26.1 Introduction

The relationship between expertise and both translation and interpreting has not only intrigued scholars since ancient times but has also become a subject of investigation in disciplines of their own in the last century. This has led to a myriad of definitions for each term, ranging from commonsensical notions to more sophisticated accounts of what expertise entails or what translation is all about. This chapter takes up the challenge of exploring a combination of such terms: expertise in translation/interpreting, focusing on the expertise framework and its implications for the study of translation and interpreting.

Expertise may be used as a buzzword in our daily lives, especially when it comes to pointing out those who (seemingly) excel in a domain or those who are (seemingly) skilful or well informed in a domain. This chapter particularly draws on the notion of expertise as developed from an expert-performance approach, as it seems to have paved the way for a new trend of investigations in Cognitive Translation Studies since Ericsson’s (2000) breakthrough article on expertise in interpreting and Shreve’s (2002, 2006) discussion of the impact of an expert-performance approach on the investigation of translation as a cognitive activity. Both Ericsson and Shreve have been amply cited in papers and articles related to translation at the interface with expertise.

The first principled investigations of the topic started nearly 50 years ago, with Chase and Simon (1973) and Simon and Chase (1973) focusing on expertise in chess. Investigations of expertise have had a great impact on cognitive psychology (see Ericsson et al., 2006), but expertise is also relevant because of its societal importance (see Bereiter & Scardamalia, 1993). This holds true for expertise in translation and expertise in interpreting, which are of great relevance in a number of cultural encounters and commercial businesses (Cronin, 2006).

This chapter is divided into four sections including this Introduction. Section 26.2 describes expertise in any given domain, making the point that Cognitive Translation Studies should resort to the notion of expertise as a more “elucidating” substitute for the notion of competence. Section 26.2 also discusses whether expertise in translation and expertise in interpreting are one single construct, focusing primarily on expertise in translation and providing a brief account of expertise in interpreting. Section 26.3 points to future directions and to approaches to expertise.
that could somehow find their way into Cognitive Translation Studies. Finally, Section 26.4 concludes with some remarks on the impact of the expertise framework on future endeavours in Cognitive Translation Studies.

26.2 Core topics

26.2.1 Expertise in a domain

Because the word “expert” shares the same origin as the words “experience” and “experiment”, “expertise” may at first refer to the characteristics, skills and/or knowledge of someone who has learned from experience (see Ericsson, 2006, 2018). This definition is misleading in that one is led to assume that 1) expertise, measured mostly in years of practice, requires experience and also that 2) experience will necessarily result in expertise. While the first part of the assumption is true, the second is not (see Ericsson et al., 2006).

Ericsson (2006, pp. 10–14) describes five major theoretical conceptions of expertise, namely: 1) the result of individual differences in mental capacities (e.g. Galton, 1869/1979), 2) the extrapolation of everyday skills to extended experience (e.g. de Groot, 1946/1978), 3) qualitatively different representation and organization of knowledge (e.g. Chi, 2006b; Chi et al., 1981), 4) elite achievement resulting from superior learning environments (e.g. Roe, 1952; Zuckerman, 1977), and 5) reliably superior (expert) performance on representative tasks (e.g. Ericsson & Smith, 1991; van der Maas & Wagenmakers, 2005). Apart from conception 1), which has failed tests over the twentieth century, such major frameworks consider expertise as an acquired skill rather than the result of basic endowment (e.g. innate talent, mental capacities, intelligence or memory) and constrain potential innate genetic predictors of expertise to body mass and height in some domains (e.g. basketball and ballet) (Ericsson, 2000).

Following Ericsson’s (2000) seminal approach to expertise in interpreting, it seems that scholars have been mostly committed to conception 5 (Ericsson et al., 2006), also known as the expert-performance approach, especially when it comes to theoretical accounts of expertise in translation, with some rare interfaces with conception 3 (e.g. da Silva, 2007, 2012; Pagano & da Silva, 2008). In both cases, the aim is to understand skills, knowledge and/or characteristics that distinguish experts from less skilled people.

A working definition of expertise within conception 5 could relate to consistently superior, or outstanding, or exceptional, performance in a given domain, with a domain being some kind of skilled activity (Shreve, 2006), which can be either informal (e.g. sewing or cooking) or formal (e.g. biology or chess) (Chi, 2006a). The demonstration of such consistently superior performance can be attained on a set of reproducible representative tasks in any given domain and is assumed to be the result of deliberate practice, i.e. the engagement in training activities especially designed for developing and consistently maintaining high performance levels in that domain (Ericsson & Charness, 1997).

