Institute of Translation and Interpreting

# Could neural machine translation be used as a self-care tool to support literary translators to process emotions when translating challenging texts on grief?


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## Abstract


This thesis looks at the topical issues of translator wellbeing and self-care, and the growing role of machine translation (MT) and Artificial Intelligence (AI) in the translation sector. The aim of this study is to determine whether neural machine translation could be used as a self-care tool for literary translators working on emotionally challenging texts. This issue is examined through an experiment carried out with volunteer student translators, who were asked to assess their experience of translating two comparable sections of an emotionally challenging text on grief with and without MT. A case study of a professional translator's experience of grief and its impact on her translation work is also presented. The results suggest that the use of MT to translate emotionally taxing texts may have something of a distancing effect, reducing the emotional impact on the translator by requiring less emotional and cognitive effort. While MT might be appropriate to use as a self-care tool in certain circumstances, it is also important to consider the risk of the potential distancing effect resulting in the translator experiencing a reduced enjoyment of working with the text. In conclusion, the findings of this thesis are that there is scope for MT to be used as a self-care tool by translators when tackling emotionally challenging texts and that this should be tested with a larger experiment with a more representative cohort of participants, including professional translators. Translators' professional workflows should be taken into account in the design of any follow-up study, and potentially useful recent developments in research and practice such as bespoke Computer Assisted Literary Translation software and the incorporation of Emotional AI may also be considered.

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# List of abbreviations

| | |
|---|---|
| AI | Artificial Intelligence |
| BACP | British Association for Counselling and Psychotherapy |
| CALT | Computer Assisted Literary Translation |
| CAT | Computer Assisted Translation |
| EAI | Emotional Artificial Intelligence |
| EEG | Electroencephalogram |
| EI | Emotional Intelligence |
| GECo | Geneva Emotional Competence (test) |
| ICT | Information Communication Technology |
| ITI | The Institute of Translation and Interpreting (UK) |
| MT | Machine Translation |
| NMT | Neural Machine Translation |
| PANAS | Positive and Negative Affect Scale |
| PsyCap | Psychological Capital |
| RBMT | Rule-Based Machine Translation |
| SMT | Statistical Machine Translation |
| TAP | Think Aloud Protocol |
| WHO | World Health Organization |

# 1. Introduction

For many years, research in translation emphasized patterns of translation choices, the role of source texts and target texts, before developing to look at translation processes (Muñoz Martín, 2016). In the 1990s there was a shift towards recognising the impact and agency of the individuals conducting these complex cognitive tasks (Shields and Clarke, 2011, p. 1). During the past decade, translation studies has experienced an 'affective turn', whereby researchers began to consider in greater depth the impact of translators' emotions on their work (Hubscher-Davidson, 2022, p. 54). Emotion and translation, and the psychology of translation have developed as significant topics in translation research, drawing on disciplines such as psychology and the social sciences (Hubscher-Davidson, 2020b; Hubscher-Davidson and Lehr, 2023). These strands of research look not only at translators' roles and their impact on translation, but also at how the very act of translating influences translators themselves. As Carol Maier (2007, p. 264) argues in her essay on the translator's visibility and responsibility, "all acts of translation hold the possibility for the translator to be affected in ways he or she did not anticipate".

In recent years, translation and interpreting research and practice has moved towards considering issues of self-care and wellbeing (Hubscher-Davidson, 2020a; Costa, Lázaro Gutiérrez, and Rausch, 2020; Bednárová-Gibová and Majherová, 2021a). This is particularly important in an industry with high proportions of freelancers, which, as in other cultural sectors, means that workers frequently operate independently, without a strong regulatory framework or solid support structures (Tyler et al., 2024; Penet, 2024). Professional associations have also begun to take these issues seriously; for example, the Institute of Translation and Interpreting (ITI) has recently developed a position paper on self-care and wellbeing, which states that this topic requires attention from all actors in the translation sector, including individuals, organizations and collectives (Hubscher-Davidson, 2021). The sector's growing attention to translators' wellbeing informs the focus of this thesis.

Another key development underpinning this research is the exponential rise of Machine Translation (MT) and Artificial Intelligence (AI) over the past decade. Ideas about technological solutions predate translation studies as a formal discipline, going back to the 1954 Georgetown-IBM experiment, a first test, which set the scene for an ongoing quest for machines to provide efficient solutions to human translation needs (Hadley, 2023, p. 94).

While the rapid rise of AI and accessible tools such as ChatGPT has since led to dramatic change in many industries, translation was already affected by the technology of large language models. Neural Machine Translation (NMT), based on these models, was initially adopted by Google Translate in 2016, which now translates billions of words per day (Eszenyi et al., 2023) Users have determined that such technologies provide good-enough solutions for many translation needs including in the case of straightforward texts without much ambiguity and for well-resourced language pairs (Grass, 2022). Generative AI, that is machine learning solutions trained on massive amounts of data, producing output based on user prompts, made a huge impact with its release in late 2022 (Sætra, 2023). While AI is recognised to have potential to enhance creative processes, its development is accompanied by a sense of fear from workers, including knowledge workers and creatives, such as translators, that machines pose a real threat to their jobs and livelihoods (Tyler et al., 2024, p. 13; Sætra, 2023, p. 2).

The latest CSA Research survey on of the state of the translation industry cites increased demand for AI as one of the key factors driving stalled or reduced growth in the industry, but shows a mixed picture of whether work is actually declining or rather changing shape as MT becomes increasingly prevalent (CSA Research, 2024). Recent research demonstrates that translators' approaches to MT and the impact on the sector are more nuanced than could be inferred from popular narratives (Vieira, 2020; Ameri, 2024). Changes in the industry should also be seen with a bigger picture lens, as part of longer-term trends across professions in general, such as automation and decreasing prices (Vieira, 2020, p. 2–5). Technological developments inevitably create some stress and uncertainty for translators, which only reinforces the need for individuals to focus on self-care and wellbeing, as well as to understand how they can best adapt their work practices to benefit from technological progress.

This study aims to investigate a potential positive application of MT as a self-care tool for translators. Significant research exists on how MT impacts upon efficiency of processes and output, and there is now a growing body of research on how translators perceive MT and AI (Ameri, 2024; Vieira, 2020). However, there has been very limited research to date on the impact of MT on the emotional responses of translators, particularly when working on emotionally challenging topics and texts. The specific application of the research question to

the area of literary translation emerged out of the author's interest in translation of grief and grief memoirs, as a complex emotional topic, where translators may face challenges in processing emotions. Research has shown that literary translators are a sub-group of translators with a particularly strong sense of identity, which can partially be explained by their special role, described by Bednárová-Gibová and Majherová (2021b, p. 171) as "translingual ambassadors responsible for creating a connection between two fictitious literary worlds materialised in two language versions". The specific focus on literary translation brings an interesting dynamic to this research, as literary translators have often been portrayed as highly resistant to technology, even though research now indicates that reactions of literary translators towards MT are mixed, and that younger translators tend to have more positive and confident attitudes towards technology than their older peers (Ruffo, 2021). This research also comes at a moment where there is growing evidence that editors are already using MT in some circumstances in translating literary works and popular fiction (Macdonald, 2024; ATLF, 2022), and that considerable progress is being made in developing sector-specific Computer Assisted Literary Translation (CALT) solutions (Hadley, 2023). These factors all combine to create a pressing need to examine how literary translators can enhance their translation processes with appropriate technology, which corresponds to their workflows and provides opportunities to support not only efficiency, but also creativity and wellbeing.

## 1.1 Research question and objectives

This thesis explores the question of whether neural machine translation (NMT) could be used as a self-care tool to support literary translators to process their emotions when working on emotionally challenging texts. The research question will be addressed by conducting a literature review outlining research on related topics, as well as an experiment with translation student participants, which will investigate the potential impact of the use of NMT in their translation processes, looking both at the impact of the technology on their experience of translating and at how satisfied they were with the results. The research will also be supported by a case study of a professional translator who experienced bereavement, which focuses on freelance translator wellbeing, the impact of personal experiences of grief on the work of the translator and on their coping strategies. The objectives of the research

are to explore the research question; to determine whether this is a suitable area for investigation through further research; and if so, to provide recommendations to inform that research.

# 2. Literature review:

## 2.1 Translation and emotion

Until the beginning of the 21st century, translation and interpreting studies have largely seen the mind and the body as two separate entities, an approach which has since been called into question (Muñoz Martín, 2016, p. 1). As Koskinen (2020, p. 1) points out, "it is not a new revelation that emotions and affects are relevant to our being in the world. It is our human condition". The move to situate the role of emotion more centrally within translation studies has been led by UK-based researcher Severine Hubscher-Davidson, who has written extensively on the subject (2014; 2017; 2020b; 2021).

### 2.1.1 What is emotion?

First, in order to provide a clear framework for this research, it is necessary to consider what emotion is, and how it overlaps with some other similar common concepts, such as mood and feelings. This is particularly important since there are no agreed definitions of these concepts, and researchers, across psychology and many other disciplines, have interpreted these terms differently. Emotions are core to our experience of being human and to determining how we think, perceive and behave, yet they are intangible, experienced by each person on an individual level and extremely difficult to define (Rojo & Ramos Caro, 2016). Emotions are generally understood to be episodes triggered by a range of internal or external stimuli that occur at a particular moment and are significant to a particular individual (Gray, Elizabeth K. & Watson, David, 2007; Lehr, 2020). Mood and emotions may be difficult to separate precisely, but one distinction which has been applied by some researchers is that moods are experienced for longer durations than emotions (Gray, Elizabeth K. and Watson, David, 2007, p. 171). Feelings are sometimes characterised as being less intense and longer-lasting than emotions, in a way that is similar to mood (Rojo and Ramos Caro, 2016, p. 109). However, there is considerable potential for overlap between all of these concepts. In research, these difficulties in definition are often sidestepped by looking at the broader

theoretical category of affect, which is generally defined as “an instinctual response to a stimulus”, which covers both positive and negative states (Rojo and Ramos Caro, 2016, p. 109). Studying under such an umbrella term allows researchers to avoid tying themselves in knots on definitions. Koskinen also points out an additional benefit of using “unordinary words” for theoretical concepts, which “allow us to overcome familiar meanings and interpretations and conceptualize familiar terrain in novel ways” (Koskinen, 2020, p. 1).

Another way of categorising emotional experiences is by using the terms “state” and “trait”. State effects are defined as “the experience of moods or emotions that are comparatively short-lived and follow a fluctuating course” (Gray, Elizabeth K. and Watson, David, 2007, p. 172). On the other hand, trait affects are lasting dispositions or longer-term, stable differences according to a person’s general tendencies (Gray, Elizabeth K. and Watson, David, 2007, p. 172). In other words, we can ask: how do you feel *now* (state) or how do you *usually* feel (trait)? As Hubscher-Davidson (2020b, p. 13) points out, when considering how emotions may influence translator behaviour, it may be more helpful to look at a continuum from states to traits, rather than to treat these as separate categories.

### 2.1.2 Emotion and the source text

Researchers interested in literary translation, such as Shields and Clarke (2011), have written about the process and experience of translating emotion from a source text and transposing it into a target text. It is important to acknowledge that while literary texts are frequently labelled as ‘emotional’, all texts can stir up a spectrum of emotions in readers, from excitement to fear, or even boredom (Hubscher-Davidson, 2021, p. 54). Texts of a sensitive nature exist in many types of translation work, for example in legal or medical settings, and Hubscher-Davidson (2021, p. 54) reports that “the use of emotive language and emotion-eliciting content in these texts has received increasing attention from both translation scholars and practitioners”.

Earlier research looked at the linguistic aspects of translating emotion-eliciting material, otherwise referred to as emotion transfer (Hubscher-Davidson, 2021). This was later used as a platform for researchers such as Hubscher-Davidson to discuss the role of the translator in the transfer of emotion. She discusses how the translator, by “perceiving, regulating and transferring emotions in writing”, considers huge amounts of emotional information,

"including the potential reactions of target readers, as the reception and understanding of translated emotions will necessarily differ from one culture to another. They are responsible for carrying over specific, personal, affective, identity-related otherness" (Hubscher-Davidson, 2020b, p. 4). Hubscher-Davidson concluded that translators rely on their own resources of emotional experiences and language to carry out the process of understanding the emotion in the source text and then expressing it in the target text (Hubscher-Davidson, 2020b, p. 4). Researchers have also built on this understanding of the cognitive processes of transferring emotion to look at the impact that working with some texts may have on translators' mental health (Hubscher-Davidson, 2021). This issue has strong links to interpreting, where more work has already been done on the impact of interpreting potentially traumatic spoken word testimonies in legal, humanitarian or other public service interpreting (Bernardi, 2022; Costa et al., 2020; Kindermann et al., 2017). This matter will be covered in greater depth in Section 2.2.

The role of emotions has been acknowledged by some literary research practitioners. For example, the American Literary Translators Association has highlighted the affective aspects of literary translation, observing that "literary translation bridges the gaps in emotions between cultures and languages" (Hubscher-Davidson, 2020b, p. 35). There has been considerable interest in the area of emotions in literary translation, as an area of core skills. For example, in a study looking at emotions and literary translation performance, Bednárová-Gibová and Majherová (2022, p. 109) stated that they:

> consider literary translators' ability to identify, analyse, and control their emotions vital for the purposes of their work with literature. Literary translators should be able to recognise the emotions of authors they render and to have the necessary emotional sensibility to successfully transfer the 'invariant core' (Levy 1963/2013) in translation.

Their study found that students who performed more successfully in a set literary translation task tended to have higher levels of both emotion recognition and emotion understanding (Bednárová-Gibová and Majherová, 2022, p. 117).

It is worth mentioning at this point the difficulties in defining a translation as literary or otherwise. Some researchers claim that literary texts are simply texts which people

describe as such, or just decline to define them at all (Rothwell, Way, and Youdale, 2023, p. 2). Boase-Beier, Fisher, and Furukawa (2018, p. 3) discuss the difficulties of defining a text as literary, proposing three main factors to qualify it as such: it should be fictional; employ literary devices, such as rhyme or ambiguity; and have the potential to create a particular cognitive effect on the readers, leading to an emotional response. The authors recognise that even with this loose definition, the task of categorisation is fraught with difficulty, and exceptions abound (Boase-Beier, Fisher, and Furukawa, 2018). There is general agreement among researchers on the literariness of poems, plays and novels, but a wide range of other texts are sometimes considered to fall into this category, such as theatre and children's literature (Landers, 2001, in Rogers, 2019, p. 153). Landers and others regard certain categories of non-fiction writing as literary, including biography, history and memoirs (Landers, 2001, in Rogers, 2019, p. 153). In her essay 'From binaries to borders', Margaret Rogers criticises bi-polar definitions of literary versus non-literary texts, preferring to draw on similarities in order to break down boundaries (Rogers, 2019). It is possible to translate texts which may not primarily be seen as a literary text type in a literary way; for example adverts, songs or philosophical texts, depending on certain aspects of style and cognitive effects (Boase-Beier et al., 2018, p. 4). This study does not attempt to untangle these ambiguities, and the author views literary translation as a porous category of translation sharing similarities with many other translation categories.

Researchers focusing on literary translators have investigated what literary style is and how to translate it into other languages. According to Saldanha, translator style is a 'way of translating', which is recognisable in various translations by the same translator and which makes one translator's work distinguishable from another, through a 'feeling' created by that particular translator's translation choices (Kenny & Winters, 2020, p. 127). Tim Parks analysed Italian translations of original English literary writers to show the individual approaches translators employ to convey writers' style (Parks, 2007). Theo Herman's 1996 essay was important in drawing attention to the previously absent "translator's voice", which he saw as being "always present as co-producer of the discourse" (Hermans, 1996, p. 42). Hermans posits that in some cases the translator's voice may be hidden behind the voice or voices of the narrator and may not be identifiable from the text, but it is still important to acknowledge that this voice is there (Hermans, 1996, p. 45). These considerations of the special

characteristics of literary translation are important to bear in mind for this research, as we consider the potential role of MT in assisting human translators in their work of translating emotionally challenging texts.

### 2.1.3 Emotion and the translator

When looking at the translator and the impact of emotions upon them, it is helpful to bear in mind the three stages of emotion evoked by Gross and Thompson (2007, p. 5) and taken up by Hubscher-Davidson in her work *Translation and Emotion: A Psychological Perspective* (Hubscher-Davidson, 2020b). This three-step process assumes that emotions arise in a given situation; emotions are assessed; and there is an emotional response (Hubscher-Davidson, 2020b, p. 12). These three stages are referred to by Hubscher-Davidson as emotion perception, emotion regulation and emotion expression. When describing the complex process of conceptualising and expressing emotions in literary translation in the narrator's voice, Tabakowska (2016, p.44) differentiates between the steps of interpreting, speaking of and translating emotions:

> Conceptualizing someone else's (or, to some extent, one's own) emotions means interpreting physiological or mental symptoms that can be either overt and observed or covert and inferred. Speaking of emotions (one's own or somebody else's) requires rendering the interpretation into words, and thus, creates a (literary) narrative.

She also draws attention to the complex interplay of many other factors, which need to be taken into account by the translator during the translation process:

> To make things more complex still, the transmission takes place in the context of a strange culture, as reflected in a strange language. In short, the work of the translator can be compared to a hurdle race, with conceptual, linguistic, and cultural barriers obstructing the run at every stage. (Tabakowska, 2016, p. 44)

Literary translators have to contend with the emotions (real or perceived) of many actors - the author, narrator, characters and ultimately the reader. Much of the emotional processing, for both the translator and later the reader, is internal and individual responses are extremely

difficult to measure. A number of tools have been developed which attempt to do this, and I will return to this question in Section 2.1.6 below.

