language mediators' performance.

The title of the book, *Contesting Epistemologies in Cognitive Translation and Interpreting Studies*, captures the challenges and issues, but also the opportunities, we want to draw attention to in the field. Epistemologies are here understood as the ways of generating knowledge in a scientific discipline and how those *ways* interrelate within and across disciplines and research traditions. An epistemological

discussion entails challenging what we understand as valid or adequate knowledge, and also the representations, formal expressions and the explanations provided for that knowledge. In other words, we are dealing with the philosophical underpinnings of what the object of study is in CTIS, and also of the empirical data, the methodologies and the models and theories brought to bear to study the object scientifically. Epistemology can also be understood as the branch of philosophy concerned with these matters. As such, the epistemologies we refer to in the title are doubly contesting. They contest established epistemological views of the field, but they also contest each other. Along the three parts of this book the reader will find explorations of current challenges and thought-provoking ways to meet them, innovative applications of theoretical frameworks, proposals for progressive integration of different epistemological traditions or apparently incommensurable sources of knowledge and calls for embracing and actively endorsing pluralism as an epistemological stance that can advance CTIS. Views throughout the volume are diverse in scope, focus, and tone, yet they resonate with one another.

CTIS is a very recent subfield in the also young discipline of Translation Studies (TS). During the 1970s and the 1980s, various scholars from different fields began to cluster around the same empirical problems and methods led by a common interest in the processes of interpreting and translation. Small networks of practitioners started to converge around these sets of problems (competence acquisition, cognitive processing, language transfer) and methods (TAPs), becoming increasingly coordinated and structured as opportunities for communication and cooperation, publications, and conferences and workshops proliferated. Following Mulkay's model of the evolution of scientific fields (1975, p. 522) we can say that early translation and interpreting process research grew and *branched out*, gaining momentum as data-gathering tools and methodology became more sophisticated, thus eliciting interest among other scholars who would join the community. During the 1990s the main topics of interest in the emerging domain were identified and the main challenges and promising futures directions were established with explicit calls for the integration of cognitive science advancements into CTIS, then at its infancy (Danks, et al., 1997).

Like any other immature field without a robust theoretical history of its own, CTIS was a methodologically-driven community with significant borrowings from sister disciplines both in terms of empirical tools and theoretical frameworks. This early stage was also marked by a characteristic variety of names to refer to the field: "translation process research," "process-oriented research," "protocol studies..." (see Jääskeläinen & Lacruz, 2018, for a discussion) that evidence a lack of disciplinary cohesion, but also a lack of agreement on the object of study and the boundaries of its domain. The critical element and common thread, however, was the resource to the theoretical models of cognitive sciences:

Translation process research, cognitive translation studies, cognitive translatology, or, indeed, any of the now multiplying research domains in translation studies that focus on translation as a cognitive phenomenon, have been tightly coupled to the theoretical frameworks introduced in other disciplines like cognitive psychology and neuropsychology (Shreve, 2018, p. 385).

Hence, we adopt here *Cognitive Translation and Interpreting Studies* as an umbrella term including all research into the cognitive processes mediating translation, interpreting, and any other form of cross-linguistic, cross-cultural or multilectal communication. Thus, CTIS includes translation process research, as the field was most widely labelled at earlier stages, research that would not epistemologically fit into the classic TPR paradigm (Risku, 2014), and also the research traditions or frameworks developed within the discipline: cognitive translatology (Muñoz, 2010), for example.

CTIS publications remained focused on empirical problems (Göpferich, et al., 2009; Mees, et al., 2009; Muñoz, 2014; O'Brien, 2011; Sirén & Hakkarainen, 2002) that grew in sophistication, yet oftentimes scholars did not take the opportunity to revisit the constructs they tested. It was not until relatively recently that CTIS scholars looked back and took stock of disciplinary progress and possible stagnation from a clearly meta-theoretical, epistemological perspective (Shreve & Angelone, 2010). In 2010, a decade ago, Shreve and Angelone took Danks et al.'s foundational book — published slightly over ten years before — as a point of reference to engage in a meta-disciplinary evaluation of the field in the introduction to *Translation and Cognition*. If Danks et al. had delimited the scope of the domain, contributors to the collected volume edited by Shreve and Angelone addressed the topics and challenges that would dominate the domain in the following decade: inconsistency issues before the emergence of new research traditions, the risk of accepting legacy concepts or borrowing models from other disciplines without problematizing them¹, explorations of construct validity, new alternative models for already studied phenomena, the integration of process and product research and across subdisciplines, and the combination of diverse methods and theory. CTIS scholars were starting to turn their attention to CTIS-specific issues that pertained to the internal coherence and organization of the discipline and not only to the expansion of the domain of study and the accumulation of empirical evidence. “Science can be expected to mature when breadth, depth, and cogency are sought, that is, when research not only widens a field but also makes it more profound and better organized” (Bunge 1968, p. 120). And so, CTIS scholars, seriously considering the validity of their findings, and the consistency and adequacy of the explanatory

¹ A concern already voiced in process research by Malmkjaer (2000).

tools with which they described cross-linguistic cognitive phenomena, found themselves in a maturing field.