The crucial aspect of deliberate practice is that unlike the mere accumulation of experience in performing a regular activity, it is focused and well planned, necessarily requiring both regular execution of well-defined tasks designed to be performed sequentially, with clear goals and adequate, gradually increased levels of difficulty for the individual, and informative feedback followed by opportunities for peer observation, repetition and error correction (Ericsson, 2006) over a significant period of time—ten years or so (Ericsson & Crutcher, 1990). In other words, regular engagement in an activity with a view to improving performance is a prerequisite of deliberate practice, which entails conscious performance monitoring (Horn & Masunaga, 2006), avoidance of arrested development associated with automaticity, and acquisition of metacognitive
skills to support continued learning and improvement (Ericsson, 2000, 2006). Performers’ practice is assessed either by themselves or by their peers or coaches against the predetermined goals or expected levels of achievement (Horn & Masunaga, 2006).

A combination of characteristics is required for one to attain expertise (Ericsson & Smith, 1991). Drawing on Tiselius (2013b), they may be summarized as follows: 1) regular outstanding performance in the domain, which rules out single top performances, 2) access to expert knowledge when needed; i.e. both novices and experts may have similar performances in routine tasks but not in difficult situations, 3) extensive experience in the domain, which can be roughly estimated to be ten years or 10,000 hours of practice and training, 4) engagement in deliberate practice, which consists of specific tasks, often coached, particularly designed to be completed at a time set aside only for practice, and solely aimed at improving a given skill, 5) definition of clear goals, with final goals usually divided into reachable part-time goals on both macro- and micro-levels, which is partly connected with deliberate practice, and 6) openness to feedback.

Further characteristics have also been associated with experts, especially when it comes to their expanded working memory (e.g. Atkinson & Shiffrin, 1968; Baddeley & Hitch, 1994; Ericsson, 2018)—the capacity of temporarily holding information available for processing, usually in three to seven chunks of information (e.g. Baddeley, 1986; Miller, 1967). Besides, compared with non-experts, experts tend to 1) know more, 2) produce the best solutions more quickly and more accurately, 3) represent a task and see problems at a deeper level and analyse them qualitatively, 4) have more efficient monitoring abilities to detect errors, 5) more successfully choose appropriate strategies to solve problems, 6) make more efficient use of information sources available while solving a problem and 7) have better recall as well as retrieve relevant knowledge and strategies with minimum cognitive effort (Chi, 2006a, 2006b; Glaser & Chi, 1988; Swanson & Holton III, 2001). Such positive qualities can also be overcome by some pitfalls and shortcomings that are common among experts, including (see Chi, 2006b) 1) poor calibration of skills required to perform a task because of overconfidence, 2) negligence of details at the surface level, 3) need for contextual clues to solve problems, 4) inflexibility and difficulty in adapting to changes, and 5) bias towards providing results based on what is already known, thereby neglecting other possibilities.

There have been two major traditions in the study of expertise, which Chi (2006a) names the “absolute approach” and the “relative approach”. The first approach builds on studying “truly exceptional” individuals to understand “how they perform in their domain of expertise” (Chi, 2006a, p. 21). Two major methods to identify such individuals are the retrospective method, i.e. by “looking at how well an outcome or product is received” (Chi, 2006a, p. 21), and the concurrent measure method, i.e. by using a rating system or measures of how well the experts perform a task. The second approach draws on studying experts in comparison to novices. The definition of expertise used in this approach is to some extent loose or generic, with experts being those individuals with more knowledge or better performance than novices. Expertise in this sense can be either grossly assessed through such measures as academic qualifications, consensus among peers, seniority or years performing a task, or more thoroughly assessed through domain-specific knowledge or performance tests (Chi, 2006a, pp. 22–23). One should notice, however, that in some domains, such as sports, more declarative knowledge does not necessarily lead to superior performance (Ericsson & Lehmann, 1996; Williams & Davids, 1995).

Drawing on Chase and Simon’s (1973) and Simon and Chase’s (1973) pioneering work on chess, which has set the ground for modern laboratory research on expertise, Ericsson and Smith (1991) tend to favour the first approach but admit the possibility of adopting the second approach in step 2 of their three-step model for investigating expertise in domains where no external ranking is available to define outstanding performance, especially in complex domains.
The first step consists of finding or collecting a set of standardized, representative tasks to capture superior performance in the domain. The second step is to examine the expert performance in a laboratory by using methods of analysis available in cognitive psychology, which include 1) methods of inferring mediating processes, as one cannot directly observe such processes, 2) expertise–novice comparisons, 3) extensive studies of single subjects, and 4) studies of particular aspects of expert performance, rather than its entirety. The underlying assumption for the second step is that the mediating mechanism for expert performance is stable and not much influenced by the additional experience in the laboratory, which is only a fraction of the expert's total experience. The third step involves accounting for superior performance by experts, i.e. providing theoretical and empirical accounts of how the mechanisms identified in step 2 can be acquired through training and practice.

Following this general framework of the studies of expertise and expert performance, the next section delves into how expertise has been approached within Cognitive Translation Studies.