### 2.1.4 Emotions and Personality types in translation

How a person experiences emotion in their day-to-day life is one of the most important facets of personality research within psychology, with many published studies looking at how personality dimensions relate to emotional experience (Hermann Brandstatter and Andrzej Eliasz, 2001, p. 5–7). Over the past decade, the role of personality has also been addressed within translation studies. Hubscher-Davidson's extensive research on translation and emotion found that professional translators with higher levels of trait emotionality are more successful in handling emotions in their work (Hubscher-Davidson, 2020b). She also argues that translators' emotional skills should be given more priority than they currently receive in training and professional contexts (Hubscher-Davidson, 2020b, p. 217).

One area of research which has generated a lot of interest both inside and outside the translation field is that of Emotional Intelligence (EI) or emotional competence. Salovey and Mayer (1990/2004) conceptualise EI as "the ability to monitor one's own feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (in Hubscher-Davidson, 2014, p. 3). This is seen by researchers in two different ways: EI is either seen as a trait or personality quality, best measured by self-report, or as a cognitive ability, best measured through performance-based tests (Hubscher-Davidson, 2014, p. 3). Whichever definitional approach is taken, it is clear that individuals have different capacities to understand, identify, use and regulate emotions. Hubscher-Davidson (2020b) attempted to look for patterns in professional translators' profiles and working lives according to their different emotion traits. She surveyed 155 professional translators, with an average of 13 years professional experience, who agreed to have their EI assessed through a process of self-report (Hubscher-Davidson, 2020b, p. 37). The findings of the study indicate that job satisfaction is positively and significantly associated with emotion expression and with trait EI (Hubscher-Davidson, 2020b, pp. 196–197). However, Hubscher-Davidson has also referenced psychology research which found that, in general, high trait EI scores can, in some cases, have negative outcomes, with participants showing greater sensitivity and mood deterioration in certain emotionally-charged contexts than low trait EI participants. She notes that it is

therefore important to look at how translators can learn to handle emotionally charged situations or material and to increase their competency in this area as necessary (Hubscher-Davidson, 20120b, p. 203)

Over the years, emotion has appeared within translation competency models, which are complex multi-level models outlining the skills and traits a translator needs to work in a competent and professional manner (Robert et al., 2017, pp. 1–2; Schäffner, 2020, p. 68). This includes the PACTE model, which has contributed towards developing a common European framework of reference for use in translator training and professional translation (PACTE Group et al., 2018). The PACTE model includes emotion under its 'psycho-physiological' component, alongside other aspects like curiosity and creativity (Beeby et al., 2011). The latest framework of the European Masters in Translation (EMT) Competence Framework, revised in 2022, focuses on top-level competencies and practical skills (Directorate-General for Translation (EU), 2022). Emotion management is not included in the model, with perhaps the closest related issues falling under the Personal and Interpersonal Skills competency area, for example 'manage workload, cognitive load, stress and critical professional situations' (Directorate-General for Translation (EU), 2022, p. 10). The PETRA-E competency framework, designed specifically for literary translators, provides a framework for competencies on five levels, from beginner to expert (PETRA-E Network, 2016). Interestingly, this model does not explicitly outline necessary skills for emotional aspects of a translator's work within any of its eight competencies. The framework is made up of brief descriptors of competencies, and is intended to provide flexibility and to open up discussion on required skills without being prescriptive (PETRA-E Network, 2016).

A recent study by Bednárová-Gibová and Majherová (2022), analysing performance of translation students and their scores in the Geneva Emotional Competence test (GECo), found that students who performed a literary translation task more satisfactorily tended to have higher levels of emotion recognition and emotion understanding than those who performed the task less well. It should be noted that a number of limitations were acknowledged, including that the sample was made up of translation students, who were mainly female, and the fact that it used a new type of test which has limited empirical validity (Bednárová-Gibová and Majherová, 2022, p. 118). The area of study of individual difference factors in translation

has been growing and includes research looking at translators' ambiguity tolerance, self-confidence, self-efficacy, intuition and stress management (Bolaños-Medina, 2022, p. 17).

Some professional translators are also increasingly reflecting upon the impact of personality on their work. Katherine Gregor, a professional literary translator, recently discussed the issue of heightened sensitivity among translators and interpreters:

> …what interests me right now is the kind of heightened sensitivity that can make translating even a crime novel or a fictional story about a difficult (but not necessarily abusive) relationship hard, or – it doesn't always have to be negative – the kind of sponge-like empathy that makes you smell, taste, hear and feel what the fictional character is smelling, tasting, hearing and feeling. (Gregor, 2024, p. 27)

Gregor considers this enhanced sensitivity to be both a valuable skill for translators and a personality trait to be managed (Gregor, 2024, p. 27). Her descriptions complement the perspectives of Pierre-Louis Patoine in his *Corps/texte* (2015), where he looks at the individual's experience of reading literature, which he viewed through the holistic lens of the body and mind working as one. Patoine (2015) describes the physical experience of reading as generating emotional reactions, which are experienced physically within the body. He describes how the model of empathetic reading can: "explain the neurophysiological mechanisms and the aesthetic challenges of these moments where we read with our flesh, where the texts lash, bite and caress us" (Patoine 2015, own translation from the French, p. 12).[1]

### 2.1.5 Emotion and artificial intelligence

Increased interest in emotions and translation can also clearly be linked to advances in technology, especially to AI and deep-learning machines (Koskinen, 2020, pp. 152-3). The rapid expansion of these technologies into our working lives and the world at large lead to sometimes extreme reactions towards machines, either as a perfect solution to revolutionise translation or as a threat to our livelihoods and humanity (Eszenyi et al., 2023). To respond to these changes, our desire to understand what makes us different and what is our added value

[1] Original text: «expliquer les rouages neurophysiologiques et les enjeux esthétiques de ces moments où nous lisons avec notre chair, ou les textes nous fouettent, nous mordent et nous caressent » (Patoine, 2015, p. 12).

grows, and many researchers have tried to encourage a more balanced approach to MT, emphasizing complementarity with the human translator (Loock, 2019; Grass, 2022). Researchers such as Schumacher argue that humans should remain at the centre of the translation process – she calls on translation teachers and trainers to reassert the agency of human translators (Schumacher, 2023, p. 5). Lehr (2022) suggests that research must look at MT from an affective standpoint. She asks whether emotions are a uniquely human feature that will define the work which can be carried out by humans and machine in communication tasks or whether machines can also translate emotions (Lehr, 2022, p. 1316).

Emotional AI (EAI) involves the use of soft biometrics, bodily measures that allow us to identify traits about a person or a group such as facial expressions, heart rate or other generally measurable factors (McStay & Bakir, 2023). Computers can assess human emotions in various ways, including by tracking what we say, post, and listen to; our facial expressions and heart rates; as well as many other bodily responses (McStay, 2018, p. 2). EAI is being used or followed with interest across many sectors, including advertising and marketing, data brokers, health, insurance, gaming and retail (McStay & Bakir, 2023, p. 661). These issues are also approached under other labels, such as affective computing, emotion AI and automated empathy (McStay, 2023). McStay stresses the need for governance and policy bodies to regulate key sectors in the use of these technologies to avoid negative impacts (McStay, 2023, p. 243). Regulation is under development, for example the European Parliament's endorsement of the proposed AI Act, which prohibits the use of emotion recognition in law enforcement, border management, workplaces and educational contexts (McStay 2023, p. 11). At a local level, McStay encourages empowering individuals to experiment with applications of new technologies, advocating for "an active, playful and participatory approach" to support creativity in a safe setting (McStay 2023, p. 252).

Recent developments have highlighted potential uses of EAI in a number of contexts, including in training doctors on the breaking of bad news to patients and family members (Webb, 2023). This can be one of the most challenging and emotionally taxing professional situations for doctors, and one for which many doctors feel inadequately prepared (Webb, 2023). Webb's exploratory study used ChatGPT to teach emergency physicians how to break bad news with promising results (Webb, 2023). Some studies have gone yet further,

investigating the use of AI chatbots to discuss end-of-life planning with terminally-ill patients (Utami et al., 2017). Other research has shown the potential for using EAI to support interaction between service providers and customers, finding that AI can generate solutions quicker than humans can, and is sometimes able to fake empathy, although sometimes fails to understand the context or to provide the appropriate tone (Huang & Rust, 2024). These kinds of interaction involve not only interpreting speech, but also non-verbal aspects such as gestures and facial expressions. Lisa Feldman Barrett's research has shown that while the face can show emotions, facial expressions are extremely variable and context-dependent, making it challenging for humans to infer underlying emotions from such signals (Barrett et al., 2019). It could be even more complicated for machines to do so. Research has also indicated that interpretations of the emotional significance of facial expressions are highly culture dependent (Jack et al., 2012). This is yet a further challenge for AI agents in interpreting these non-verbal cues. AI is also unable to respond to other intangible aspects of human communication, for example eye contact, pausing to listen, and tone (Webb, 2023). Despite these challenges, current research aims to test the boundaries, for example ongoing research by Mat Coler at the University of Groningen is looking at whether AI can detect sarcasm, with an aim to improve the quality of human-machine interactions (Sample, 2024). The possible applications of EAI being investigated in topical research are relevant for this thesis, as progress in this area is so fast that in the future it may be possible to incorporate this kind of technology into a follow-up experiment, as a support tool embedded in bespoke MT systems. This will be discussed further in Section 2.5.4 below.

### 2.1.6 Challenges of measuring emotion

Emotions are primarily a private matter, and are therefore not generally observable to an outsider (Tabakowska, 2016, p. 43). Measuring emotion involves some complex and peculiar challenges, which are well summed up by Gray and Watson (2007, p. 178):

> When participants are asked to judge their affective conditions, they must integrate objective physiological sensations with a subjective interpretation of cues from both the body and the surrounding context in formulating their responses. It relies on participants noticing and quantifying their affective experience and then honestly and accurately reporting that.

Due to the complexity of the task, and the underlying definitional issues described above, measuring emotion or affect is subject to measurement errors. Some of the most foremost pitfalls are that perceptions of social desirability may distort responses and that recalling emotions previously experienced can be challenging (Gray, Elizabeth K. and Watson, David, 2007, p. 179). The most accurate self-reports of emotion are therefore considered to be those of *current* mood or emotion (Gray, Elizabeth K. and Watson, David, 2007, p. 179).

From the late 1980s onwards, a range of models have been developed to assess emotional responses, including the Watson and Tellegen model, based on the dimensions of Positive and Negative Affect (PANAS), which gradually emerged as one of the most accepted ways to measure self-rated affect (Gray, Elizabeth K. & Watson, David, 2007, p. 173). The PANAS model, is relatively short compared to some emotional assessment frameworks, with 20 components for assessment (Thompson, 2007, p. 228)[2]. Other existing scales considered for use in this research include the Profile of Mood States or POMS (1971), which describes a range of emotion blends, such as anger-hostility and tension-anxiety (Weidman et al., 2017, p. 268). The Differential emotions scale (DES) was also developed to measure the 10 basic emotions of interest, joy, surprise, sadness, anger, disgust, contempt, fear, shame/shyness and guilt (Gray, Elizabeth K. and Watson, David, 2007, p. 175). A shorter version of the PANAS scale was also developed, called the PANAS short-form scale (Thompson, 20007). It is complicated to navigate between the many different models available, which are based on a wide spectrum of emotions that are defined differently or not defined at all (Weidman et al., 2017). Additional limitations include concerns about transferability across cultures, given that some of the terminology in these scales is strongly rooted in Western culture, and may be somewhat ambiguous in other contexts (Thompson, 2007). I will go on to explain the choice of scale used for the experiment in Section 5.4.1 below.

## 2.2 Translation, crisis situations and trauma

Translation, and more notably interpreting, in crisis situations has been an area of increased research over the past two decades. This topic is of interest within the framework of the research question, since many of the issues raised are related, notably the role the

[2] The components of the PANAS scale are: interested, distressed, excited, upset, strong, guilty, scared, hostile, enthusiastic, proud, irritable, alert, ashamed, inspired, nervous, determined, attentive, jittery, active and afraid (Thompson, 2007, p. 230).

translator or interpreter plays in relation to their task; the particular risks and support needs they may have, given that they are often exposed to traumatic content; as well as the complexities of translating potentially traumatic content and messaging.

Mona Baker's seminal work *Translation and Conflict* (2006) uses narrative theory to examine how translation and interpreting function in a conflict-ridden and globalised world. By conflict, she takes the broadest definition, in that "conflict refers to a situation in which two or more parties seek to undermine each other because they have incompatible goals, competing interests or fundamentally different values" (Baker, 2007, p. 1). In this sense, Baker frames conflict as a part of everyday life. In this work, she looks at the part that translation and interpreting play in influencing conflict at all levels, including military conflicts through the declaration of war, the coordination of military action and the mobilisation of civilians (Baker, 2007). The lens employed by Baker, which looks at translators (and interpreters) as active participants in communication situations, is also a useful concept for thinking about literary and other translators working on emotive topics and texts. It is important to consider the power dynamics at play within the narratives embedded within communication. Baker refers to narratives as "public and personal stories that we subscribe to and that guide our behaviour. They are the stories we tell ourselves, not just those we explicitly tell other people, about the world(s) in which we live" (Baker, 2007, p. 19).

The work of O'Brien and Federici (2023) on translating crises has been crucial in highlighting the specific challenges and associated needs of translators and interpreters working in contexts such as war, natural disasters and migration (with refugees and asylum seekers). They emphasize that during a conflict, translators and interpreters themselves may be living the same crisis "and are therefore potentially operating at physical, emotional and cognitive breaking points" (O'Brien and Federici, 2023, p. 1). Maier calls these contexts 'limit situations' for translators, where translators may face challenges in reconciling their professional neutrality with their personal identity and experiences in wartime, citing examples such as Iraqi translators employed by the United States military (Maier, 2007, p. 264). O'Brien and Federici argue the case for more attention to the key role that translation plays in crises, and advocates for translation to be built into each crisis response, as a critical investment in risk reduction (O'Brien and Federici, 2023, p. 1). In practice, despite the important roles played by language professionals in crisis contexts and given the risks they

face as an integral part of their work, their support needs are too often not being met. Federici, O'Brien and O'Shea (2023), in a survey of sixty professional associations, attempted to understand provision of mental health and wellbeing support in multilingual crisis contexts. They found that while professional organisations are showing increased interest in developing or deploying such training in the future, only 19% of respondents were at that moment offering training or support to members of their associations (Federici, O'Brien, and O'Shea, 2023, p. 5).

Over the past two decades, issues related to multilingual communication in humanitarian contexts have been discussed in academia and international development spheres, with reference to the many international commitments to overcome communication barriers rooted in language and culture (Moser-Mercer et al., 2023, p. 219). For example, the World Health Organization's guidance on communicating risk in public health emergencies (WHO 2018, p. ix) states that "accurate information provided early, often, and in languages and channels that people understand, trust and use, enables individuals to make choices and take actions to protect themselves, their families and communities from threatening health hazards". In an account of the experience of the International Organisation for Migration (IOM) on the ground in migration contexts, Majidi et al (2020) in Guadagno and Matthews (2023, p. 411) clearly recognised this need:

> Adequately accounting for the presence and cultural specificities of all people on the move is a key concern for authorities and service providers. In multicultural and multilingual societies, the ability to provide all individuals with appropriate services, assistance and protection is essential to fulfilling the mandates and responsibilities of authorities and providers.

Researchers and practitioners working on these issues call for action on the ground to reflect the narrative of these principled commitments, for example Liu, Russell and Allen (2023, p. 122) state that "it is high time to properly fund and recognise translation and interpreting and the wider language services in civil emergencies and humanitarian aid as part of its deliverables".

### 2.2.1 The frontline role of the interpreter/translator in translating trauma

Community interpreting covers a range of activities, but in all cases, this vital work gives voice to those who seek access to basic services but do not speak the society's majority language (Bancroft, 2015, p. 217). Bancroft lists the settings in which community interpreters may work as follows:

> In health care, the settings can range from hospitals to health departments, clinics and roving medical vans. In human services, they can encompass any service imaginable, from sexual assault, domestic violence and homeless shelters to suicide hotlines, food assistance, employment counselling and services to persons with disabilities. Faith-based interpreting could entail interpreting for home or visiting pastors, chaplain visits, religious education, prayer, hospice or funeral services. Educational interpreting takes place in settings such as schools, preschools, colleges and training programs. (Bancroft, 2015, p. 221)

In all these varied settings, due to the nature of the life challenges faced by the clients, and the often-vulnerable positions that clients often find themselves in, interpreters deal with heavy and potentially traumatic topics (Bancroft, 2015).

In a comprehensive literature review by Rajpoot (2020), looking at the experience of interpreters working with individuals and groups who have experienced domestic violence and abuse or other traumatic situations, interpreters saw themselves as a voice of the service user and practitioners, and were committed to conveying their message as accurately as possible. Many of them also saw themselves in the role of a cultural broker, heeding the culture and norms of the speaker (Rajpoot, 2020, p. 8). The work of interpreters and translators in such complex and emotionally fraught scenarios is highly demanding. Over the past decade, research has begun to consider the personal and professional risks to these individuals and the related support needs. These considerations are of interest to the question of self-care of literary translators working on emotive topics, therefore this issue will be considered in more detail in the section below.