During the first decade of the 21st century, the pace of growth increased and the process of maturation continued, as evident in the many publications published during the last ten years and in the wealth of topics researched and methodologies applied (Alvstad et al., 2011; Ehrensberger-Dow et al., 2015; Jääskeläinen & Lacruz, 2018; O'Brien, 2011; Risku et al., 2019; Schwieter & Ferreira, 2017). Cognitive approaches to translation and interpreting flourished, bringing to bear new methodologies and data extraction tools (e.g., key logging, eye tracking, screen recording, EEG, fMRI), but also introducing new constructs and reinterpreting existing ones (a case in point is *expertise*, also discussed in this volume).

In parallel, the CTIS community demonstrated increasing dissatisfaction with cognitivist models of the mind based on the “information-processing paradigm.” This dissatisfaction was partly driven by an interest in the social dimension of cross-linguistic mediation tasks, ethnographic considerations of language industry workplaces and aspects of cognition that had been disregarded previously, for example, emotions (Muñoz 2010, 2016; Risku 2014, Rojo & Ramos, 2018).

Muñoz explicitly links cognitive translology to situated cognition in proposing it as an alternative research tradition or paradigm in CTIS. He argues that CTIS was then, in Kuhnian terms, at a “pre-paradigmatic stage” (2010, p. 170). Over a decade since Muñoz introduced the new paradigm, we see that research in CTIS that could be more or less explicitly inscribed in cognitive translology has thrived, particularly in explorations of the role that emotions, ergonomics, and human-computer interaction play in cognition. And yet, cognitivist research continues to be carried out and no clear paradigmatic shift has taken place. Allegedly, a decade is a short time span to assess the impact of a research framework or paradigm. Still, the parallel development of frameworks seems to indicate that “research traditions,” theoretical frameworks that are subject to change and interaction, can coexist without dramatic change, unlike paradigms (Laudan, 1977; see also later Kuhn 1970, 1977). They also provide a suitable description of scientific evolution and the way scientific communities of practice behave.

Despite misguided calls for monism (see Dupré, 1993, p. 223), the coexistence of traditions is a sign of disciplinary maturity, particularly in the social and applied sciences, where social and human factors make objects of study highly complex and amenable to a variety of epistemological and even ontological perspectives. CTIS is no exception, as a maturing science it exhibits a variety of research traditions, levels of analysis, objects of study, and epistemological perspectives. The present volume bears witness, as it addresses contesting epistemologies in the field.

2. This volume

2.1. Challenging Epistemologies

The first part of this volume includes five chapters on current epistemological challenges to CTIS: the philosophical foundations of our constructs and methodologies, their application within new frameworks of the extended mind, and the very abstraction of our object of study. These challenges are met with epistemic views that are challenging themselves; they acknowledge that there are contesting views and they provide insightful alternatives to reconceptualize domain and practice. In Chapter 1, Hanna Risku and Daniela Schlager review *expertise* as a construct in CTIS according to positivist, constructivist, and cooperative perspectives. They provide a panoramic view of the evolution of the construct across traditions to then illustrate their discussion with data derived from a multi-case study on language industry professionals and workplaces. The authors identify an increasing relevance of contextual aspects in the acquisition and development of expertise in epistemological perspectives, and interestingly find that conceptualizations of expertise at the workplace tend to correlate with one tradition or another, depending on whether respondents talk about others or about themselves.

Also revisiting foundational concepts in CTIS, Piotr Blumczynski tackles the complexity of cognitive processes and of translation and interpreting as processes themselves. He provides new conceptualizations that extend beyond classic cognitive research traditions, thus enriching our object of study. Blumczynski offers a “theoretical intervention” on the very notion of *process*, setting out from a polemical position to revisit the construction of ‘processes’ in CTIS according to “process thought” (Whitehead 1968). This new sensitivity advocates understanding cognition as a process not necessarily linked to linear objectives or to products, and explores the epistemological and ontological entailments of such a view for objects of study in CTIS.