### 26.2.2 Expertise in Cognitive Translation Studies

Building on Halverson (2010), what is now termed Cognitive Translation Studies seems to fit well into what Holmes (1972/2000) envisioned as “process-oriented descriptive translation studies”, a kind of research within Translation Studies that would profit from psychology to gain access to the “complex mental processes” underlying the “process or act of translation itself” (Holmes, 1972/2000, p. 177). The field has evolved far beyond this interaction with psychology and has been influenced by a number of other disciplines, including linguistics, neuroscience and cognitive science, to name a few (see Alves, 2015; Alves & Hurtado, 2010; Alvstad et al., 2011). However, as O’Brien (2013) points out, such influence does not necessarily entail “interdisciplinarity”, as the field has been more of a borrower than a lender and has had very little impact on the other domains. O’Brien’s observation adds to Alves and Hurtado’s (2010) contention that cognitive approaches to translation still borrow extensively from other disciplines while striving to establish their own tradition.

This observation and the call for reciprocity between Cognitive Translation Studies and other disciplines are perceptive and well timed. However, O’Brien does not account for why it has been so. While this chapter is not intended to uncover all such reasons, a starting point seems to be how Cognitive Translation Studies appropriates concepts and methods from other disciplines without a clear understanding of the epistemological consequences (Marín, 2017, 2019). This holds particularly true when it comes to the notion of expertise and expert performance, originally introduced in cognitive psychology (see Ericsson & Crutcher, 1990; Ericsson & Smith, 1991; Scardamalia & Bereiter, 1991), and how several scholars have been at odds concerning how to relate it to the notion of translation competence or vice versa (see Alves, 2015; Muñoz Martín, 2014; PACTE, 2003, 2005, 2017; Pym, 2003; Schäffner & Adab, 2000; Shreve, 2002, 2006; Sirén & Hakkarainen, 2002; Tiselius, 2013a, 2013b).

Competence may be basically understood in two different ways: either as underlying knowledge, i.e. the cause or prerequisite of performance, or as aptitude, i.e. the result of performance (see Rothe-Neves, 2007). In their struggle to relate competence and expertise, translation scholars have 1) roughly equated expertise with translator’s competence (e.g. Muñoz Martín, 2014; PACTE, 2003, 2005, 2017; Rodrigues, 2018a), 2) implicitly considered expertise either as 2.1) the final stage or result of translation competence (e.g. Englund Dimitrova, 2005) or as 2.2) the underlying factor or cause of competence (e.g. Shreve, 2002, 2006), or 3) even explicitly seen expertise as a broader term encapsulating competence (e.g. Tiselius, 2013a). Alongside the fact that the very notion of competence remains unclear within Translation Studies, as it is
interchangeably associated with underlying knowledge, qualities of a good translator, aptitude, performance or the result of performance (see Malmkjaer, 2009; Pym, 2003; Rothe-Neves, 2007; Schäffner & Adab, 2000), the notion of competence seems to have brought little profit to cognitive approaches to translation, especially if one considers its influence or gradual detachment from Chomsky’s (1965) generative grammar. Even though Alves (2015) argues that cognitive approaches to translation have explicitly claimed affiliation with the studies of expertise and expert performance, such affiliation, which has been dependent on how expertise relates to competence, has not entailed a rethinking of the epistemological position of the notion of expertise within Cognitive Translation Studies (Marín, 2017, 2019) and how it can feed back into the studies of expertise and expert performance.

Following Shreve et al.’s (2018) argument, competence models (e.g. Alves & Gonçalves, 2007; Bell, 1991; Hatim & Mason, 1997; Kelly, 2002; Neubert, 2000; PACTE, 2003, 2005, 2017), especially the multicompositional models, seem to have undeniable pedagogical value but tend to be less relevant to understanding cognition and mental processes, for which “the concept of expertise could be a robust and more enlightening substitute” (Shreve et al., 2018, p. 37). Besides, if Cognitive Translation Studies truly means to be reciprocal to other disciplines, it is by using the notion of expertise instead of that of competence that it may find a theoretical apparatus not only to feed into Cognitive Translation Studies but also to feed back into the studies of expertise and expert performance—for instance, by employing experimental methods, accommodating findings, and expanding theoretical frameworks with evidence from translation (Shreve et al., 2018). In Ericsson’s (2000, p. 214) words, both the domains of interpreting and translation offer a unique window on real-time comprehension and seem to provide a sufficiently constrained task for the study of the most elusive phenomena in skilled activities, i.e. comprehension and production of verbal messages.

Shreve et al. (2018) draw their conclusions from seeds planted by such authors as Sirén & Hakkaranen (2002), Shreve (2002, 2006), Tiselius (2013a), and Muñoz Martín (2014), to name a few, who anticipated issues in relating expertise to competence. Their original, rather strong claim that the concept of expertise may be more “robust” and “enlightening” in Cognitive Translation Studies points to some maturity in how to conceive of and tap into expertise in translation and expertise in interpreting.

Having provided some information on how Cognitive Translation Studies has incorporated the concept of expertise, the next section discusses whether expertise in translation and expertise in interpreting should be regarded as one single construct.