### 2.2.2 Specific risks and support needs

Community and humanitarian interpreters and translators frequently find themselves exposed to a risk of burnout, compassion fatigue and vicarious trauma. Rajpoot et al's study (2020), a meta review of studies of interpreters working with clients who experienced domestic abuse highlighted the extent of the personal and professional risks:

> All studies described significant emotional and psychological impact on interpreters resulting in the development of emotional distress and burnout Findings suggest that such issues could often become unbearable and overwhelming for the interpreters and may result from listening to the traumatic stories [of] armed attack, assaults, torture, persecution or other traumatic experiences of the service users or breaking bad news during health care encounters. (Rajpoot, Rehman, and Ali, 2020, p. 9)

Research into these potential dangers has demonstrated the risks and potential impacts for interpreters, and has pointed out clear training and support needs. Ndongo-Keller (2015) provides a useful overview on the risks in this area drawing on theorists working on those helping at-risk individuals, from the work of Maslach (1982) on burnout, to McCann and Pearlman's (1990) work on vicarious traumatization; and Figley's (1995) work on compassion fatigue (Ndongo-Keller, 2015, p. 338). Ndongo-Keller summarizes that according to almost all experts, vicarious trauma is caused by "repeated exposure to the stories of trauma, the narratives of traumatized persons and images of traumatized people or graphic images of war zones, and also by the desire to assist, to help. An additional cause is the fact that sometimes one feels useless, especially when one is not in a position to provide that assistance. The "trauma worker" eventually identifies himself with the victim or the patient, the traumatized person" (Ndongo-Keller, 2015, p. 340). Figley (1995, p. 1) talks about a "cost to caring", which can result in professionals working with traumatized clients losing their sense of self to the clients they serve. He identifies empathy as a major resource for those working with traumatized clients to help those clients, but also as a possible vehicle for them to become traumatized themselves (Figley, 1995, p. 15).

Studies indicate that interpreters use varied coping strategies to mitigate the emotional impact their work has upon them, such as self-control, self-medication, detachment and

accessing social support (Rajpoot, Rehman, and Ali, 2020, p. 11). In her study on the psychological implications of interpreting in conflict zones, Eleonora Bernardi proposes a triangular structure of support of prevention: providing interpreters with a theoretical framework that can help them make sense of what is happening to them; self-care or coping strategies (short-term and long-term); and support, including professional counselling or therapy, regular briefing and debriefing with a supervisor, and peer support (Bernardi, 2022, pp. 205–6). Support strategies should consider not only the emotional and psychological burden of the work, but also contextual factors such as pay and conditions, which are equally cited as sources of stress by interpreters in crisis contexts (Schiller and O'Shea, 2023, p. 337). Interpreters' own life and personal experiences should also be taken into account, as in crisis situations translators and interpreters are more likely themselves to have experienced traumatic events, which increases their risk to vicarious traumatization. For example, Bernardini, drawing on her interviews of interpreters who worked in Croatia and Bosnia-Herzegovina during the 1990s, found that many of the interpreters interviewed had personally experienced trauma, as well as hearing accounts of it during their professional lives (Bernardi, 2022, p. 200).

### 2.2.3 The human challenge of translating trauma

While the above analysis looks at the potentially traumatic impact of the content and situations that interpreters (and translators) find themselves in, it is also important, in the context of translating traumatic texts, to go deeper and to explore some of the specific challenges of translating the language of trauma. The sense that we are living in a permanent state of emergency, together with an acute global awareness of the scale of trauma within our modern era, as we watch it all unfold in the news, require us to rethink our understanding of translation and intercultural communication (Pillen, 2016; Federici, 2016). Pillen states that the inhumanity that we witness in global news, the precarious humanitarian and climate situation, "together with the eventual humanity of survivors brings to the fore something that is difficult to express in language—a loss of decorum no other species seems to have enacted. The vital bond between humanity and language is challenged as trauma continues to elide translation" (Pillen, 2016, p. 10). Pillen points to the peculiarities of traumatic frightening experience, as he notes that, according to van der Kolk and van der Hart (1995), under extreme conditions existing meaning-making schemes may not be able to accommodate

frightening experiences (Pillen, 2016, p. 10). In *The Body Keeps the Score* (2015), Van der Kalk describes how even years after experiencing traumatic events, people often have difficulties explaining what happened to them. “Trauma by nature drives us to the edge of comprehension, cutting us off from language based on common experience or an imaginable past” (Van der Kalk, 2015, p. 51). Pillen describes overwhelming events outside of the realm of ordinary human experience as leading to “speechless terror”, which cannot be organised on a linguistic level:

> There is a failure to arrange memories in words and symbols, yet they persist at a somatosensory level—as somatic sensations, images, nightmares, flashbacks, or bodily reenactments. Terrifying experiences therefore cannot be easily translated into the symbolic language necessary for linguistic retrieval (Pillen, 2016, p. 171–72).

In an article by Yardenne Greenspan (2023) on translation and the temporary inheritance of trauma, she talks about the intense experience of working on traumatic texts, as she explains how she takes on aspects of the writer by diving “head first into the writer’s brain, heart and psyche” in order to produce the best possible translation with significant effects on her personally. Reflecting on how she went about translating an essay on inherited trauma of the daughters of holocaust survivors, she says:

> To do justice to their words, I had to take on their identities, emotional baggage included. I had to wear the author’s skin over my own and carry their memories and dark ideas, like a porter transferring luggage, until I could deposit them safely in the translated manuscript. They were mine, but they were not mine. Once the translation was complete, I would be able to move on from them – but not all at once, and not completely, little by little, the weight would lift, the malaise would melt away, and I would go back to being myself, rather than an amalgam of myself and the author, myself and the author’s character’s, myself and the subtext. (Greenspan, 2023)

In this way, Greenspan describes the real impact that these texts had on her personally, not just in the moment of reading and translating them, but also on a deeper level. By working with these texts, she had integrated them, at least on some level, into her own person.

In a roundtable discussion about translating trauma (Elias-Bursać, Robertson, and Sanches, 2020), translators discussed the idea of the potential for experiencing secondary trauma while translating traumatic texts. Elias-Bursać, who had been a translator for the International Criminal Tribunal for the former Yugoslavia noted that a psychologist working with staff there had told her that "although interpreters are in the booth hearing everything live and speaking it, they speak it to other people. So even though it's difficult, they have the option of being heard, and there's a direct communication between them and the people in the courtroom", whereas, "translators just sit with a document, and then it just sits in you. There's nowhere to go with it…". In her book, *Translating Evidence and Interpreting Testimony at a War Crimes Tribunal* (2015, p. 52), Elias-Bursać describes this experience in more detail:

> Although one expects the work of interpreters in the field and the booth to be deeply disturbing, work on documents can also traumatise. I learned from revising translations that I could never predict what would be damaging. There were some translations that, although they described grisly events, did not undo me, while others contained a trigger, sometimes a mere detail in a text, that would suddenly make what was being described feel real.

She also mentions the impact of confidentiality issues, which meant that translators were not permitted to speak to others about the texts they were working on, and therefore had limited access to the support that talking difficult issues through may provide (Elias-Bursać, 2015, pp. 29–30).

While there are few accounts of literary translators' experiences of working on traumatic texts, Lara Vergnaud, in *Translating (in) Darkness* (2020), reflects on her experience of literary translation in general, and specifically on translating a heavily violent text full of rape and torture scenes:

> The act of literary translation may be the closest reading one can offer a text and its author. For a translator to bring prose from one language into another, nothing can remain ambiguous. Every semantic and orthographic element must be weighed; even punctuation takes on maddening importance. You can't get into the author's head, but almost. And for the best translation—finding not the most

> precise, most equivalent words, but the emotional resonance of a text—you have to feel it. And sometimes you don't want to. (Vergnaud, 2020)

Vergnaud describes various techniques for coping with translating traumatic texts, including covering up the most unpalatable and more traumatic scenes to return to those later, a technique which she acknowledges as amounting to procrastination. She concludes that "the grim truth is that translating the pain and terror on the page may be preferable to what's out in the world. The page, at least, gives us space to prepare, to delay as long as needed" (Vergnaud, 2020).

### 2.3 Translation and grief

This thesis was inspired by personal reflections on the potential parallels of translation and grief as transformative processes. I became interested in the potential of grief to transform an individual, and in how that experience might compare with the transformation of a text through translation. I had become familiar with the genre of writing of 'grief literature' or 'grief memoirs', which led to an interest in how such intense and personal experiences could be effectively translated, especially given the cultural and individual nuances of grief.

> Grief is universal. Its oral and non-verbal expression varies across cultures as well as individuals, and is a response to loss or anticipated loss. Grief and the expression of grief is an articulation not only of loss but potentially of gain, growth, and the birth pangs of a new personal synthesis. (Corless et al., 2014, p. 132)

Grief and bereavement are terms which are used somewhat inconsistently in academic research to refer to either the fact of having lost a person to death, or a person's response to this situation of loss (Zisook and Shear, 2009, p. 67). To differentiate between the two terms, many researchers agree that bereavement should be used to refer to the loss itself, with grief describing the emotional, cognitive, functional and behavioural responses of any individual to the loss (Zisook and Shear, 2009, p. 67). Grief can be seen as a natural, human experience, which is universal, in that we are almost certain to experience it during our lifetime. Though often difficult, most people are able to come to terms with the reality of their loss over time and without any need for psychosocial support (Stroebe, Schut, and Stroebe 2007, 1960).

Grief is underpinned by interpersonal relationships, as a response to the fact that a person valued by the grieving individual has died, therefore it must be understood within its relational setting (Rubin, Malkinson, and Witztum, 2012, p. 23).

### 2.3.1 Definitions and types of grief

Grief can be seen both as an emotion and an experience. As an emotion, grief is unusual in that it can persist for months or years, and is happening in an ongoing way (Markovic, 2024, p. 2). This contrasts with some researchers' definitions of emotion as being short-lived, as discussed earlier. Kubler-Ross's classic model of death (1969) presents five stages of grief, which suggests that bereaved individuals go through five fundamental phases of denial, anger, bargaining, depression and acceptance, in a fairly universal and linear way (Kubler-Ross, p. 1969). Zisook and Shear (2009, p. 68) describe how an experience of grief can include a wide range of emotional responses, which vary by individual and by moment in the experience, and may ebb and flow across weeks and months:

> Shock, anguish, loss, anger, guilt, regret, anxiety, fear, loneliness, unhappiness, depression, intrusive images, depersonalization, and the feeling of being overwhelmed are but a few of the sentient states grieving individuals often describe. At first, these acute feelings of anguish and despair may seem omnipresent, but soon they evolve into waves or bursts, initially unprovoked, and later brought on by specific reminders of the deceased.

This account recognizes the variety and fluidity of grief experiences, acknowledging that these differ widely in intensity and length among cultural groups and according to the individual (Zisook and Shear, 2009, p. 67). It is clear that each experience of grief is unique, and that there is no right or wrong way to respond to the loss of a loved one (Rubin et al, 2012, p. 23).

While grief can be considered a profoundly human experience, research and practice show that not all grief experiences are to be considered as equal. The literature on bereavement has not reached agreement on what constitutes "normal" or "common" grief, or on what, if anything, might be considered too much or too little, abnormal or pathological grief (Bonanno and Kaltman, 2001, p. 706). Some specialists, including Zisook and Sheer, prefer to use the term 'uncomplicated grief', as a solution to avoid the debate on what is or is not 'normal', given that grief is such an individual and variable experience (Zisook and Shear,

2009, p. 68). On the other hand, complicated grief is a term that is commonly accepted and used amongst grief theorists and practitioners. Complicated grief "occurs in a minority of people following the loss of a loved one. Studies suggest that complicated grief occurs in about 10% of bereaved people overall, with higher rates among individuals bereaved by disaster or violent death and among parents who lose children" (Shear et al., 2011, p. 4). Uncomplicated grief manifests itself in a whole range of different ways, including physical symptoms such as exhaustion, headaches and insomnia; cognitive changes such as difficulties concentrating and dreams about the deceased; a range of emotional responses; and behavioural modifications such as withdrawal or changes to relationships (Corless, 2015, p. 493). Complicated grief has been defined as a grief experience which entails a chronic and more intense emotional experience than the typical experience, or an inhibited response that either lacks the usual symptoms or where symptoms are delayed (Stroebe, Schut, and Stroebe, 2007, p. 1965). Complicated grief is associated with significant distress and negative health consequences (Zisook and Shear, 2009, p. 69).

Berzoff (2011) argues that all grief leads to transformation in some ways, whether these changes are negative or positive, and she cites the potential for transformation in the mourner's self-identity and ideals (Berzoff, 2011, p. 268). It is interesting to consider whether complicated grief is more likely to lead to an experience of transformative grief, a phenomenon which will be discussed in more detail below. While there is not much research on this issue, one interesting study by Whalen and Tisdale (2023) looked at the impact of the suicide of a child on their mother. Whalen herself lost her son to suicide, and the authors interviewed three other mothers bereaved by suicide (Whalen and Tisdell, 2023). One of the questions they looked at was the extent to which transformative learning takes place after suicide loss of a child, appreciating that losing a child is a devastating experience, and that suicide loss entails additional complications associated with stigma and guilt (Whalen and Tisdell, 2023). Whalen and Tisdell concluded that over time, the mothers interviewed all exhibited a changed view on the world following their devastating loss: "they are now equipped with a more comprehensive worldview that includes the prevalence of different types of human suffering. This new perspective moves them to find ways to alleviate the distress of others" (Whalen and Tisdell, 2023, p. 219).

### 2.3.2 Transformative grief

As Jelena Markovic explains in her essay 'Transformative Grief', grief has the potential to transform a person across a number of dimensions: cognitively (in terms of beliefs and desires); phenomenologically, as a 'global or diffuse change in our experience'; normatively, as a revision of the person's practical identity; and existentially, altering the very meaning of the griever's life (Markovic, 2024, p. 1). Cognitively, grievers are required to revise their known expectations of life, so as to process the fact that the person they loved has died (Markovic, 2024). Their experience of life changes, as does their view of the world and how we function in it, adapting to take into account the loss of that person, for example an end to shared projects and mutual support (Markovic, 2024, p. 6). Beyond this, there is an existential change through learning lessons on life, sometimes with a window into the process of dying and an insight onto what it means to no longer exist (Markovic, 2024, p. 7). In a similar way, Taylor describes the occurrence of post-traumatic growth, where in the aftermath of traumatic events such as bereavement, individuals can develop positive characteristics which may include increased appreciation, a stronger sense of meaning and purpose, more authentic and intimate relationships, and heightened confidence and competence (Taylor, 2021, p. 3).

Attig (2011) describes grief as 'relearning the world', which involves finding out how to remain in the world after the person we love dies. This has parallels with the process referred to by Lindemann, a pioneer in the modern study of death and dying, as 'grief work', whereby bereaved individuals try to adapt to the loss of a loved one (Corless, 2015, p. 491). The experience of grief usually includes a process of sense-making, which in itself is a transformative activity, with the potential to create a new sense of identity for the person left behind by the deceased (Markovic, 2024, p. 11). Berzoff (2006) looked at the potential of grief to lead to transformation and growth, and even to social change, through examining a number of case studies of bereaved families, such as the highly mediatised case of Terri Shindler-Schiavo in the United States. In discussing a range of responses to death by grieving loved ones, Berzoff (2006) argues that grief can fulfil important functions, including altruism, which can be activated through the creation of a coherent grief narrative, personally and potentially also politically. She concludes that "grief and bereavement hold the potential to change the mourner—who she is and who she hopes to become—even ennobling the

mourner to contribute to the greater social good, to activism, and to social change" (Berzoff, 2006, p. 122).

### 2.3.3 Writing about grief (grief memoirs)

As described earlier, in Section 2.3.3, this thesis, taking the idea of grief as a complex individual experience spanning a range of emotional responses, has been inspired by a genre of writing called grief literature or grief memoirs. While writing about loss has long been a common phenomenon in a range of forms – poems, eulogies, biographies etc – memoirs about loss, depicting the experience of loss in a more comprehensive form, have become popular over the past two decades (Małecka and Bottomley, 2022, p. 842). Grief memoirs give important first-hand accounts of the personal experience of grief, and also potentially share accounts of what people learn from transformative experiences of grief. Reading has been established as one of a range of coping strategies for individuals who have experienced loss (Koopman, 2014). Bibliotherapy, or book therapy, has been defined as the use of selected reading materials as therapeutic aids in medicine and psychiatry; as well as guidance in the solution of personal problems through directed reading (Association of Hospital and Institution Libraries, 1966, in American Library Association, 2012). Bibliotherapy has been established as a source of therapeutic exploration for centuries, falling into two main genres – didactic literature, e.g. self-help books, and imaginative literature, such as poems and fiction (Małecka and Bottomley, 2022, p. 843). Małecka and Bottomley (2022, p. 843) describe grief memoirs as a form of life writing which benefits from the advantages of both of these genres:

> They consist of affective narrative elements and images, enabling readers to get in touch with their emotions, and they include some characteristics of self-help books, such as observations based on the lived experience of the mourner, which can be informative and helpful to the bereaved.

Writing itself can be seen as an active way to engage in sense-making in circumstances beyond an individual's control. In his book *The Wounded Storyteller,* Frank (1997) describes the power of storytelling in the case of illness, as a way of rethinking and rebuilding an individual's understanding of their place in the world, in a changed body. The same kind of personal activity of reconstruction through writing can also be applied after the loss of a loved one. In the last two decades, a number of well-known titles in grief literature have been published,

for example Joan Didion's *The Year of Magical Thinking*, Helen Macdonald's *H is for Hawk* and *Option B* by Sheryl Sandburg. Writing can be seen as an expressed response to grief (in written form) where narrative language is used to portray emotion in the form of storytelling (Corless et al., 2014, p. 135–36). Telling and retelling the experience of a death can be an effective way to process the loss of a loved one. The idea of a present listener is also an important aspect of storytelling as an outlet for grief (Corless et al., 2014, p. 136). Kathryn Batchelor, in *Translation and Immortality* (2023), discusses writing and other creative activities as a means of confronting death, for example in elegies and laments, and goes yet further, describing writing as a means in itself of momentarily forgetting death as a universal eventuality.

### 2.3.4 Translating grief

As with writing, translation can also be used to process emotion or as a distraction during an intense emotional crisis, such as depression or bereavement (Batchelor, 2023, p. 467). Batchelor discusses translation as an act of mourning, citing some of the few existing examples of research demonstrating this link. She highlights that authors have sometimes turned to translating during periods when they cannot produce their own work because they are grief-stricken, as in the case of American poet and translator Henry Wadsworth Longfellow, who was reported to have translated Dante's *Divine Comedy* while mourning his wife (Batchelor, 2023, p. 468). She explains that translation as a task requires focused attention and gives a sense of achievement when complete (Batchelor, 2023, p. 468). It is possible that translation is one of a potential range of options for working on grief, and for professional translators, it can be a way for them to maintain their sense of identity. Claire Cox refers to a return to work following a bereavement as a potential distraction from grief, and a relief in reminding the griever that they continue to exist outside of their grief experience (Cox, 2023b).