Sandra Halverson and Haidee Kotze follow suit in chapter 3, challenging the adequacy of prevalent constructs at the interface of cognitive and social domains in CTIS. The increasing adoption of models of cognition that acknowledge its social embeddedness calls for constructs that can integrate both domains. The authors analyze two long-standing constructs in the field, *norms* and *risk management*, according to three points of contention: (1) ontological and epistemological instability, (2) the rational model of behavior these notions are supported by, and (3) the oversight of the linguistic nature of translation. In order to overcome the issues identified in their assessment, the authors propose an approach starting from usage-based theories of language.

Chapter 4 presents an original piece by Kobus and Jani Marais: an autoethnographic case study on intersemiotic translation exploring cognitive semiotics from an extended mind hypothesis angle. The authors analyze Jani Marais's performance of Samuel Beckett's "Not I." In order to ensure ecological validity, authors discuss the actress's own reporting on the translation of the monologue into bodily movement and then into voice according to movement theory. Then they frame their discussion in terms of semiotics and situated cognition postulates.

Closing the first part of this volume, Christopher Mellinger and Thomas Hanson problematize the philosophical foundations of quantitative research in Chapter 5. The authors focus on the application of Likert-type scales to measure latent variables in Translation and Interpreting Studies. The validity of survey scales at the ontological level is discussed. The authors call for formal definitions and stress the need to make explicit the philosophical positions underlying measurements to ensure scientific rigor in quantitative empirical research of language mediation phenomena.

2.2 Converging Epistemologies

The second part of the volume deals with aspects of epistemological integration that recognize differences in conceptualization of product and process knowledge in translation studies, and integrative modeling of the complexity inherent to the domain. In Chapter 6 Tatiana Serbina and Stella Neumann argue that process-based and product-based research produce different kinds of knowledge but that both are necessary for a comprehensive understanding of translational phenomena. In discussing multimethod research and the benefits of developing an integrative conceptualization of translation covering the entire initiation-process-product workflow, the authors turn to cognitive linguistics for a suitable framework allowing for an integrated approach. The authors end up with a note of "cautious" optimism about integration, warning us against the potential issues of trying to integrate individual behavioral data and the collective trace of processes in product data; for instance: the ecological validity of data gathered in experimental settings or the difficulties accounting for editorial intervention

Chapters 7 and 8 feature contributions by Fabio Alves and Igor da Silva, and Michael Carl respectively, focusing both on how one model can integrate phenomena by providing an explanatory framework for objects that have been constructed as different. Alves and da Silva propose incorporating extended, embedded and embodied aspects of cognition into the classic expertise performance framework by differentiating expertise in two types from a sociological perspective: contributory expertise and interactional expertise. The authors argue that such a framework accounts for the different aspects of translation expertise acquisition and can be considered an example of "how different approaches can

inform a wide range of studies in a complementary fashion.” In Chapter 8 Michael Carl presents the monitor model as a framework to describe human-technology interaction in translation contexts from an enactivist-posthumanist view accounting for the relation of how the mind, the body and the environment interact in their relationship with the world (in this case, translation phenomena). The resulting “symbiotic relationship” between translators and technology is then explained in terms of facilitating priming (modelled by a “translation automaton”) and implicit learning of humans and machines.

2.3 Pluralist epistemologies

If the second part focuses on points of convergence and consilient models as single explanatory/descriptive tools for varying phenomena, the third part addresses plurality from an epistemological perspective. In chapter 9, Ricardo Muñoz and Christian Olalla-Soler describe CTIS as an applied science implementing the scientific method to investigate an object that is socially determined. They compare CTIS with medicine as another applied science, building their argument on the grounds of shared epistemic traits at the disciplinary level, namely: borrowing from other fields, the coexistence of diverging, sometimes competing constructs for the same phenomena, and ill-defined concepts. In light of their argumentation, the authors endorse epistemic pluralism as a philosophical stance while pointing out the risks of falling into relativistic views. Álvaro Marín elaborates further on pluralism in chapter 10. He introduces pluralism as a general philosophical standpoint arguing for the coexistence of more than one possibly valid value system and contextualizes it according to existing models of scientific evolution. He then describes current discussions on scientific and model pluralism in the philosophy of science and applies them to theory development in CTIS, arguing that a plurality of models, even if mutually inconsistent, can still build an internally consistent, wider explanation of multilectal communication, that is, a theory.

3. An ongoing conversation

Science evolves as an ongoing conversation. We contend that this conversation can only be productive if the diversity of scientific practices is acknowledged and the related epistemic challenges identified and addressed. This volume serves as a venue for such a conversation. Thus, the volume includes epistemological discussions from a mature field that has experienced steep growth in the last decade. It is our hope that the work included here may serve to further strengthen a field that promises to enhance our

understanding of the minds of multilectal mediators. This understanding will have important implications for scientific progress, but also for training, industry and human-computer interaction in our domain.

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