26.2.3 Expertise in translation and expertise in interpreting: One single construct?

Muñoz Martín (2014, p. 4) mentions that “expertise in translation and expertise in interpreting are often implicitly assumed to be different constructs” and argues for an understanding of “expertise in translation” as a construct referring to both translation and interpreting tasks. He contends that 1) both translating and interpreting skills are “concrete, adaptive developments of various levels of bilingual proficiency to specific task configuration” (Muñoz Martín, 2014, p. 4), 2) they share some features, including an optimized bilingual lexicon and inhibitory rules for competing linguistic forms in different languages, 3) people often engage in both translation and interpreting activities, thereby gaining experience from both, and 4) “research constructs must include all cases in the definition while excluding all others” (Muñoz Martín, 2014, p. 4).

Reasons 1) and 2) seem to be valid, but it is quite debatable whether people often do engage in both translation and interpreting tasks (reason 3) and whether a research construct including all cases in the definition while excluding all others (reason 4) is feasible, considering
that expertise is domain specific (Ericsson, 2000; Ericsson & Smith, 1991). If the underlying assumptions in the theoretical framework of the studies of expertise and expert performance remain true, especially when it comes to identifying the set of reproducible representative tasks in a given domain (Ericsson & Smith, 1991), it follows that an all-encompassing research construct named “expertise in translation” is inconsistent with the epistemological and theoretical frameworks of the expert-performance approach. There are some points of overlap, particularly considering Muñoz Martín’s reason 2, but the representative tasks for translation are extensively different from those for interpreting languages orally, which in turn are also quite different from those for interpreting signed languages. Such differences are also reflected in the fact that studies of translation have traditionally focused on several variables and parameters that are quite different from those used in studies of interpreting. Indeed, one cannot expect an expert translator to necessarily be an expert interpreter, since expertise does not transfer across domains, however much it may help to perform tasks in other domains (Chi, 2006b; Scardamalia & Bereiter, 1991). The notion of domain can be even stricter, including text types and subject areas, in such a way that one cannot even expect, for instance, an expert literary translator to be an expert scientific-technical translator (Shreve, 2002, p. 153).

The fundamental, all-encompassing research construct should remain that of expertise, as specified, especially because translation scholars tend to explicitly state their affiliation with the studies of expertise and expert performance and usually relate their research to the notion of expertise as consistently superior performance—see, for instance, Shreve et al.’s (2018) account of and approach to the matter. In other words, even though researchers can find characteristics that are specific to translators and interpreters alike, it seems there is no need for such a specific research construct as expertise in translation for Cognitive Translation Studies. As a matter of fact, this would eventually prevent the field from feeding back into the studies of expertise and expert performance (see Section 26.2.2).

As such, the following sections address expertise in translation and expertise in interpreting separately. According to Pym (2003), the adoption of the expertise framework in the Translation Studies dates back to Holz-Mänttäri (1984), but the following section focuses on expertise studies that build on cognitive psychology, more specifically on the expert-performance approach. The use of such specific framework started in interpreting studies (e.g. Ivanova, 1999; Moser-Mercer, 2000), and seemingly gained momentum with Ericsson (2000), a specialist from cognitive psychology.

26.2.4 Expertise in translation

This section is subdivided into two: the first addresses the theoretical framework that has already been introduced into Cognitive Translation Studies, while the second addresses how this framework has been translated into empirical studies.

26.2.4.1 A theoretical account

Expertise in translation has long intrigued translation scholars, institutions and professionals (see Pym, 1996). Several questions have been raised, such as: How have translators become experts? Are all translators experts?

However, it was only in 2000 that Ericsson’s article paved the way for the study of interpreting (and translation) from an expert-performance approach. It did not take long for Shreve (2002) to provide what is perhaps the first comprehensive account of a potential interface between such an approach and Cognitive Translation Studies. Shreve (2002) discusses the theoretical issues around the notion of expertise in translation, how it relates to the notion of translation competence, and the cognitive changes that take place in translation experts. Particularly, he observes...
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that “making the concept of expertise in translation operational would require a performance model for translation” (Shreve, 2002, p. 152). Following the studies of expertise and expert performance, such a model requires consistency, with translation experts consistently displaying expert performance.

By then, probably because of the novelty of an expert-performance approach to translation, Shreve (2002, p. 154) declared that “[o]ur interest in expertise in translation is an extension of our research in translation competence”. Apparently, this perspective remained until 2018 and was notably present in Shreve’s (2006) much-cited paper, in which he particularly focused on the implications of the concept of deliberate practice in translation. He wisely pointed out that a performance model “must fully describe the empirical characteristics that define superiority” (Shreve, 2006, pp. 28–29). As performance in translation cannot be easily measured, unlike in such domains as sports, Shreve (2002, 2006) seemed to be aware that performance in translation has yet to be properly defined, and Cognitive Translation Studies does need to come up with measurable, well-defined, translation-specific tasks if it is to qualitatively differentiate superior performances from simply acceptable or good performances.