Brianna Elatove, in *After my brother: Translating Grief* (2020, p. 62), talks about her experience of loss and translation, and the links she sees between the two processes, as well as the differences:

> In translation, the goal is to craft a final version. In grief, the finality is sprung on you in waves. With translation, you revisit a moment and remake it anew, and no one thinks you're crazy for delving into the past again and again. After a loss, we

> do the same, only there is a pressure to remain in the present, to acknowledge the impossibility of drawing the lost one forward.

In this powerful essay, Elatove talks about grief, and about the devastating and long-lasting impact that the loss of her brother to suicide had on her. She described the experience as being like learning a new language. Like many translation theorists before her, she questions whether it is possible to translate at all. "Does giving the text a new form change the text fundamentally? Does it matter? To me it matters because at some point I had to remake my life using a new grammar and a new vocabulary…" (Elatove, 2020, p. 62).

When writing or talking about grief, as Corless et al (2014) have outlined, a wide variety of factors will determine which kind of language is used, including the individual's internal, interpersonal and external factors. Narratives (a part of story-telling) are framed by the religious, spiritual and cultural beliefs of the individual griever and their community (Corless et al., 2014, p. 136). The key terms surrounding death and grief themselves give some clues about the nuances and significance of cultural specificities of these experiences - these words make emotions surrounding death and bereavement 'speakable' within our communities (Evans et al., 2017, p. 118). Evans et al. (2017) discuss their research into the significant shades of meaning assigned to words expressing the experience of grief across different cultural and linguistic communities within Senegal. They stress that many languages have no word that matches precisely the specific, narrow use of 'grief' in English, which signifies intense sorrow, especially caused by someone's death. In French, *chagrin* can be used, but it also means sorrow, heartache and distress (Evans et al., 2017, p. 131). *Deuil*, on the other hand, can be translated as 'bereavement', but also refers to mourning and the funeral procession (Evans et al., 2017, p. 131). Translations of texts about grief can be rich sources of observation on cultural and personal perspectives on death and grieving.

### 2.4 Translation, wellbeing and self-care

The World Health Organization defines wellbeing as "a positive state experienced by individuals and societies. Similar to health, it is a resource for daily life and is determined by social, economic and environmental conditions" (World Health Organization (WHO), 2021). To promote wellbeing in the workplace, WHO advocates for a positive prevention approach, emphasizing the need to protect workers and to provide opportunities for them to strengthen their capacities (World Health Organization (WHO), 2022, p. 5). How wellbeing is

understood and experienced differs across cultural groups, yet mainstream theory fails to sufficiently consider local perspectives of wellbeing (Allen et al., 2014, p. 300). In the past decade or so, building on research on interpreter wellbeing, discussions in translation studies moved towards discussing aspects of translator wellbeing, looking at this issue within the sector, and how employers and employees, as well as the many freelance translators can seek to maintain and promote their wellbeing. This section looks at what wellbeing means for translators, where the responsibility for translators' wellbeing sits, and lastly discusses some recent approaches to wellbeing that focus on sustainability and psychological capital, which help to explain why wellbeing matters to the translation industry overall. This discussion provides necessary context for the research question.

### 2.4.1 Translators and wellbeing

Over recent decades, a number of different models of wellbeing have been developed, which incorporate different elements and perspectives. Diener's (1984) framework defines wellbeing as subjective; it must include positive dimensions; and provide a global assessment of a person's life. On the other hand, Ryff's (1989, p. 1071) concept of psychological wellbeing took the concept beyond an individual's short-term affective state to include aspects of positive psychological functioning, such as relationships with others, autonomy, purpose in life and personal growth. To frame the discussion of translator wellbeing within this thesis, I refer to Seligman's definition of optimal human functioning, which discusses the importance of 'flourishing' under a practical model of wellbeing, otherwise known as the PERMA model (Seligman, 2011). The PERMA model incorporates the following five aspects: positive emotions; engagement; positive relationships; meaning and mattering; and accomplishment or achievement. Within this framework, each of these domains is understood to contribute to an individual's feeling of wellbeing (Donaldson, Van Zyl, and Donaldson, 2022, p. 4).

Regarding translators' own perceptions of wellbeing, research has shown a mixed picture. If we review the research through a lens of the criteria of the PERMA model (which has not been explicitly applied) translators appear to fare better in some areas than in others. Dam and Zethsen (2016), for example, conclude that translation has "been described as a peripheral, low-status, unskilled and poorly paid occupation, whereas translators have been characterised as invisible, isolated, unappreciated and powerless" (Dam, H. V., & Zethsen, K.

K., 2016, p. 174). Dam and Zethsen's study, building on previous studies from 2008 to 2012, was based on quantitative analyses of 15 Danish agency translators reflecting on their job satisfaction. As well as reflecting their low status, unrecognised expertise, and low pay, another more positive narrative emerged, which described a joy and enthusiasm that these translators gained from their work. Dam and Zethsen grouped the themes described by the translators as follows: 'Translation is exciting and satisfying'; 'translation is varied, stimulating and never boring'; 'translation is an intellectual and creative challenge'; and 'translation is important and therefore meaningful' (Dam, H. V., & Zethsen, 2016, p. 179). The authors concluded that the translators felt frustrated with the significant gap between their self-worth as experts, and how they feel clients and society at large fail to value their expertise (Dam, H. V., & Zethsen, 2016, p. 182). Questions may arise from this research as to whether the findings would be similar with other groups of translators, such as freelancers or translators working in other institutions, and whether the impact of technology, and the challenges translators are facing in reducing work and lower prices is impacting on this delicate balance of translators' perceptions of their work and wellbeing. Bednárová-Gibová (2020) has described extensively the characteristic of translators' 'literary hedonism' contributing to workplace happiness, whereby translators derive a sense of pleasure from working with words across various languages. This observation holds true for translators working on non-literary and literary texts alike. A comparative study of freelancers and agency staff showed that freelancers demonstrated more linguistic hedonism than agency staff, as a general rule (Bednárová-Gibová & Majherová, 2021a).

Sela-Sheffy's work, focusing on literary translators in Israel, highlighted that literary translators have a tendency to idealise their job as a "vocation" as opposed to a means to an end, implying a sense of devotion and sacrifice, which to some extent underpins the precarity of the translator's professional status (Sela-Sheffy, 2010, pp. 136-7). Sela-Sheffy reports that top literary translators promote a discourse which denies practical and economic challenges and impedes professionalisation in order to shore up their elite privileged status in the industry (Sela-Sheffy, 2010, pp. 147–48). In Bednárová-Gibová's (2020, p. 84) study of Slovak literary translators, she found that participants demonstrated a prevalence of positive over negative affective feelings, demonstrating that they were happy individuals overall and were able to access linguistic hedonism from time to time. A study the following year, honing in

further still on literary translators found that 61% of literary translators self-reported as 'happy' or 'very happy'; that those who translated only part-time were happier than those who had it as their full-time job; and that income was not a strong motivating factor (Bednárová-Gibová & Majherová, 2021b).

As discussed above in Section 2.2, during their careers translators may face challenges to their wellbeing, such as burnout, compassion fatigue and vicarious trauma. While all texts may elicit a range of emotions, risks are heightened when translators work on certain types of materials or in certain situations (Hubscher-Davidson, 2014, p. 16). Context and job-related stresses such as heavy workload and ethical stresses contribute to the risk of burnout (Penet, 2024, p. 193). There is much to learn from other industries that are further ahead in acknowledging the need to support their professionals, such as counselling, psychotherapy and nursing. For example, Costa et al (2020) highlight the British Association for Counselling and Psychotherapy (BACP) ethical framework (2018), which recognizes self-care as a part of the process of developing one's self-respect at the personal and professional level. The BACP ethical framework proposes that appropriate support be provided to ensure self-care needs are met, in order that practitioners can continue to be effective (Costa, Lázaro Gutiérrez, and Rausch, 2020, p. 39).

Translation is a profession with a variety of working structures, with a large proportion of translators working as freelancers and for agencies. The responsibility for translator wellbeing exists at various levels within the industry, including employers, agencies and individuals. Professional associations also have a role to play in promoting good practice and providing support and resources for freelancers and organisations. Professional translation and interpreting bodies are becoming more aware of the importance of protecting wellbeing at work, and some associations are beginning to develop policies or position statements on this issue. ITI, for example, has been one of the first such organizations to do so, with their position statement on translators' health and wellbeing drafted by Hubscher-Davidson published in 2021. The statement was drafted in response to rapid changes and increased pressure within the translation industry, and in line with the ITI's mission to "promote the highest standards in the profession" (Hubscher-Davidson, 2021).

### 2.4.2 Self-care practices for translators

While wellbeing describes a situation where an individual is able to manage their emotions and benefit from the positive experiences of work, self-care describes the steps individuals themselves may take to achieve wellbeing. Costa refers to this as "a deliberate practice of activities which keep a person healthy, engaged and well-functioning" (Costa, Lázaro Gutiérrez, and Rausch, 2020, p. 40). Bressi and Vaden (2017, p. 34) define self-care as activities or processes initiated and managed by the worker to support their health and wellbeing, meet their own needs, or provide stress relief. Lambert talks about the ethical responsibility of translators to attend to their own self-care, to keep themselves healthy in an increasingly complex working environment full of stresses such as "time pressures, technology competition, the transitory nature of the profession, questions over low status, rates of pay, and so forth" (Lambert, 2023, p. 142). JC Penet (2024) also highlights the ethical function of self-care, noting that self-care can help translators to be in a position to make ethical decisions, avoid burnout and stay in the profession for longer. Penet proposes a self-care model, outlining practical steps to implement to take care of yourself as a professional translator, including connecting with support networks, looking after emotional wellbeing and building in time for reflection (Penet, 2024, pp. 194-197). Costa describes the need not only for individual self-care, but also for collective efforts, favouring group-based reflective practice for professionals to confront, resolve and learn from their work-related challenges (Costa, Lázaro Gutiérrez, and Rausch 2020 and Costa, 2025).

While the need for translator self-care is increasingly acknowledged within the sector, in practice, translators face many challenges in attending to their self-care needs. As mentioned above, translators in the current system often work independently, as freelancers, which means that they may not have access to supportive colleagues and can feel isolated (Moorkens, 2017, p. 467; Tyler et al., 2024, p. 50). This can have a negative impact on their wellbeing and job satisfaction. Confidentiality issues, as mentioned above, can also mean that translators are unable to discuss the texts they are working on, which can further risk isolation and damage to wellbeing (Costa, Lázaro Gutiérrez, and Rausch, 2020, p. 41). The increasing impact of technology, digital and hybrid working on translators' practice is widely reported to lead to increased stress and diminished wellbeing for translators in today's workplace (Ameri, 2024; Vieira, 2020).

It is also important to highlight the limits of self-care, and to draw attention to the potential for workplaces, or even neoliberal economic systems more broadly, to weaponize self-care or render it toxic, by placing an unreasonable degree of responsibility on the individual (Rahbari, 2023; Ward, 2015). Rahbari (2023, p. 4) points out that:

> It is no coincidence that in the era of neoliberalism, self-care has become the most embraced 'choice' rather than the structural and systematic development of a community-based and collective care system. Self-care is part of a culture of self-promotion and competition in achieving 'wellbeing' without nearly enough attention to structural social inequalities upon which status is built.

Placing sole responsibility for wellbeing on individual workers, who are already under stress, does not absolve the wider responsibilities of the industry and organisations to protect their staff. Individual workers, especially in isolation, cannot protect themselves from wider systemic issues of low pay, unrealistic demands and economic instability, especially in an industry which is largely unregulated. These issues have been highlighted as increasingly damaging to freelancers in the cultural and creative industries more widely, in a recent report based on a large-scale survey, interviews and focus groups commissioned by Arts Council England (Tyler et al., 2024). Survey respondents highlighted a range of challenges faced by cultural freelancers, including work precarity, low pay, late payments and unpredictable income, as well as growing feelings of lack of recognition for their work (Tyler et al., 2024, p. 9). The report highlights the impact of these challenging working conditions on independent workers' mental health, leading to fatigue, anxiety and despondency (Tyler et al., 2024, p. 11).

### 2.4.3 Sustainability and psychological capital

Beyond looking at wellbeing as a prerequisite for service provision, adopting a sustainability framework helps to see the bigger picture and to understand why translator wellbeing matters. While sustainability is most often discussed in the wider environmental and ecosystem context, it can also be applied in the human resources context, in terms of optimising workers' capacity from a psychological perspective (Hubscher-Davidson, 2020a, p. 3). In her 2017 article, di Fabio looks at sustainability and its importance to organisations from a preventative perspective (Di Fabio and Kenny, 2016, p. 1). These ideas are developed from the perspective of positive psychology, seeing healthy people as flourishing and resilient

workers, stressing the importance of a healthy work environment to promote employee wellbeing and performance (Di Fabio, 2017). Hubscher-Davidson, applying the positive psychology approach to the translation profession, while building on her work on emotional intelligence, has taken the perspective of psychological capital (PsyCap), which she defines as an individual's positive psychological state of development (Hubscher-Davidson, 2020a, 4). She refers to Luthans, Youssef and Avolio's (2007) four-pronged characterisation of PsyCap, which includes: 1) confidence (or self-efficacy) to take on and succeed at challenging tasks; 2) optimism about current and future success; 3) perseverance and hope, to reroute as necessary to achieve success; and 4) resilience to bounce back in face of challenges (Hubscher-Davidson, 2020a, 4). She notes that "constructs of self-efficacy, creativity, and emotional intelligence are especially noteworthy for translation, as they have attracted much attention in the literature due to their positive impact on professional performance" (Hubscher-Davidson, 2020a, 4).

This framework of PsyCap is particularly helpful in moving beyond a narrow concept of self-care to a more active and empowered approach for translators to apply, as they navigate the dynamic challenges of their profession. It aligns well with authors such as Donaldson, Van Zyl, and Donaldson (2022, p. 3) focus on 'positive functioning', which has been defined as "when individuals are able to effectively manage the daily fluctuations in positive and negative emotions at work (i.e., affect balance) […] having the opportunity to live up to their potential, having a sense of meaning/purpose at work, harbouring feelings of control over one's work-life and the execution of ones duties and being able to build and maintain positive work-related relationships". These frameworks can help translators to conceptualise self-care and wellbeing in a more holistic way, as they attempt to navigate the many challenges of a sector undergoing rapid change.

## 2.5 Machine translation and its ethical implications

Neural Machine Translation (NMT) became available from 2016, with providers such as Google Translate and DeepL offering widely accessible tools based on large language models. In late 2022, the release of generative AI solutions such as ChatGPT heralded dramatic changes across creative industries (Sætra, 2023, p. 2). NMT is trained on extremely large data sets, using hardware evolved from graphics processors (Forcada, 2017, p. 292). Specialized neural networks, picking up representations of individual words or sub-word

units, are typically learned from large monolingual texts – by learning about words in context, machines learn to make predictions based on patterns in the training texts (Forcada, 2017, p. 292). This ability to break words down into sub-word units is one of the most distinguishing features of NMT compared to the earlier technology of SMT (Forcada, 2017). The dramatic popularity of this technology, its application and potential for the future has led researchers to consider the many challenges arising in terms of ethical issues, uptake and acceptance by human translators as well as those related to the processes required in MT, most notably post-editing. These challenges will be discussed in the following sub-sections, both in relation to the translation industry in general and, given the focus of this research on literary translation, in terms of the specific concerns for that particular sector.

### 2.5.1 Ethical concerns arising from AI and MT

As MT and AI have increasingly taken hold in the translation profession and continue developing at speed, it has become important for researchers and practitioners to consider a range of ethical issues related to the use of these technologies. Moniz and Parra Escartín (2023) outline many of the key challenges, including ecological impacts, data and ownership rights, and issues of gender and age bias. In a digital age, translators rely on sharing and storing electronic data, which inevitably implies a considerable carbon footprint (Van Wynsberghe, 2021). Cronin (2017), in his book *Eco-Translation*, highlighted the huge environmental impact of information and communication technology (ICT) manufacturing and digitalization: "there is nothing virtual about the ecological impact of the virtual. It is damagingly real" (Cronin, 2017, p. 96). Moorkens (2022) stresses that NMT is particularly resource intensive, requiring powerful and expensive Graphic Processing Units (GPUs) to carry out training, requiring high levels of energy consumption. The now commonplace use of cloud-based software and neural models is also associated with high energy costs (Rothwell et al., 2023, p. 112). Van Wynsberghe (2021) describes the two separate areas falling under the broad heading of Sustainable AI as AI *for* sustainability (sometimes referred to as AI4Good) and the sustainability *of* AI, such as measuring carbon footprints, computational power for training algorithms and so on (Van Wynsberghe, 2021, p. 214). Van Wynsberghe (2021, p. 217) strongly recommends that tech companies take greater accountability by ensuring that developing AI models use existing tools to track and share data on the carbon footprint of their training models.

Data ownership rights are also acknowledged as being a critical issue. Alongside authors, translators are protected by the concept of copyright as outlined in the 1886 Berne Convention, which treats translations as original works and, in theory, allows for appropriate compensation for the work of translators (Forcada, 2023). NMT poses significant problems in this sense, as the vast quantities of translations on which it is trained are produced in word or sub-word level output, which cannot be attributed to the humans who crafted the training inputs (Forcada, 2023, p. 63). Lacruz Mantecón (2023) outlines issues surrounding copyright and authorship in relation to MT, rejecting the idea of an "electronic personality" of texts created or translated by AI, for which there is currently no legal basis. As a solution to the failure to renumerate translators for the texts and fragments used to train MT systems, Lacruz Mantecón, (2023) discusses implementing a system to compensate translators for the use of their work. While solutions must be sought, putting such a system into place is likely to be extremely difficult, due to considerable shortcomings in regulation of the extraction and use of data for training models (Sætra, 2023). There are also significant concerns around transparency of data, since tech giants leading AI, like Google and Microsoft, refuse to share information on the data on which their systems are trained (Widder et al., 2024).