Focusing on four conditions that are necessary for deliberate practice to sustain expertise—1) a well-defined task, 2) appropriate difficulty of the task for the individual, 3) informative feedback, and 4) opportunities for repetition and error corrections—Shreve (2006) accounts for the challenges that Cognitive Translation Studies may face if it is to truly adopt the notion of deliberate practice. As for condition 1), he argues that translation per se is an extremely complex task, which requires performance in a number of other related tasks, including reading and writing, which vary greatly according to experiential parameters, including pragmatic circumstances, text types, subject domain and translation skopos. In fact, one could contend that translation is an ill-defined, problem-solving task (see Nye et al., 2016), whose final outcome is open to some variation. However, following Pym’s (2003) minimalist approach, Shreve (2006, p. 31) seems to suggest that the notion of a well-defined task in translation could be a combination of the following two activities, performed under specific experiential circumstances: “the ability to generate a series of more than one viable target text (TT1, TT2, …, TTn) for a pertinent source text (ST)” and “the ability to select only one viable TT from this series, quickly and with justified confidence” (Pym, 2003, p. 489).

As for the appropriate difficulty condition, Shreve (2006) places it at the intersection between the specific textual properties and the existing, possibly deficient, cognitive resources of the translators. According to him, textual and contextual causes may precipitate specific difficulties in a number of stages during the translation task, including input processing, comprehension and target-text production. For instance, complex, highly dense texts may require re-reading and refreshing of working memory.

When it comes to feedback, Shreve (2006) stresses that feedback mechanisms usually work well in translation learning settings but are rare in the workplace. Still, feedback is crucial because of the interdependency with the capacity for self-regulation. One potential feedback mechanism in the workplace can be error correction in the form of editing and revising processes, when they truly provide room for the translator to perform changes and understand their inefficiency. Further compensatory error correction schemes could include mentoring or coaching, which are not rare in other domains, as well as Internet-enabled collaboration. Besides, repetition in such contexts would not be necessarily related to translating the same text over and over but to specializing in a language pair, in particular subject areas, and in particular text types. This could be a useful way to recognize, analyse and schematize linguistic, textual and conceptual patterns.

Shreve (2006) argues that expertise in translation includes performance in four distinct areas, namely: 1) L1 and L2 linguistic knowledge, 2) culture knowledge of the source and target culture,
including domain knowledge of specialized domains, 3) textual knowledge of text conventions in L1 and L2, and 4) specific knowledge of translation, including strategies and procedures, such as use of translation tools and application of information-seeking strategies. According to the author, translation experts excel in their respective domains not only because of their number of cognitive resources but, most importantly, because of the quality and constitution of such resources.

Besides, consistently with the studies of expertise and expert performance, Hurtado and Alves (2009) summarize expert performance in translation as an acquired skill, which 1) requires a high level of metacognitive activity, 2) involves proceduralization of knowledge related to domain specificities, 3) requires self-regulatory behaviour, i.e. monitoring, resource allocation and planning, and 4) is not necessarily related to general cognitive capacities such as memory or intelligence. However, despite these theoretical attempts to describe expertise in translation, empirical cognitive translation investigations have not been able to address such skills under the expert-performance framework because of the unstable relationship between expertise in translation and translation competence. The following section addresses this troublesome relationship.

26.2.4.2 An account of empirical studies

As mentioned in Section 26.2.1, two major traditions stand out in the study of expertise, namely, the “absolute approach” and the “relative approach”. The theoretical account described earlier calls for an absolute approach, but empirical cognitive translation investigations have primarily adopted the relative approach.

This imbalance between the theoretical account and the empirical practices may explain why scholars have mistakenly brought the notion of competence to bear on the expert-performance framework. In assuming that professional, experienced, usually (but not necessarily) trained translators are “expert enough” in the translation domain, since they have the necessary competence to perform a translation task, competence-based studies most often take it for granted that it is valid to carry out experiments with participants screened and selected on the basis of the numbers of years they have worked as professional translators. Such a procedure is consistent with a “relative approach”, provided the studies limit their findings to an understanding of how an individual with more experience than another seems to perform differently, sometimes better, in a task.

Much as the relative approach tradition is valid within its own theoretical framework and arguably allows translation competence to be equated with expertise in translation, it comes at a price. Experts, loosely defined as such, do not necessarily perform better than non-experts or novices, nor do they necessarily perform better consistently. For example, the PACTE group started out with 35 professional translators but ended up with only nine top-ranked translators. PACTE (2003, p. 44) stated that they “started from the concept of translation as a communicative activity […] that requires expert knowledge. In Translation Studies, this expert knowledge is called Translation Competence”. However, PACTE (2017) had to take a relative approach to account for the performance of the nine top-ranked translators, even though all participants had originally been selected because of their assumed competence/expertise resulting from years of experience (see especially PACTE, 2017, pp. 269–302). Besides, several professional translators performed similarly to non-translators, and some were even outperformed by them in at least one of the tasks. On top of that, the participants performed only two tasks, which does not necessarily guarantee that the nine top-ranked translators would consistently perform at superior levels. PACTE (2017, p. 294) insists that translation competence is expert knowledge, but it turns out that translation competence may be at best a prerequisite for expertise: if one assumes that the nine top-ranked translators were indeed experts from the perspective of a relative approach to expertise, they were actually found because of their alleged competence.

The notion of competence seems to be dear to Translation Studies, and competence models do have pedagogical value (e.g. Esqueda, 2020). Besides, studies following this notion may well
contribute to the relative approach to expertise if they recognize themselves as such. They may also contribute to the absolute approach to expertise if researchers learn from their task applications and how they can serve the purpose of deliberate practice and identification of consistently superior performance, especially considering steps 1 and 2 in Ericsson and Smith's (1991) three-step model for investigating expertise.

To the best of this author’s knowledge, no scholar within Cognitive Translation Studies has followed the three steps fully in empirical studies, especially when it comes to the third step: accounting for consistently superior performance by translation experts. In fact, the field has yet to come up with a collection of representative tasks, which, to date, may only be speculatively derived from a combination of the individual tasks used in several empirical studies. Most empirical investigations have focused on comparisons between experts, loosely defined as such, and non-experts (e.g. Jakobsen, 2002, 2003), or between performance in an expertise-specific domain and performance in a slightly different domain (e.g. different text type, subject matter, language pair, directionality or number of text features) (e.g. da Silva, 2007, 2012; Schmaltz, 2015), or even both (e.g. Alves et al., 2011; Dragsted, 2005). Few studies have focused on single expert individuals (e.g. Jakobsen, 2005). Methods have usually included verbal protocols (e.g. da Silva, 2015; Englund Dimitrova, 2005), keylogging (e.g. Jakobsen, 2002, 2003), eye tracking (e.g. Jakobsen & Jensen, 2008; O’Brien, 2006) or triangulation of different sources of data elicitation (e.g. Carl & Dragsted, 2012; Hvelplund, 2011), usually concerned with ecological validity (see Alves, 2003; Shlesinger, 2000). More recent studies have also used resources from the neurosciences, including functional magnetic resonance imaging (e.g. García, 2013; Szpak, 2017).

A systematic expert–performance approach to translation has yet to emerge in empirical cognitive translation investigations, especially when it comes to defining or singling out expert individuals and having them participate in reproducible tasks. Nonetheless, clear attempts to qualify expert performance have been made. The analyses have focused on a range of dependent, process-related variables of temporal, cognitive and technical nature (Krings, 2001), some of which have evolved independently within Translation Studies, Cognitive Translation Studies or even other fields, including working memory, pauses, segmentation, micro-units, recursiveness, renditions, fixations and metarepresentation. The results of the individual empirical studies are not generalizable, but they seem to indicate that within their domain of expertise, experts, loosely defined as such, tend 1) to operate in an integrated processing mode when dealing with familiar, easy texts, i.e. a mode featuring long average segment sizes, high production speed and short pauses, with most processing at the clause/sentence level, and 2) to make decisions more quickly than novices and stick to them once they write them, with recursiveness and changes in renditions having an impact on the macro-level of the text rather than being mere changes of words on the micro-level. Also, it is worth noticing Jakobsen’s (2005) attempt to define an objective, systematic metric to identify expert performance, aka peak performance, i.e. producing extremely long segments by pressing 60 keys or more sequentially without any interruption longer than 2.4 seconds.

In addition to the traditional expert–novice comparison, a few studies have also compared “expert” translators with field specialists in the translation of technical-scientific texts (e.g. Alves et al., 2011; Pagano & da Silva, 2008). Field specialists, such as physicists and physicians in non-English-speaking countries, often develop translation skills as an integral part of their expertise in their respective fields. This allows them to participate in various academic activities (e.g. to attend conferences and publish in peer-reviewed journals). Studies of such field specialists have attempted to uncover the impact of domain knowledge on task execution. Findings seem to show that field specialists cannot operate in an integrated processing mode, regardless of their domain knowledge of the subject matter addressed in the text. In other words, their domain knowledge, including source-text comprehension and vocabulary, does not allow them to
perform to standards that would be expected from expert translators when they are dealing with source texts in domains with which they are familiar, as reflected in the production of long segments with few and short pauses in between (e.g. Dragsted, 2005; Jakobsen, 2005). Even so, some field specialists can perform tasks at similar speeds as translators and can represent meaning at higher linguistic levels (see Chi, 2006b), including those of the clause and sentence (da Silva, 2015), with some of their target texts ranking better than the translators’ when assessed by a panel including field specialists, linguists and translators (Braga, 2012). These findings, which seem to challenge some current notions of expertise in translation (e.g. are exceptionally long segments and few, short pauses truly indicative of expertise in all cases? Do they always translate into fast performance and production of quality target texts?), may be used in the future to improve the collection of reproducible tasks that point to expertise in translation.