In recent years, hidden biases of MT training data have been uncovered, as well as NMT's inability to perceive cultural diversity and linguistic nuances, which leads to risks of perpetuating biases and discrimination existing in society (Bo, 2023; Sætra, 2023). For example, professions, attributes and adjectives are often associated with one or another binary gender and mistakes and inconsistencies in gender occur within texts (Rothwell et al., 2023, p. 105). The problem goes far beyond inaccuracies, since it leads to perpetuating discrimination against already marginalised groups (Sætra, 2023). Research, such as that by Vanmassenhove, Shterionov, and Way (2019, p. 229) has demonstrated that the use of MT causes a general loss in terms of lexical diversity and richness in comparison to texts translated by humans, leading to words getting "lost in translation'". This tendency towards reduced linguistic diversity over time could have significant consequences for the richness of language. This risk should be seen a backdrop of what Verdegem (2024) describes as AI capitalism, with the AI market dominated by tech giants of the likes of Google, Meta and Apple – the interests on which the industry is developing are commercial, and the interests of contributors and users are not prioritised.

### 2.5.2 Translators' relationships with/perspectives on MT

Since O'Brien (2012) framed translation as an example of human-computer interaction, researchers have since grown increasingly aware of the impact of MT on the translator and their work. Significant research has been undertaken on the translator's views of and reactions to MT, as well as on efficiency and quality impacts of MT (see, for example, Toral and Way, 2015; 2018; Hansen et al., 2022; Taivalkoski-Shilov, 2019). Language industry surveys indicate that translators feel increasingly under pressure, due to a wide range of factors described in Section 2.4 above, but with the rise of AI and MT featuring prominently. In CSA Research's December 2023 survey of freelancers, 48% of the 335 respondents said that their income was decreasing (compared to 38% in August 2022) (CSA, 2022 and 2023). The second and third most cited factors which freelancers believe affected their work, after inflation (65%), were competition from improved machine translation (62%) and competition from generative AI (49%) (CSA, 2023). In his recently published book *Working as a Professional Translator*, JC Penet acknowledges that AI and MT are changing the profession significantly, and that the role of translators will continue to evolve (Penet, 2024, p. 176). Penet highlights the importance of gaining the relevant skillsets and continuing professional development to adapt to these ongoing changes. In his 2024 article, Ameri discusses translators' vulnerability in the face of AI and MT technology, which he claims brings up both positive and negative emotional responses, leading translators to feel both empowered by AI to leverage its potential to benefit their work, as well as to feel threatened, experiencing negative emotions such as fear, anxiety, and uncertainty (Ameri, 2024, 17).

Recent literature has stressed the importance of 'Machine Translation Literacy' – in other words, professional and student translators must keep up to date with developments in MT, to know the basics about how it works, what it can do and what it cannot do (see Schumacher, 2023; Looke, 2019; and O'Brien and Ehrensberger-Dow, 2020). MT literacy includes learning about the benefits and limitations of MT tools, as well as promoting their responsible and effective use (Schumacher, 2023, pp. 2–3). With NMT, translation fluency has greatly improved compared to previous MT systems, which is in itself a significant challenge, as this can sometimes veil inaccuracies in the target text (Kenny, 2022, p. 43). One important area of MT literacy requires translators to understand why certain mistakes occur and what

to look out for while post-editing (O'Brien and Ehrensberger-Dow, 2020, p. 5), as described in more detail in Section 2.5.3 below.

Despite the overall shift towards technology in general and MT in particular, which has transformed the translation industry, literary translation has to some extent resisted this advance, both in research and practice. Paula Ruffo, in her PhD thesis and further research, has documented the particular attitudes of literary translators, who have a strong sense of identity, often discussing their work with narratives of passion, creativity and sensitivity (Ruffo, 2021, p. 221). She describes the complex relationship literary translators tend to have with technology, being more open to technology in general, but with more negative reactions to translation-specific tools, possibly due to fears of receiving less work or pay or even being replaced by machines (Ruffo, 2021, p. 222). Ruffo reported that 71% of the literary translators she surveyed were still not using these translation tools in their work (Ruffo, 2021, p. 212).

### 2.5.3 The role of post-editing

Post-editing is, according to O'Brien (2021), "basically a form of translation revision, except that the post-editor is revising translation produced automatically by an MT system, rather than translation produced by a (human) translator" (O'Brien, 2021). However, there is a danger that the similarities can be overstated, as post-editing and revision are different cognitive processes and require slightly different skill sets (Schäffner, 2020, p. 76) Understanding post-editing is essential to understanding the usefulness of machine translation in its current state of development, as it is an essential step to be undertaken by human translators in many workflows, including in Computer Assisted Literary Translation (Kolb, 2023). Kolb's chapter in the book *Computer-Assisted Literary Translation* (2023) looks at the different cognitive processes involved in post-editing, compared to translation 'from scratch'. The study compares findings from two empirical studies – in the first, five professional literary translators translated a story by Hemingway from scratch and their working and decision-making processes were captured by keylogging and think-aloud protocols. In the second study, using the same research design, five other professional literary translators post-edited a DeepL-generated version of the same short story (Kolb, 2023, p. 53). The results showed that although individual post-edited target texts are not necessarily of lower quality, MT 'priming' – the predisposition that human translators are found to have to

accept the solutions proposed by the machine – seems to be a built-in element of PE processes and to limit the post-editor's agency, leading to more homogeneous, less creative target texts (Kolb, 2023). There tended to be less variety in translation choices, with post-editors more often than not accepting the machine's choices. Kolb remarked that the voices of the post-editors are less manifest in the target texts than those of the translators (Kolb, 2023, p. 65).

While NMT has some similarities with its predecessor Statistical Machine Translation (SMT), there are some particular common recurring errors in NMT translated texts, including: "errors of disambiguation of polysemous words, orthographically similar words, coreference resolution, verb tense, register, literality, and omission of source text material" (Kolb, 2023, p. 57–58). Post-editors of NMT translated texts therefore need to watch out for certain kinds of errors that they did not experience before with previous systems. NMT systems are the first generation of systems to use sub-word units instead of whole words, and therefore sometimes piece together a translation from sub-word units when confronted with a word they have not seen before in their training, resulting in particularly challenging errors, as the words produced may play a key role in understanding the meaning of the sentence (Forcada, 2017, p. 303). Transparency about the source of texts being assigned to translators is extremely important. If translators are aware that they are post-editing, they can be on the lookout for such errors, whereas if the text is presented as a revision, these kinds of errors can easily slip through. The *Association des traducteurs littéraires de France* 2022 survey on Machine Translation and Post-Editing, based on a survey of over 400 literary translators, reported a perceived lack of transparency, with just over half of translators who had accepted post-editing tasks reporting that the work had not been presented to them as post-editing but as revision or as some other type of work (ATLF, 2022, p. 8)

### 2.5.4 The rise of Computer Assisted Literary Translation

Like other translators, in recent years literary translators have had to adopt and adjust to various aspects of technology, including tools such as online dictionaries and corpora, digitised archives, and word processing technology (Hadley, 2023, p. 92). However, they have been slower to take up certain tools, for example they have generally not adopted CAT tools or MT, due to the difficulties in segmenting literary texts and the need for flexibility and

understanding context rather than applying a standardised approach to terminology which can be seen, for example, in legal or medical translation (Youdale, 2019, p. 15). Even so, as far back as the mid-2010s, Toral and Way began exploring the previously little-explored research topic of Computer-Assisted Literary Translation (CALT). Since then, they have continued to challenge the widely-held view that there is no realistic prospect of machines playing a significant role in translation in the literary sector (Toral and Way, 2015 and 2018). In 2015, Toral and Way built a tailored SMT system for a contemporary best-selling author, Carlos Ruiz Zafón, to translate one of his novels between two closely-related languages, Spanish to Catalan. The results were of surprisingly good quality (Rothwell, Way, and Youdale, 2023, p. 10). In a subsequent experiment, working with languages that were further apart, Toral and Way (2018) tested their systems on 12 English novels and their translations into Catalan. A human evaluation of three of the books revealed that between 17% and 34% of the NMT translations were perceived by native speakers of the target language to be of equivalent quality to translations generated by a professional human translator (Toral and Way, 2018, p. 1). Toral and Way proposed to evaluate post-editing, embedded into professional translators' work-flows, in future experiments (Toral and Way, 2018).

Research by Kenny and Winters has focused on MT ethics and the literary voice, recognising the need to preserve the translator's voice in literary MT processes (Kenny and Winters, 2020). Kenny and Winters initiated an experiment with Hans-Christian Oeser, a well-recognized Irish into German literary translator, who was asked to post-edit a MT excerpt from F. Scott Fitzgerald's *The Beautiful and the Damned* (Kenny and Winters, 2020, p. 133). Comparing Oeser's post-edited translation with his 1998 from scratch translation revealed that his post-edited work is still somewhat less representative of the translator's style than his 1998 from scratch translation. "His style, and thus his textual voice, is still discernible in the edits he makes to the machine translation output, but the overall effect is perhaps a slight dampening of his textual voice" (Kenny and Winters, 2020, p. 144).

A study by Guerberof-Arenas and Toral (2020) looked at the impact of post-editing and MT on creativity in translation products. In a later article explaining the results, they described creativity as follows: "creative translation is the process of identifying and understanding a problem in the source text, generating several new and elegant solutions that depart from the source text and choosing the one that best fits the target text and

culture…" (Guerberof-Arenas and Toral, 2022, p. 24). In their experiment, a short story was translated from English to Catalan and Dutch in three ways: by human translators, post-edited MT, and then by MT alone. Guerberof-Arenas and Toral's conclusions were that a NMT system trained on literary data does not yet have the necessary capabilities for a creative translation, since it renders literal solutions to translation problems, and that even post-editing raw MT output constrains the creativity of translators, leading to poorer results than those produced by human translators (Guerberof-Arenas and Toral, 2022).

While there is much work underway to explore the potential for CALT, there has been little comment from researchers to date on its advantages, such as reducing cost barriers to translation for minority languages, and very little work on reader reception of MT-literary texts. These considerations are particularly important in an industry where in many countries, national bodies such as cultural outreach centres are required to heavily subsidise translation into national languages (Hadley, 2023, p. 92). Oliver highlights the benefits of MT in widening access by allowing readers to experience lesser-known authors and cultures and enabling publishers to test the market for the demand for higher volumes of translated texts (Oliver, 2023, p. 127).

Hadley concluded that for technology to be used effectively in the literary translation domain, this cannot be slightly adapted versions of non-literary translation technology, since "the needs and practices of the two forms of translation differ based on the texts themselves, the reasons why those texts exist, the reasons people engage with them, and the techniques used to translate them" (Hadley, 2023, p. 103). Hadley noted that the first literature-specific CAT tools are beginning to appear, such as PunCAT1 which assists translators in identifying and translating puns in literary texts (Hadley, 2023, p. 99). Dorst (2023, p. 15) has looked at whether MT can tackle metaphors, finding that it deals relatively well with creative metaphors but struggles with foregrounded metaphors and grammatical metaphors, which can also be challenging for human translators. Hadley comments that changing attitudes is a gradual process, but that there are opportunities for CALT to become more efficient in a way that leaves space for the creativity that is so vital, and that it is important for literary translators to be open to these opportunities in order to avoid being left behind (Hadley, 2023, pp. 103–4). While literary translation has been touted as the 'last bastion' of pure human translation (Ruffo, 2021, p. 2), there is increasing evidence that publishers are now, in some cases, using

AI to replace translators in some tasks. A January 2024 survey, run by the UK Society of Authors, which consulted authors, translators and illustrators found that a third of translators had used generative AI in their work (SoA Policy Team, 2024). Close to 90% of respondents were concerned that the use of generative AI devalues human-made creative work (SoA Policy Team, 2024).

Damien Hansen's (2024) PhD research explores how MT and technology can be applied to enhance the work of literary translators, in a way that is adapted to their work, expanding the focus beyond productivity and encompassing concerns around ergonomics and job satisfaction. Hansen's research shows that it is possible to adapt a CALT system to personalise it to the individual author and/or translator, and indeed that the more specialised and adapted the system is to individual style, the more successful the results will be (Hansen, 2024). Hansen's study focused on English to French translations of a series of fantasy novels translated by the same author. Although using relatively limited data, Hansen judged the results to be positive overall (Hansen et al., 2022). He concluded that MT that assists translators in an interactive way, providing several options to inspire the translator and correcting human errors such as those due to inattention or misinterpretation, can lead to faster translation processes and free up the human translator to concentrate on more creative passages (Hansen et al., 2022, p. 15).

Rudan et al (2023) stress the importance of "augmenting" the work of the human translator, assisting them by providing tools which enhance both their efficiency and their creative processes. Their work focuses on developing processes which are iterative and can be adapted to literary translators' varied workflows (Rudan et al., 2023). They argue that machines can bring a perspective which the human translator cannot, notably analysing large quantities of data through a 'distant reading' approach, as outlined by Moretti (2013), reading at scale and looking for patterns (Rudan et al., 2023, p. 263). This would also enable the translator to plug into a wider world beyond the source text itself (Rudan et al., 2023, p. 264):

> …the text does not exist in a vacuum but rather is supported by a corpus of literature that influenced the writer. There is also the entire network of characters, places, semantic models and entities that are embedded in the Source Text either explicitly or implicitly, and finally the author's corpus and cultural backgrounds that contextualise the specific text.

The authors argue that CALT has many advantages, in comparison to a generalised use of MT. CALT focuses on the user experience, adapting the technology as required, to reduce translators' "cognitive friction" (Rudan et al., 2023, p. 274). Where the user is central to its development, CALT can empower translators and improve their experience of the translation process by being more transparent, user-driven and adaptable than other available tools (Rudan et al., 2023, p. 260).

# 3. Methodology:

## 3.1 Approach/framework

This research is grounded in a translation psychology approach. Translation psychology is a growing field, with research over the past fifteen years conducted in a range of topics including emotion, personality, metacognition, stress, creativity and cognitive styles (Bolaños-Medina, 2022, p. 12). In translation psychology, the individual (i.e. the translator) occupies a more central role than they had been accorded in other areas of translation studies (Bolaños-Medina, 2022). This is part of translation studies' 'human turn', developed from the ideas of Chesterman, who promoted a sociological approach, elevating the role of the translator as an agent in the process of translation (Chesterman, 2017). From the mid-1980s, translation studies had moved on from uniquely text-based approaches to focus on processes, with translation process research drawing on ideas from the disciplines of psychology and sociology (Muñoz Martín, 2016, p. 7). Since then, cognitive approaches have come further to the forefront, with theorists asking questions about what goes on in translators' heads, with a primary focus on rational processes in cognition (Lehr, 2020, p. 295). Interest in cognitive processes in interpreting began earlier on, perhaps due to high memory requirements. Angelone, Ehrensberger-Dow, and Massey (2016, p. 44) describe how the perspective of the interpreter as an information-processing system prompted research into memory capacity, cognitive sub-skills, such as anticipation and inferencing, and cognitive processing models. Chesterman, and many others, referred to the concept of a black box: "we can start with the idea of the translator's mind as a black box, with an input arrow on one side and an output arrow on the other, and a question mark in the box itself" (Chesterman, 2020, p. 26). Chesterman also highlights a weakness of this approach, in that it implies that we consider the mind to be understood in isolation and without considering the environment or historical perspective (Chesterman, 2020, p. 26). Initially, post-task interviews and retrospective commentaries were used to learn how translators and interpreters approach tasks and solve problems, although constraints of selective and working memory were identified as a limiting factor (Angelone, Ehrensberger-Dow, and Massey, 2016, p. 45). As technology has progressed, there has been a diversification in the potential methodologies which can be used to measure and understand the translation process.

Think-aloud protocols (TAPs), which were first used in psychology research, were

applied enthusiastically to translation studies research from the 1990s onwards (Bernardini, 2001, p. 241). This approach is based largely on Ericsson and Simon's 1984 theoretical framework, which viewed human cognition as the processing of information and concluded that it should be possible to learn from individual translators recording their thought processes (Bernardini, 2001, p. 244). This approach, which was initially met with enthusiasm, has been criticised on the basis of a number of important potential flaws, including the possible impact of the process of talking aloud on wider aspects of cognitive processing and doubts about how much of a person's thinking would actually be verbalised (Chesterman, 2020, p. 27). This technology-dominated approach continued to develop, with a clear focus on cognitive processes involved in translation and interpreting, including techniques such as key-stroke logging, recording and interpreting data from translators' typing processes (Jakobsen, 2017, p. 29), and use of eye tracking sensors to detect attention to areas of the computer screen while translating (Jakobsen, 2017, p. 21; Muñoz Martín, 2016, p. 8). Further advances in technology have seen the use of electroencephalograms (EEG), a method measuring electrical activity in the brain to gain insight into which brain regions are activated in particular tasks (Hansen-Schirra, 2017, p. 232), and use of heart rate monitors to evaluate emotional impacts of translating texts (Hubscher-Davidson, 2022, p. 4). These new options for data collection allow empirical researchers to apply data triangulation to strengthen research by combining different methods (O'Hagan, 2022, p. 429).