26.2.5 Expertise in interpreting

Moser-Mercer appears to have introduced the expert-performance approach to the interpreting community when she invited Ericsson to the Ascona workshops in 1997 and 2000 (see Tiselius, 2013b). However, it was Ericsson’s (2000) article that formally proposed an expert-performance approach to interpreting to substitute those he named “traditional approaches”, including the pioneering work by Gerver (1971). Furthermore, even though Shreve (2006) does not explicitly mention “interpreting”, it seems that his account of translation is all-encompassing and does include interpreting, as he mentions “listening” once (Shreve, 2006, p. 32).

Early studies in interpreting assumed that expertise in interpreting was dependent on some innate special skill (see Dillinger, 1989). Subsequent attempts were built on introspective descriptions of mediating mechanisms or on basic processes such as word recognition and categorization, but they lacked independent verification and experimental validation, and therefore did not meet the standards of laboratory research (see Massaro & Shlesinger, 1997; Shlesinger, 2000). According to Shlesinger (2000), there is evidence against the decomposability of interpreting into components and sub-processes, since the complex semantic context at the level of discourse is relevant for generating the meaning of a word or a sentence.

In his proposal for an expert-performance approach to interpreting, Ericsson (2000) draws on the three-step model described in Section 26.2.1. The author also makes a strong case for the potential of such an approach to interpreting. However, as he could not find studies that met the criteria for the expert-performance approach at that time, he did not demonstrate how it could be applied.

According to Tiselius (2013b, p. 19), the expert-performance approach has since found its way into studies of expertise in interpreting. For instance, Moser-Mercer has investigated expertise from the learners’ perspective (e.g. Moser-Mercer, 2000; Moser-Mercer et al., 2000). Besides, some dissertations have explored expertise in interpreting: Ivanova (1999) addressed problem-solving strategies, Liu (2001) focused on working memory, and Vik-Tuovinen (2006) included preparation in her study of expertise from a wider perspective.

It seems that, as in the studies involving translation, a systematic expert-performance approach has yet to emerge in empirical studies of interpreting. Still, Liu (2008) reports several findings in interpreting that can be correlated with expertise (e.g. Dillinger, 1989; Goldman-Eisler, 1972; Isham, 1994; Liu, 2001). She points to three major processes in interpreting—comprehension, translation and production—and further divides them into subskills and cognitive abilities (concurrent articulation, articulatory suppression, working memory and attention shift). Building on such processes and subskills, she reports some common features among experienced interpreters compared with non-experienced interpreters that might be indicative of expertise in interpreting, such as 1) better semantic processing, 2) better selection of the most important meaning units,
3) less disturbance by delayed auditory feedback, 4) larger digit span when it comes to working memory, and 5) rapid attention switching between listening and speaking. These skills usually entail fewer errors, faster responses and less effort.

These findings were obtained in studies involving oral languages in either simultaneous or consecutive interpreting. To the best of the author’s knowledge, Cognitive Translation Studies is still in its infancy when it comes to interpreting sign languages (Rodrigues, 2018a, 2018b). This is even more the case regarding studies of expertise in sign language interpreting. In one of the few studies, Rodrigues (2018a), who arguably equates competence with expertise, advocates the inclusion of an intermodal component if a translation competence model is to be “universal” or at least capable of accounting for interpreting sign language. In a related work, Rodrigues (2018b) states that there are at least two language modalities—an auditory-vocal modality and a visual-gesture modality—and contends that modality impacts on interpreting from oral language to sign language because of 1) the use of code blending, 2) the necessary body-visual performance, and 3) the prevalence of translation into the L2. According to Rodrigues (2018a, 2018b), expertise in interpreting sign languages requires both a kinaesthetic-bodily ability to produce signs and a visual-cognitive ability to understand signs, both of which are linked to the linguistic competence and the communicative competence.

26.3 Future directions

Besides the expert-performance approach, other approaches to expertise, not necessarily mutually exclusive, can likewise contribute to Cognitive Translation Studies. Several translation scholars have claimed that translation requires “competence” in reading and writing (see Muñoz Martín, 2014; Shreve, 2006, among others). Therefore, it seems promising to understand the developments in studies of expertise in such related domains. For instance, Scardamalia and Bereiter (1991) suggest that expertise in writing is a dialectical process whereby individuals both deduce from their domain knowledge and their discourse knowledge to solve a particular case and infer from a particular case to reformulate their domain knowledge and their discourse knowledge. The authors point out that there are two different writing processes. In the knowledge transfer process, the text tends to reflect the order in which the individual thinks of something, rather than an order imposed by the content as a result of planning. In the knowledge transformation process, two spaces are interconnected: the content space, where there are problems related to domain (or content, or subject-matter) knowledge, and the rhetorical space, where there are problems related to writing (discourse knowledge).