Recently, the influences of organisational psychology and social psychology were also considered within the translation psychology approach, looking at the translator in their work context, and the way that the individual's behaviour is influenced by wider society (Bolaños-Medina, 2022). Bolanos-Medina (2022, p. 20-21) lists some of the areas of interest as being sources of workplace stress, and traits and resources required for professional success in translation. Research has also grown in workplace ergonomics, looking at individual work tools, routines and environments, with an applied perspective to lead to examples of good practice (Risku et al., 2020, p. 42). Translation psychology looks, among other things, at individual difference factors, and the influence of such factors on translators, which clearly includes emotion and motivation (Bolaños-Medina, 2022; Lehr, 2020). This area has already been explored in some detail in Section 2.1 above.

## 3.2 Value and limitations of the translation psychology approach

Working with a translation psychology approach allows for research to draw on the rich discipline of psychology, which has a long history and wide application. Psychology has also benefited from a well-developed exchange and intersection with other scientific fields such as the natural sciences and social sciences (Hubscher-Davidson, 2022, p. 1). Over recent decades, the role of emotion in cognition has been increasingly recognised within psychological research (Lehr, 2020, p. 294). The varied methodologies for evaluating emotions, developed within psychology, provide a valuable source of inspiration for this research. However, there are also some notable challenges in applying this approach. These include the necessary subjectivity of reviewing human behaviour, a complex phenomenon with limited observability (Hubscher-Davidson, 2020b, p. 212), which requires careful attention to methodological approaches, to provide a rigorous basis for research, as will be discussed in more detail in Section 3.3 below. Researchers have acknowledged that decades of psychological research, intended to uncover truths about human psychology, may actually only tell us about a tiny subset of our species— people who live in Western (or White), educated, industrialized, rich, and democratic (sometimes referred to as WEIRD) nations (Muthukrishna et al., 2020). This is as true for psychology as it is for translation studies, and has been acknowledged by some researchers looking into translation and emotion (Pedikaki and Georgiou, 2022, p. 77). Researchers have a responsibility to attempt to be more inclusive in their research, to bring a wider range of perspectives to inform their work, including when it comes to selecting languages and profiles of participants.

## 3.3 Ethical issues in translation research

According to Saldanha and O'Brien (2014, p. 41), "translation research involves research into human behaviour and society, as well as into language and text". The authors go on to state that the most important guiding principle for ethical research is to treat participants with respect (Saldanha and O'Brien, 2014, p. 42). Researchers must treat participants as autonomous agents and protect any vulnerable individuals who form part of this group throughout the research process (Mellinger and Hanson, 2022, p. 15). In order to protect participants from harm, researchers should consider the potential psychological impact that their research could have on the participant (Saldanha and O'Brien, 2014, p. 67). This is important for all research involving participants, but becomes even more critical in

research dealing with potentially triggering topics, such as, in this case, grief. Potential risks of harm to participants should be disclosed to participants and where possible should be mitigated by careful planning of safeguards. For example, in the case of this research, experiment participants were provided with a brief description of the text with 'trigger warnings' and with details for the university counselling services in the information pack, and the choice of text for translation was made purposefully to be emotionally impactful but not distressing for participants. It should be noted that participants were neither screened according to their personal experiences nor asked to divulge any information about their past, as the support structures could not be put in place to deal with any trauma uncovered.

Informed consent is key to designing an ethical experiment. Potential participants must be given sufficient information about the purpose and the demands of the study, and provided the opportunity to withdraw from the study at any time without suffering any negative consequences (Mellinger and Hanson, 2022, p. 17). The information and consent form for both the interview and the experiment are attached in annex below (see Appendixes A and C). For the experiment, as an additional safeguard, even after filling out the consent form at the beginning of the process, participants were prompted to reconfirm (or otherwise) their consent to participate when filling in the questionnaire. This is in line with best practice described by Saldanha and O'Brien (2014), as some commentators on ethics and research argue in favour of "consent as an ongoing negotiation with the participants" (Riessman, 2005 in Saldanha and O'Brien, 2014, p. 44). The information to participants gave clear information about confidentiality and data storage arrangements, and detailed how participants would not be referred to by name. To support this confidentiality, for the experiment, personal data was separated from all other data by using a unique participant key. On the other hand, the interviewee agreed to waive her right to anonymity and to be referred to by name in the thesis.

As a student myself, access to potential participants is one of the major benefits of working with this group. However, there are also some important ethical challenges related to working with student participants. It is imperative that researchers consider power dynamics and avoid any inappropriate pressure in recruiting participants (Mellinger and Hanson, 2022, p. 16). In this case, participants were fellow students, which could be potentially be considered to be more equitable, compared to if the research was conducted

by a staff member. As advised by the ethics committee approving the research, students were made aware that whether they agree or decline to participate in the research, this would have no impact on their grades or on any other aspect of their studies (see the participant information form in Appendix C).

Regarding the motivation and position of the researcher themselves, Saldanha and O'Brien (2014, pp. 41-2) state that "all research is influenced by the values and ideology of the researcher, which drive topic selection and focus. Researchers ought to be aware of their own bias and should explicitly interrogate their own motivations". With this in mind, I have declared my own personal interests which led to the selection of this topic, in terms of a personal experience of grief and an interest in grief writing or grief memoirs. While this was the point of departure for the research, the thesis developed to consider a wider question of the use of MT as a self-care tool and the potential impact on emotional processing. However, reflecting on my own positionality as a researcher, there are some ways in which my experience has likely impacted the research, for example in the selection of the text for the experiment. As someone who has experienced a significant grief event, was my choice of text influenced, leading me to choose something which was either more or less palatable to other participants who may not have experienced a similar event? It is difficult to evaluate this, since, for practical reasons, participants were not asked about their own personal experiences; the small sample size would anyway have meant that it would be very hard to evaluate the impact of their experience on their reactions to the experiment. The text choice was discussed in some detail with my research supervisor, providing an additional perspective. Opting for a text that was palatable and not shocking was also a precaution built into the ethical considerations of the experiment, so it the impact of my experience was not significant and does not impact on the validity of the research.

### 3.3.1 Selecting appropriate research strategies and applying best practices

Some specific issues regarding planning, data collection and analysis are highlighted here for the two methodologies selected for this research. The strategies used in this research were that of an experiment, and a case study based on an interview and complementary secondary sources. Ethical issues considering best practice in data analysis are considered below for each strategy.

#### *3.3.1.1 Case Study*

Case studies, which originated in the social sciences, aim to investigate a particular phenomenon or issue in depth and within its social context and often use a variety of data sources (Meyer, 2016, p. 178). In this case, the case study is built on an interview and complementary secondary sources. Although multiple case studies would provide potential for comparison, a single case study is not in itself problematic, since case studies are intended to develop an understanding of that particular case, and the generalizability of results and observations is necessarily limited (Meyer, 2016, p. 178). Case studies are "complete and interesting on their own merit. They are, in one way or another, a unit that is part of a larger population (of translations, translators, training institutions, literary systems) and we investigate them because we are interested in that population" (Saldanha, 2015, p. 208). According to Böser (2016, p. 236), interviews allow for the contextualisation of human behaviour, and the central purpose of this method is to generate "data on lived experiences and on the meaning which individuals […] under investigation derive from them". A semi-structured interview was designed, which gives some framework for the discussion but also provides space for the interview to develop according to the nature of the discussion and the participants' responses. The setting of the interview is important both in order to safeguard participants' privacy and build rapport with the interviewer (Böser, 2016, p. 237). In this case, as is now often the case, the interview took place at a distance, which had the advantage of being in a comfortable place (home and place of work) of the interviewee. The interview plan is included as Appendix B.

#### *3.3.1.2 Experiment*

According to Gile (2016, p. 220), for the purposes of translation and interpreting studies, experiments are "scientific investigations in which an environment and/or a particular task are created, controlled and manipulated for the specific purpose of collecting data in order to improve one's knowledge of the object of study". Gile describes the advantages of experiments over naturalistic studies, where things are studied in their natural environment: experiments have a potential to be highly observable, since they are planned and set up by researchers; it may be possible to eliminate some confounding effects when exploring the effect of one particular variable; experiments are replicable; and they can be

set up to create conditions that rarely occur in real life settings (Gile, 2016, p. 221). In the case of this experiment, all these advantages hold true to some extent.

While randomized control trials are considered to offer the highest levels of rigour, "there are actually few hypothesis-testing experiments in translation and interpreting studies with full control, random allocation of participants to experimental and control groups and inferential statistics, which are standard in the cognitive sciences" (Gile, 2016, p. 225). For this experiment, splitting the cohort in order to create a control group would not have been helpful, due to the small size of the group of participants. The main challenges associated with experiments are those of ecological validity: "because of the artificial nature of the setting and controls, it is sometimes difficult to assess the extent to which the same or similar results can be applied to real-life settings" (Gile, 2016, p. 221). There are also some particular challenges related to ecological validity in working with student participants, as "extrapolating from students to professionals cannot be taken for granted, precisely because numerous comparisons suggest that their behaviour differs significantly in many respects" (Gile, 2016, p. 224). Mellinger and Hansen (2017, p. 16) also highlight difficulties in attempting to generalize across populations, when university students tend to be wealthy, secular, Western young people with high levels of privilege. However, many studies in translation and interpreting studies resort to working with student cohorts due to challenges with recruiting professional participants, and so these potential shortcomings are commonplace (Gile, 2016, p. 224). Bednárová-Gibová and Majherová (2022, p. 118), for example, recognise the limitations of working with translation students in their study on emotions and literary translation performance and state that it would be valuable for the study to be replicated with practising translators.

Sample sizes can pose a problem for quantitative studies, due to issues of statistical power, generalization and appropriate statistical techniques (Mellinger and Hanson, 2017, p. 318). Small sample sizes can also invalidate the assumptions of standard statistical tests and require alternative specialised approaches. In the case of this experiment, the possibilities for analysing quantitative aspects of the data are necessarily limited by the sample size of eight participants. In order to avoid misrepresenting the data, priority was given to a simple and visual presentation of the data, to let the data 'tell its own story'. Regression analysis was avoided, due to the difficulties of proposing potential relationships between variables when

it would be impossible to test validity due to the small data set. It should be noted though that many of the questions in the survey provided to participants were qualitative and, in this sense, small samples are not necessarily problematic, as qualitative data can provide extensive descriptions and explanations (Mellinger and Hanson, 2017, p. 318). The experiment was designed with a mixed-methods approach which provides some advantages, due to the complementarity of the quantitative and qualitative data.

# 4. Case study - interviews of professional translators having experienced a grief event

While the experiment did not consider personal experience of grief and its impact on a translator and their experience of translation, I decided to approach this issue through one or more interviews with professional translators who had experienced bereavement. My aim was to understand how translators' experiences of grief affected their work in the short term and the longer term, and if they had identified approaches and tools which supported them to continue their work. Due to overall time limitations, I was able to conduct one interview, which I decided to analyse within a case study approach, as described in Section 3.3.1.1 above. Case studies provide a suitable approach to look at complex social phenomena, such as in this case, grief, attitudes to work and social relationships. The case study presented has an exploratory purpose and serves as a starting-point for reflecting on the impact of experiences of grief on professional translators.

## 4.1 Design and preparations

I wrote to Claire Cox, a professional translator who had written several blog posts on translation and grief, to see if she would be willing to be interviewed. In her blog posts, Claire shared her experience of the illness, loss and bereavement of her mother and father, and the impact that it had on her professionally, as a freelance translator (Cox, 2023a and 2023b). I designed an interview plan for a semi-structured discussion following a series of open-ended questions. The outline is attached in Appendix B. The interview lasted around forty minutes and was conducted online. With Claire's permission, I was able to record and transcribe the interview, sharing the draft transcript for Claire's corrections, which I incorporated into the final transcript.

### 4.2 Ethics and confidentiality

The procedures for the interview were described in the participant information and consent from, which was shared with Claire in advance (see Appendix A). Claire was provided with an information and consent form. The interview was recorded and the recording was deleted as soon as the transcript was finalised. Claire gave her permission to be referred to by name in this thesis.

### 4.3 Analysis

The interview covered the following main topics: the translator's experience of grief and bereavement while working as a professional translator; approaches, tools and techniques that helped the translator during this time to continue working; whether the grief experience had any impact on the translator's professional life in the longer term (for example, interests, projects taken on, approaches to texts etc); and the role of social and professional relationships and sharing experiences with others. After transcribing and checking the transcript with the interviewee, I reviewed and analysed the text freely, looking for the most prominent issues emerging from the single interview. I also referred to the additional sources of Claire's blogposts (Cox, 2023a and 2023b). I found the following themes emerged from the discussion: managing work, personal life and grief work; the translator's approach to self-care; the impact of relationships; and changes to life perspectives. Analysis and presentation of case studies is necessarily subjective. The emerging themes were to some extent influenced by the literature review, notably by the sections on translation and emotion, and translation and grief.

#### 4.3.1 Managing work, personal life and grief work

Claire shared her experiences of the illness and death of both her parents, with her mum passing away first after a short period of ill health, and her father unwell and requiring care over a longer period, all of which had a significant impact on the family. She described how in the period when her mum was sick, she had needed to take a break from working to deal with the immediate responsibilities of family life. This point is reinforced in one of Claire's blogposts: "The problem with death (and serious illness, for that matter) is that it rarely arrives at a convenient time" (Cox, 2023a). In our interview, Claire described how it was hard during that time, to balance the conflicting draws on her time, including visiting, personal

admin and other tasks. She said that her mind was full and she didn't have time for work. She then described how, following her mother's death and the subsequent period of readjustment, she was able to return to work:

> I think in some respects I found that the actual process of working did enable me to switch off and as long as I had long deadlines or small jobs, I could actually fit them in. And during the time I was doing that, I could shut out all the grief and all the admin and all the effort, and I could just concentrate on that, but it was definitely a juggling act.

She described her return to work as a translator, again after the death of her father around 14 months later:

> So again, work was a release, in a way, it definitely was, the ability to think, "I can control this". I couldn't control what was going on with my dad, I tried really hard… it was really hard, but work was that one constant, that I was in control and I knew what I was doing, and as long as I didn't bite off more than I could chew, then I was ok.

Here, Claire was talking about the challenges of managing family responsibilities during emotional times, including illness and death of parents, of balancing and managing all of these tasks and roles without becoming overwhelmed, as well as the beneficial role that her work played in providing an area of focus other than her grief.

### 4.3.2 Translator's approach to self-care

Self-care was not specifically mentioned within the interview questions. However, Claire herself referred to it as being important. She mentioned a number of activities or hobbies that she kept up following the death of her parents, which helped her, such as gardening and walking in nature. She talked about the importance of having balance in life, and having time for yourself outside of work:

> at least I could go into the garden, and that's a very mindful process… weeding or sowing seeds, you can forget yourself, and at the same time it was a way for me of reconnecting with my parents, because they were very keen gardeners as well.

She described how activities which require you to focus on something else intently are useful as “you are not focusing solely on the grief, but you can come to terms with it, sort of at the back of your mind”. Claire also discussed how writing about her experience was helpful to her and she described it as being “cathartic”:

> I mean that’s why I wrote the blog, because I thought it was important to write about my experiences… I’ve written blogs for a long time, but it’s as though those blogs wanted to come out. There was one, I don’t know what I set out to write, I was going to write something completely different... when it came out, it was obviously what I needed to write, about dad and his life and experiences.

Claire was conscious that writing blogs had always been useful for her as a translator, because “it gives you your own writing outlet”. She said that “especially after this [experience of grief], it has given me the ability to want to share that with other people”. In this sense, Claire highlighted that writing was important to her in both expressing her emotions, and in building relationships with others in response to her grief experience.

During the interview, when talking about grief literature, Claire shared that reading particular books had been helpful to her in processing her own grief, in particular non-fiction literature describing personal experiences of grief rather than self-help style books. A Japanese novel called *The Telephone Box at the Edge of the World* was recommended to her by a friend, “where people who had lost someone could go and find this very remote telephone box and they could connect to the person they had lost... And… it was about coming to terms with their loss”. She described how she felt that she responded well to this type of text as “seeing what other people have done does give you the opportunity to come to terms with it, so I think that works as well”.

### 4.3.3 Impact of relationships

Claire shared how relationships had helped her in her journey through grief and in maintaining her professional practice. She talked about sharing the burden of responsibilities of caring and death admin with family members, and the particular challenges of being self-employed, as well as the importance of having networks of friends and colleagues who can relate to your personal experiences and provide mutual support. In Claire’s case, she found it helpful to have friends who understood both the experience of caring and/or grief, and the

demands of being a self-employed translator trying to juggle life and work. She says that "to have other people who understand that I think is really, really useful".

Claire also talked about the additional benefit of sharing her experiences with others through her blog, which is that it helped her to connect with others:

> I think it's worth doing the blog because then people know what you're going through, and so many people come out of the woodwork as it were, that you didn't know they had experienced similar things, and yet they can either help you, or you can help them.

Claire also talked about how she is working within her professional networks to discuss issues of caring and grief. She is an active member of the UK Institute of Translation and Interpreting (ITI) parents' and carers network (Institute of Translation and Interpreting, n.d.). She said that the network is important, as "there are other people I can contact that are going through similar things... I just wouldn't want to do this on my own". Claire described a range of ways in which she coped with grief and the multiple demands of personal and opening up to others and listening to other people share their experiences of challenging life events.

### 4.3.4 Changes to life perspectives

Developing a personal sense of meaning through the experience of grief is an issue emerging from the literature review, see Section 2.3.2 above. There appear to be elements of this in Claire's experience, particularly in that she has been able to share her experience, not only as a cathartic tool, but also to potentially help others, and also considering her work on grief with the ITI Parents and Carers network. Devoting time to social purposes and sharing personal experiences with others to raise awareness demonstrates a changed altruistic perspective brought through grief, as was put forward by Berzoff (2006) and discussed in the literature review above.

Claire did not feel that her translation practice had changed much as a result of grief. As a translator of technical texts, she generally does not work on highly emotional issues. However, Claire talked about a project she took on to translate a book about plants, which she felt was of significance to her during the period when her dad was unwell and she had a lot of caring responsibilities. "It was my dream project… and I felt I couldn't turn it down, it

was just what I wanted to do". She described taking this project as being a form of self-care, despite the heavy workload and the deadlines… "I just felt so strongly that I wanted to do that project, so I couldn't compromise on my care for dad, but equally I just had to do this work, because I think that's important… I didn't want to turn them down". Claire also reflected on this experience as demonstrating a change in her perspective on life following loss:

> I think if anything it has made me think, that life is for living, like with the book, it was so important for me to accept the book, because it was on a subject I really wanted to do, and I think it's made me think that life is short, we never know whether it is going to be cut short, cut shorter, so you should only accept texts that you want to do.

This example demonstrates how Claire's working practice as a translator was important in reaffirming her personal identity and in boosting her sense of wellbeing during a very challenging period of her life, providing an example of the role that translation can play in responding to or coping with grief, as discussed above in Section 2.3 of the literature review.

### 4.4. Limitations and opportunities for further development

The case study approach was an appropriate format within which to analyse the interview data. This methodology is well suited to examining such an emotionally charged topic, particularly with a limited number of participants. Having a one-to-one discussion with an individual on their personal experience was an ideal way to begin to explore the topic, and I was able to complement this with additional information from Claire's blogposts. Together this provided an interesting perspective on how an individual translator experienced grief and how it impacted her work. To take this analysis further, it would be interesting to interview other translators with personal experiences of grief, to be able to either have a comparative approach across several case studies, or to conduct a thematic analysis from a larger pool of qualitative data.

## 5. Experiment

To respond to the research question, I decided to set up a small-scale experiment looking at the impact of the use of MT on translators' experience of translating emotionally challenging texts. This experiment was designed for six to ten participants, and eight eventually took part. The target for recruitment was master's students in translation in the

English Unit at the Faculty of Translation and Interpreting at the University of Geneva. This cohort was chosen due to easy access to the group, and to having very limited resources, as it would have been difficult to recruit professional translators who would need to be properly compensated for the work. Volunteers would be asked to translate two short extracts of a French literary text about a personal experience of grief into English, the first part without MT and the second part with MT. Participants were also allowed to use any other online reference resources They would be provided with an online questionnaire in two parts, to complete after carrying out the translation exercise, in order to evaluate how they experienced working with each part of the text.

### 5.1 Design and preparations

The experiment was designed to test participants' experiences of translating an emotionally-taxing text on grief, with and without machine translation. The first challenge was to identify a text of suitable length and emotional charge. It is important to acknowledge that each individual response to a text is extremely subjective. It was important to choose a text which elicited an emotional response from the average reader, while avoiding anything which would be overly taxing emotionally, for ethical reasons. The text should be long enough to develop an emotional response, but not so long as to be too time-consuming for the volunteers, given that they would only be given a small token gift to thank them for their participation. I was looking for a text with approximately 300 words for each of its two parts. The next challenge was to find a text with an equal (or at least approximate) emotional weight between the two parts. While I was aware of the genre of grief writing or grief memoirs in English, I was not at all familiar with similar texts in French. I looked online on different French language message fora and blogs with recommendations on books which could be helpful for individuals experiencing loss of a loved one. I looked at reviews online, before choosing some of the texts to read. I found that many of the texts built up an emotional response not only through powerful prose, but also through a description of the day-to-day mundane numbness of losing a loved one. Sections of powerful prose did exist, but usually they were short and not necessarily of the required length or able to be divided up into two balanced parts for my experiment[3]. Eventually, I discovered a text which I felt met all the requirements of focus,

[3] Some of the texts I reviewed but discounted as unsuitable were: *A présent* by Brigitte Giraud; *Vivre vite* by Brigitte Giraud; *Après l'orage* by Dominique Lagrou-Sempere; *Tristan* by Didier Mény; *Je ne suis pas sortie de*

length and emotional balance, which I shared and discussed with my supervisor. The text I finally chose to use in the experiment was an extract from the book *Le Fleuve* by Canadian author Sylvie Drapeau, from the 2022 version (the book was originally published in 2015). The book is a semi-biographical account by the author of the death of her brother by drowning, written from the perspective of the author as a five-year-old girl (the text is provided in Appendix E).

I provided volunteers with the text (marked into the two parts for translation) and with step-by-step instructions (see in Appendices D and E), including a very brief description of the author and the text outlining what the book was about. For the first part of the text, participants could only use bilingual and monolingual dictionaries and other online resources such as linguee and wordreference. They were expressly instructed not to use machine translation or AI for this part. For the second part of the text, translators were asked to use a NMT engine of their choice (e.g. Deepl, Google Translate) to translate the text, and then to post-edit it. To evaluate the translators' experience, I decided to use a questionnaire in two parts to record the volunteers' response to each part of the text, and to compare their experience of translating the same text. I designed the questionnaire to be completed online, as I felt it would be easier for participants, and therefore would me more likely to lead to richer data. I included a mixture of open and closed questions, including some questions with Likert scale responses. I asked the volunteers to submit their texts, to verify that they had completed the exercise.

### 5.2 Ethics and confidentiality

As I was carrying out an experiment with human participants, and the subject was sensitive, I went through the process of requesting permission from the University of Geneva Ethics Committee (CUREG). I submitted the completed standard request form along with the draft information and consent form for the experiment for their review, which was approved, with some recommendations were provided by the committee. As the participants are students, the committee highlighted the importance of assuring the participants that there

*ma nuit* by Annie Ernaux; and *Ceux qui restent* by Marie Laberge. All of these books fall into the category of grief memoirs. I also considered a collection of written testimonies of survivors of the Haiti earthquake in 2010, *Haiti parmi les vivants (*Actes Sud/Le Point*)*.

would be no impact on their grades or in other way on their studies, whether they participated or not. The ethics committee's permission is included as Appendix G.

Regarding the ethical issues of working with people on emotional issues, in line with good practice recommendations, I put a number of safeguards in place to make sure that people could evaluate their own willingness to take part in the study and decide to opt out at any point. This included clearly describing the subject of the translation in early correspondence with participants; choosing a text which focused on the feelings of grief rather than overly focusing on the circumstances surrounding the death of a loved one; reaffirming participant consent in the online questionnaire; and providing details of the university counselling service in the instructions for the experiment.

Regarding data protection, the data was to be anonymised through the use of a correspondence key with a unique participant number. Personal data (name, email, phone number), would be stored separately from the questionnaire data, by using a correspondence key attached to a unique participant number. Anonymised data would be kept safely in two places – on the research lead's computer hard drive and in cloud storage. The consent forms were to be saved separately on a password protected USB key, and the personal data would also be saved on another password protected USB key. Both keys would be held securely by the research lead. All personal data would be deleted no later than 30 October 2024, once the research was finalised. The remaining questionnaire, which would then be completely anonymous, will be kept along with the consent forms for an unlimited period of time (not less than five years) under the care of the research supervisor.

### 5.3 Recruitment

After considering various options, I decided to recruit volunteers from the English Unit in the Faculty of Translation and Interpreting at the University of Geneva. The main reason for this was that for a project of this scale and limited resources, it would be very difficult to recruit professional translators. As the Unit has a small number of students, I felt it would be possible to motivate them to take part in the experiment out of interest and/or solidarity. Through department funding, I was also able to offer the volunteers a small incentive, a book token for 20 CHF, which is less than the market value of the participants' time taken to complete the exercise.

I limited the potential volunteers according to the following criteria:

- Current or past student in Translation in the English Unit at the Faculty of Translation and Interpreting at the University of Geneva, at Master's, PhD or Post-Doctoral level.
- Highly proficient mastery of the English language
- French at a minimum of B2 level

I contacted potential volunteers meeting the above criteria. Of these, nine responded positively that they would like to participate in the experiment, and eight actually participated.

### 5.4 Questionnaire design

The evaluation of the experience of translating/post-editing the text was conducted by online questionnaire, in two parts, which I developed using LimeSurvey. LimeSurvey was recommended by the ethics committee over other online survey tools, due to its strong features regarding data protection concerns. The data was collected during a two-week period over the Spring 2024 semester. Volunteers were asked to translate the first part of the text without MT and then to complete the first part of the questionnaire. They were instructed to then post-edit the second part of the text, before finally completing the second part of the questionnaire. The questionnaire had a total of 31 questions, including 11 open-ended questions and 20 closed questions. The questionnaire is attached in full as Appendix F. In order to evaluate the respondents' data, a mixed-methods approach was used, with a combination of quantitative and qualitative methods. The data was analysed according to measures of central tendency (mean values). A qualitative analysis has been applied to assess participants' responses to open-ended questions. The sample size of the collected data was relatively small, which is an accepted part of the experiment. It was never the intention to consider this experiment as statistically significant, but that this research would be a small-scale preliminary analysis, possibly serving as stepping stone to future research with a larger and more representative sample.

### 5.5 Analysis of results

All eight participants carried out both the translation and post-editing tasks and completed the questionnaire in full. The students were all female, current or former master's students in translation at the University of Geneva and under thirty-five years of age. The

majority were approaching the end of their studies and had accumulated many hours of translation experience within the university setting. Of those taking part in the experiment, half had no professional experience in translation, and half had some professional experience, in a variety of fields, including finance, humanitarian, arts and culture, lifestyle, academia and theology. All participants would have had some exposure to MT and post-editing practice through their studies and/or professional experience, which would not necessarily have been the case if professional translators were included in the sample

Participants were not directed towards a particular MT engine for the post-editing task. Six people chose to translate with DeepL, and two used Chat GPT. They reported that they had used a range of additional resources for both parts of the text, predominantly WordReference.com, Linguee.com and Thesaurus.com. The survey results, both quantitative and qualitative, are presented below. A preference has been given for visual depiction of data, as well as presentation of mean results, which has been chosen as more representative than the median for a small sample size. Regression analysis has not been undertaken, as the sample size is too small to show statistically significant patterns. Nevertheless, some interesting findings emerge, considering analysis from the quantitative and qualitative data, which is presented below.

### 5.5.1 The emotional experience of translating and post-editing

The results from the questionnaire clearly demonstrate that participants had a range of different emotional responses to the text. This is perhaps to be expected with a literary text, as different texts and subject matters affect each reader or translator in different ways. Regarding the translation of part one of the text, asked how translating the text made the participants feel, three participants mentioned that the text made them feel either upset or sad: “It made me feel sad about the death of a child, although that is not something I have experienced personally”… “It made me feel quite upset”… “I found the text genuinely affecting and felt quite upset by the end”… Meanwhile, other participants responded that they did not have much of an emotional response. Their detailed explanations suggest several reactions in this sense. A recurring theme from several comments is that the intellectual or cognitive work of translation mitigated the emotional impact of the text. One participant said that:

> the intellectual work involved in translation acted as an emotional blocker at first, in the sense that I was trying to work out what was going on in the text and thinking about how to make certain sentences sound natural in English. It was only after several readings that I could really unpack what was going on emotionally and feel the distress and helplessness of the narrator.

Another translator said that "the text made me feel very similar to translating other texts that are not as emotionally charged. I think this is because when I translate a text, I'm focusing a lot on the language itself". Two participants mentioned that they did not have much of an emotional reaction, as they did not have the lived experience of the author or didn't relate personally to the themes in the source material. Several translators mentioned their feeling of "responsibility to translate it [the text] well" or "to do it justice". Two participants shared that their emotional response was not as strong as it might be, as they did not know the full story and since they were only translating short extracts of text – "I think translating a small portion of the text allowed me to not feel as emotionally charged, but this might have changed had I read more of the book".

Participants were asked to which extent they experienced five different emotions while translating the first part of the text, on a Likert scale of 1 (very slightly or not at all) to 5 (extremely). The five emotions I selected for this question were: distressed; interested; upset; inspired and anxious. This selection of emotions was taken from the PANAS scale, as introduced in Section 2.1.6 above. I considered using various other assessment frameworks for emotional response, including the Profile of Mood States (POMS) and the Differential Emotions Scale (DES), also discussed earlier. I decided on the PANAS scale, as it is one of the most widely used scales within psychology research for measuring emotional response, therefore potentially giving it more validity. It also provided a wide enough range of potential emotional responses for me to identify emotional responses which may potentially correspond to participants reactions to the selected text, without providing an overwhelming number of possible options. It also allowed me to fulfil my objective of keeping the questionnaire manageable for participants, as this is a small and relatively quick experiment, and it will be carried out by self-assessment with limited written instructions from the researcher. From the PANAS scale, I reviewed the ten positive and ten negative emotions and selected two primarily positive and three primarily negative descriptors: inspired; interested;

upset; distressed and anxious. Looking at research evaluating individuals different interpretations of emotional descriptors, I decided to substitute the term 'anxious' for the 'nervous' descriptor included within the PANAS scale, as nervous can be considered to be a more specific subset of the related emotional experience of 'anxious', which is measured more frequently in the various existing scales, as evaluated by Weidman et al. (2017, p. 272).

There is evidently an overlap between some of these terms (i.e. distressed, upset and anxious, and interested and inspired), which I did not feel would compromise the results, but is rather a reflection of the reality of the way individuals experience emotions differently. The emotions selected do not capture the full range of emotions possibly experienced by participants'; however, it was intended that they should capture some of the more likely positive and negative emotions that may arise during the translation process, accounting for both a reaction to the subject matter, and the intellectual work of translating the text. After careful consideration, I decided not to provide definitions or descriptors of emotions, in order to avoid creating confusion. It has been acknowledged in the literature review above that emotions are perceived differently by individuals, and any definitions provided by the researcher may not align with the understanding of the person completing the questionnaire and this may end up being more of a distraction than a help. Leaving these definitions open to interpretation also presents a potential limitation of the study, however this is deemed by the researcher to be the be most satisfactory of the two options. Participants were also asked to rate how intense their emotional experience of translating the first part of the text was, on the same Likert scale (1-5). The same questions were asked for the experience of translating the second part of the text, to enable a comparison, and the results from the two parts are presented below.

The following visual representations show the responses by the participants to the quantitative questions on their experience of translating both parts of the text. A quick note on methodology is needed here, to acknowledge that in quantitative research, there is some debate about performing statistical operations on data obtained using a Likert scale (Wu and Leung, 2017). Strictly speaking, Likert scales are ordinal scales, indicating rank and order and not considered to be continuous, therefore use of arithmetic calculations such as mean and standard deviation should be used with caution, and have provoked lively discussion among researchers (Wu and Leung, 2017, p. 527). In this case, given that it has been acknowledged

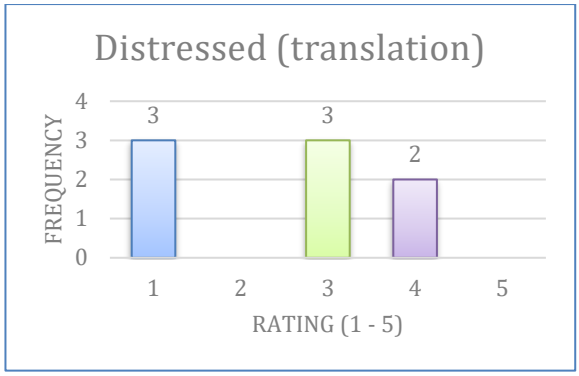
that the dataset is very small and that the experiment is exploratory, providing the mean and standard deviations to aid the reader in interpreting the data within the context of the full data is judged to be appropriate. The standard deviations presented demonstrate that the spread of the data is in all cases within reasonable limits, without significant outliers, which can also be seen clearly in the full data presented. It should be noted that the mean has been provided as a potentially useful indicative figure, but the detail of each response has been provided to show the range and the responses visually. The detailed results are shown in Figures 1 and 2 below.

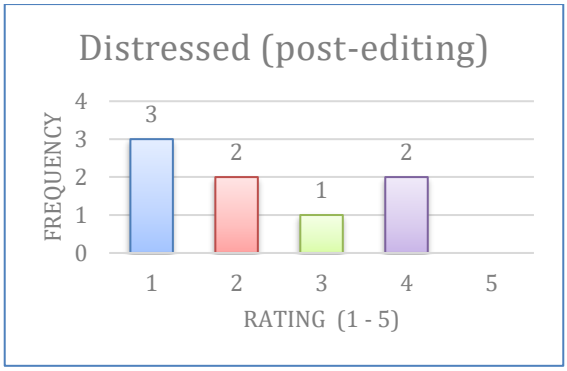
The results show that the participants experienced on average slightly less distress during post-editing the text than during the translation, with a mean of 2.25 compared to 2.5 for translation. Participants felt on average less interested during the post-editing, as compared to during the translation task, with a mean of 2.75 compared to 3.38 for the translation task. On average, participants reported feeling less upset during the post-editing task (mean of 2.38 compared to 2.88) than the translation task. They also reported feeling on average a little less inspired overall during the post-editing task (mean of 2.25 compared to 2.5). Finally, participants felt on average slightly more anxious during the post-editing than the translation, although this was a very small difference (mean of 1.75 compared to 1.63). The charts below give more insight into the spread of the responses, and show that there are no cases of extreme outliers distorting the mean, which can also be explained to some extent by the use of a Likert scale with a limited range of values (1-5). It could be perceived from the results that the use of MT led to the participants feeling ever so slightly more anxious compared to translating from scratch. However, looking at the spread of the data, there is not a significant enough difference to infer this.