Scardamalia and Bereiter (1991) also state that, in several domains, experts need to develop skills in their core tasks while also developing skills in writing and reading. They suggest that expertise in domains requiring reading and writing skills may be related to how such skills are incorporated into the professional performance and to some habits of the individuals. Some scholars in Cognitive Translation Studies have mentioned Scardamalia and Bereiter’s work, especially when dealing with comparisons between translators and field specialists (e.g. da Silva, 2007, 2012; Pagano & da Silva, 2008), but they have not explicitly focused on the translators’ habits and how their reading and writing skills are incorporated in their performance. Besides, studies of translation have not investigated the implications of fast performance as an unreliable predictor of writing and reading expertise (see Scardamalia & Bereiter, 1991); i.e. unlike in most domains, expert writers and expert readers are not necessarily significantly faster than novices, which may also hold true for expert translators to some extent.

From a sociological perspective, Collins and Evans (2007) posit several different types of expertise, two of which seem to be of relevance to studies of translation and interpreting. The authors suggest
that specialized tacit knowledge can be associated with two different types of specialized expertise; namely, contributory expertise and interactional expertise. In general terms, contributory expertise is what allows individuals to perform their activities in their domains (e.g. a surgeon operating on a patient), while interactional expertise is what allows reviewers, journalists, sociologists and translators to perform a great deal of their tasks upon conversations and interactions with those who have contributory expertise; i.e. it is co-created between the individuals. In other words, the former allows individuals to perform directly in their own domain, whereas the latter implies encyclopaedic knowledge and mastery of the language of another domain without knowledge of actual practice in that domain. Drawing on the interactional expertise paradigm, da Silva and Silveira (2017) carried out a two-year longitudinal study with novice translators who periodically interacted with physicians and performed tasks aimed at deliberate practice. The authors showed that interactional expertise enabled the novice translators by themselves to pinpoint and solve problems in the writing of the source text before producing an adequate translation with improved confidence in their own work. The focus in such an approach is, therefore, not exclusively on the individual performer but, rather, on their interactions with others, as elaborated on by da Silva (2019).

26.4 Concluding remarks

The present chapter is necessarily a selective approach, which neglects several aspects, theories and historical accounts of expertise in general and expertise in translation/interpreting in particular. It provides a general overview of some aspects of several different definitions of expertise, both concerning studies of expertise and expert performance and regarding Cognitive Translation Studies (see Muñoz Martín, 2014; Tiselius, 2013b, Marin, 2017, 2019, for further discussions). There seem to be competing definitions of what expert performance is in interpreting and in translation; besides, they may be dependent on text type, skopos, among other intervening factors.

By explicitly affiliating with some paradigms, traditions or approaches from other disciplines, while also understanding their impact on the tradition of empirical-experimental research in Translation Studies in general and Cognitive Translation Studies in particular, researchers can overcome several shortcomings and most likely improve their understanding of translation and interpreting while also feeding back into other disciplines. For instance, Tiselius (2013b) affiliated with the expert-performance approach and found results that challenge the notion of deliberate practice in interpreting. While she did not deny the validity of the concept, Tiselius (2013b) pleaded for a more precise, unambiguous understanding of it, both from within the discipline as well as from the perspective of the expert-performance approach. Evidence of expertise in translation or in interpreting is mostly similar to that in other domains (Jääskeläinen, 2011), and a closer dialogue between Cognitive Translation Studies and studies of expertise and expert performance could be fundamental, not only to improve our understanding of translation as a highly demanding cognitive act and of expert professional behaviour, but also to better place translation and Cognitive Translation Studies on the map of other disciplines.

Cognitive Translation Studies is paving its way to reaching maturity in its investigation of expertise in translation and expertise in interpreting. Perhaps, the next step is to truly overcome the unstable relationship, at times dichotomous, at others close, between expertise in translation and translation competence, which has long trapped Cognitive Translation Studies in its theoretical and methodological accounts of expertise in translation and expertise in interpreting. Hopefully, this chapter has provided a contribution to this debate by shedding light on the differences between an absolute and a relative approach to expert performance with respect to translational activity. In doing so, researchers will most likely create a bulk of empirical studies that are comparable because they share methodological procedures, core definitions and theoretical frameworks, not only in
Cognitive Translation Studies but also in neighbouring disciplines. In this way, expert performance and expertise are likely to become strong constructs rather than buzzwords indistinguishably associated with competent, professional and/or experienced individuals. The field may also come up with objective metrics of what absolute expertise in translation or in interpreting really is, which could also feed back into the studies of expertise and expert performance.

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**Note**

1 Sirén and Hakkarainen (2002) also provided a comprehensive account of the potential of investigating expertise in translation, but not from an expert-performance approach.

**Further reading**


A volume with 19 chapters on innovative methodological approaches to investigating translation and interpreting.


As an updated edition of the 2006 *Cambridge handbook of expertise and expert performance*, this handbook provides vast documentation of expertise in 16 major domains, including theoretical and methodological discussions.


A collection of 12 chapters on translation process that report on methods, research topics, and interactions of the Translation Studies with other disciplines.


A collection of 15 chapters that assesses the state of the art in Cognitive Translation Studies by focusing on methodological innovation, research design and research issues.

**References**


Translation, expert performance and cognition