***Figure 1: Participants' experience of feelings while translating vs post-editing the text***

Please rate the extent to which you experienced the following feelings while translating or post-editing the text, on a scale of 1 – 5: **Distressed**

Mean 2.5 Standard deviation 1.31 Mean 2.25 Standard deviation 1.28

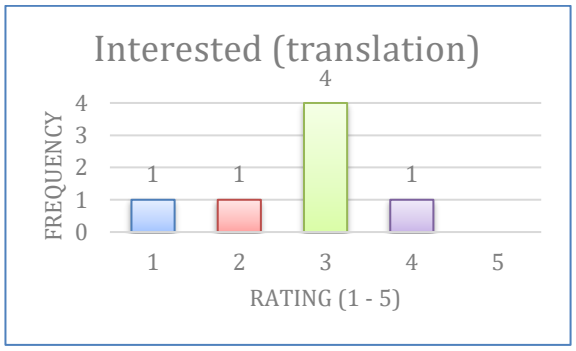



Please rate the extent to which you experienced the following feelings while translating or post-editing the text, on a scale of 1 – 5: **Interested**

Mean 3.38 Standard deviation 1.3

Mean 2.75 Standard deviation 1.16

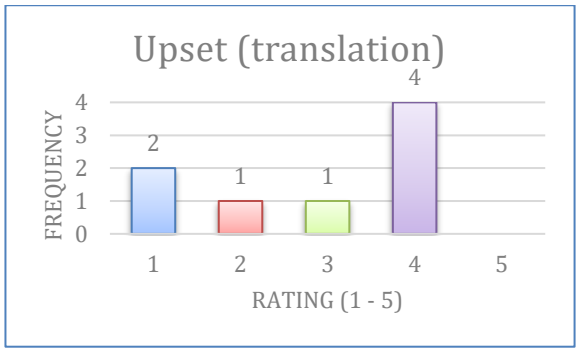


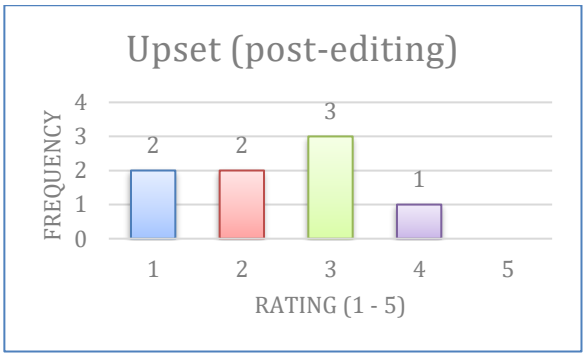


Please rate the extent to which you experienced the following feelings while translating or post-editing the text, on a scale of 1 – 5: **Upset**

Mean 2.88 Standard deviation 1.36

Mean 2.38 Standard deviation 1.06

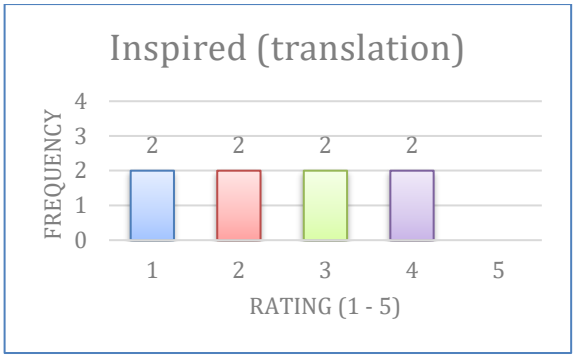


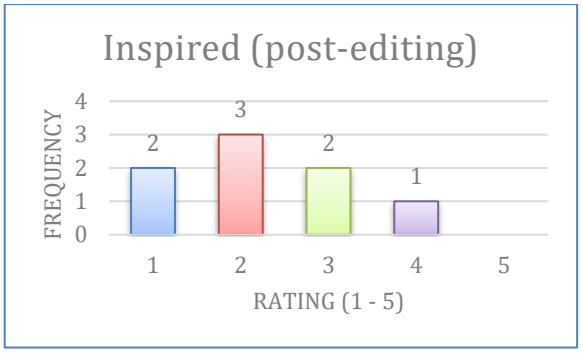




Please rate the extent to which you experienced the following feelings while translating or post-editing the text, on a scale of 1 – 5: **Inspired**

Mean 2.5 Standard deviation 1.2

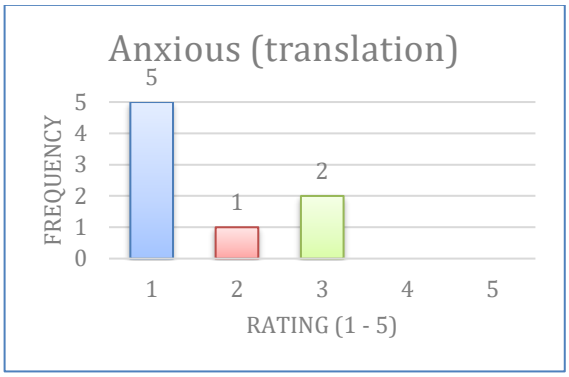
Mean 2.25 Standard deviation 1.04

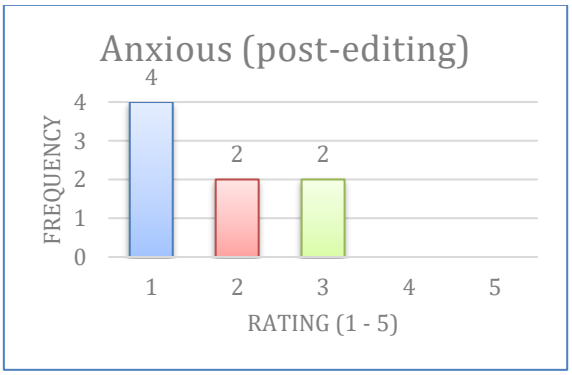



Please rate the extent to which you experienced the following feelings while translating or post-editing the text, on a scale of 1 – 5: **Anxious**

Mean 1.63 Standard deviation 0.92 Mean 1.75 Standard deviation 0.89



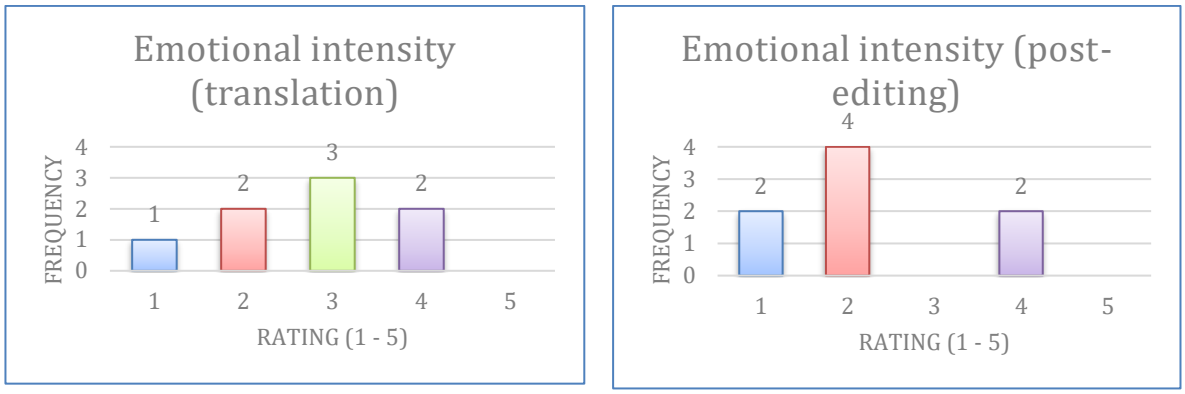




Participants were also asked about the intensity of the emotional experience of working with each part of the text. The mean score for the participants' experience of intensity in translating the first part of the text was 2.75, while for post-editing the second part of the text, it was 2.25. Here, it is useful to consider the spread of the data by looking at Figure 2 below. For part one, three out of eight participants recorded a score of 3 for the intensity of translating, compared to for post-editing part two, where four out of eight participants gave a score of two for the intensity of their emotional experience. It is clear from a visual view of the data that, overall, participants found the translation exercise to be a more intense emotional experience than post-editing.

***Figure 2: Intensity of participants' emotional experience in translating vs post-editing the text***

Question: How intense was your emotional experience of translating this part of the text, on a scale of 1 (not at all intense) to 5 (extremely intense)?

Mean 2.75 Standard deviation 1.04 Mean 2.25 Standard deviation 1.16

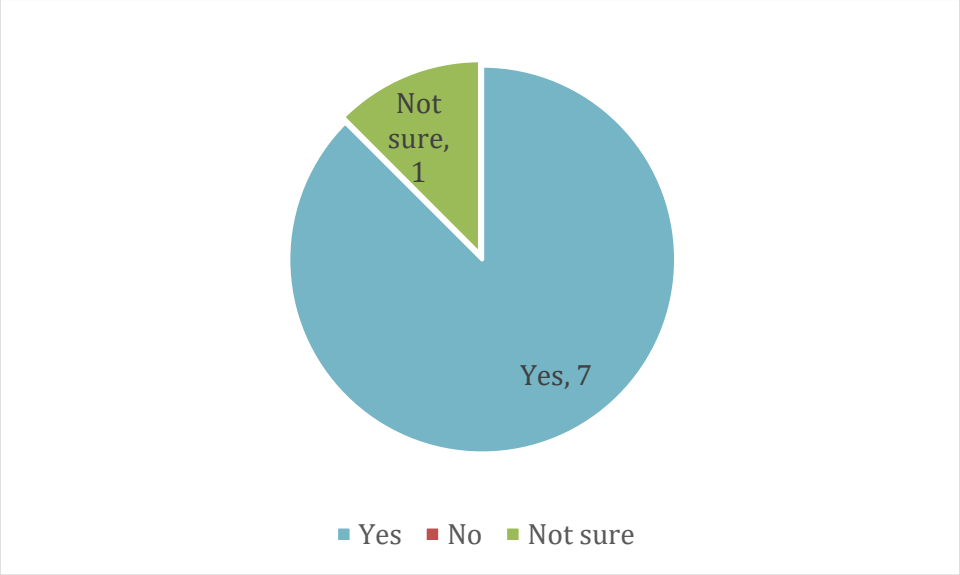



### 5.5.2 The impact of post-editing on participants' experience

When asked about their experience of post-editing the second part of the text after running it through MT, many of the participants talked about the distance between themselves and the text, which they felt was greater as a result of using MT. "The machine definitely created a bit of a barrier between me and the text, in the sense that I could gloss over the words more quickly in some passages"… "I felt more detached from the material, as I didn't do as much of an in-depth reading of the source text before I started working on the translation"… "I did not feel very connected to the text this time around as post-editing does not require such intensive reading as translation". Several of the participants referred to the different approach required due to the process of post-editing. As mentioned in Section 2.5.3 above, post-editing is a process that has its own cognitive dynamics. Some translators in the experiment appeared to be aware of this necessary difference in process. "I was more focused on correcting any obvious errors or anything that sounded strange, rather than intensively reading and re-reading the source text to produce a translation from scratch. This also made me feel less connected to my translation as a result". One participant said that they found that translating the second part of the text "was slightly more emotionally charged as the descriptions were more explicit". These comments show an awareness of the impact of MT, which was acknowledged in another question posed to participants. Seven out of eight participants, when asked directly whether they believed that using MT had affected their emotional response to the text answered yes, while only one participant was not sure.

***Figure 3: Participants' emotional responses in translating vs post-editing***

Question: Do you think that using machine translation (for part two of the text) affected your emotional response to the text?




### 5.5.3 Translators experience of using MT during the experiment

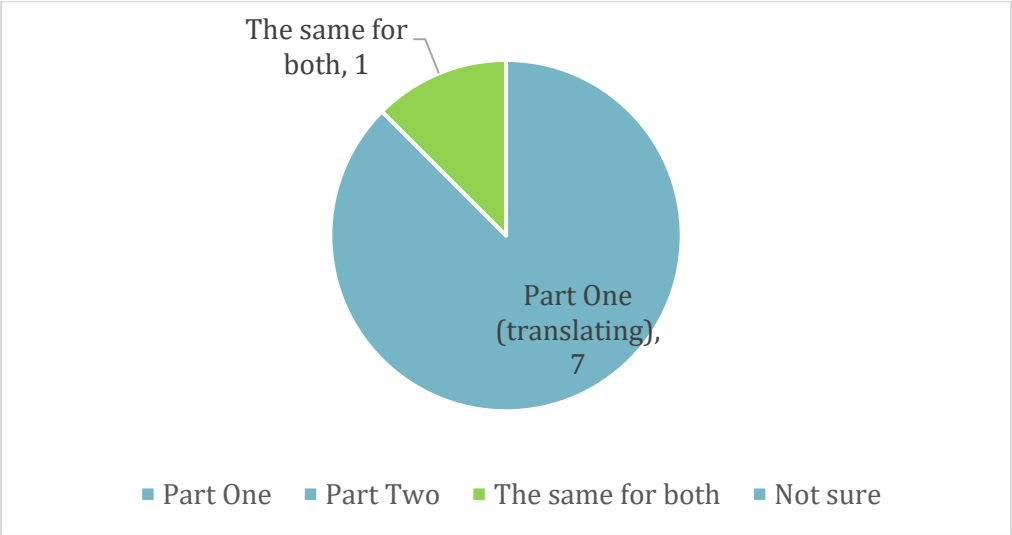
The participants were asked what they liked and disliked about the experience of using MT for the second part of the text. Three participants mentioned that using MT was quicker or more efficient. For example, “I liked that it was a lot more time-efficient, and allowed me to focus on the text at a micro-level (grammar, syntax) as opposed to drowning in the enormity of the death of a child as I went through the text”. Three participants said that it helped with vocabulary, with some even saying that “the machine put across better than I would have done myself” and another responding “it had some suggestions I wouldn’t necessarily have thought of”. One translator was aware of a reduced cognitive load, with the machine translation doing part of the “translating/thinking” for her.

Regarding the negative aspects of using MT, many of the participants felt that it created some kind of a barrier between them and the text. “I did not feel as connected to my translation or to the source text. I did not have a deep sense of feel for the author’s voice and the emotional force of her writing”… “there is a certain degree of detachment from the immensity of the author’s experience, I think, which feels like an injustice”. One person said that they felt that MT hindered their understanding of the source text. Several participants mentioned that they were unhappy with the results of the MT, and/or that it created additional work for them, for example “I disliked how sterile the sentences were in the machine translation as the machine translation was very direct and lacked nuance. It required a lot of post-editing and would have been easier if no machine translation had been involved”.

One participant said that "it felt like it hampered the creative aspect of literary translation and it took more rounds of editing to find the right rhythm and poetic language. The translation of metaphors was far too literal". It appears that, on being prompted to reflect upon it, all translators were able to find both positives and negatives about the experience of post-editing the MT, as they were requested to do.

***Figure 4: Participants' enjoyment in working with the text***

Question: Which part of the text (1 or 2) did you enjoy working with more?




When asked which experience they enjoyed more, seven out of eight respondents replied that they preferred the experience of translating, while one was not sure. Reflecting on the responses to the open questions, a common theme was the freedom of interpreting emotions, which several participants felt not only strengthened their translations for the first part, but was crucial, particularly for the text type.

> I think it's important to immerse yourself in the emotions of the text when translating this kind of narrative. While being more detached may protect you emotionally, I think that creating that barrier is an obstacle to creative output. I think there needs to be a certain amount of emotional investment in this kind of text in order to be able to move your readership.

Others mentioned that translating the text from scratch "felt more personal", or that it enabled them to build up a "deeper connection with the text and the emotions of the author and the parents". Another participant said that in part one they felt "more connected to the

author's voice and style". Three participants mentioned that they felt inclined or persuaded to choose the solutions presented by MT – the priming effect discussed in Section 2.5.3 of the literature review – even though they may not have been the best solutions. Several translators stressed having enjoyed the experience of translating the first part, as an emotional and intellectual challenge. For example, "I found the experience a lot more interesting and challenging, and I enjoyed trying to think of creative solutions to the translation problems (like whether to keep or change punctuation, how far should I idiomise certain aspects and phrases, what or who the author was referring to, tense choice, etc)". The person who responded that they felt both parts were equally enjoyable had an interesting reflection on the usefulness of both approaches:

> It would depend on factors such as my emotional stability (if I am well, I could handle a text on grief and even enjoy the emotional intensity, but if I am under pressure from work or home or university, then such a text can be emotionally disruptive and trigger feelings of anxiety) and time (if I have a tight deadline then my emotional response can be inconvenient, or it may unsettle me and push me to do a hasty translation job so as not to dwell on the immensity of the death of a child).

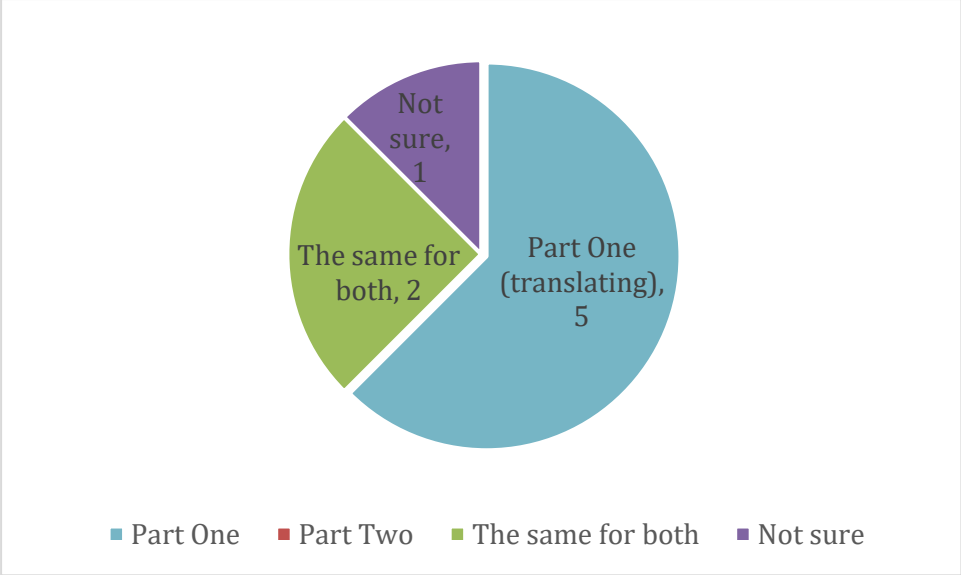
This reflection demonstrates a strong personal analysis on the potential utility and appropriateness of the use of MT, noting that their choice of approach may vary according to the circumstances.

### 5.5.4 Participants' satisfaction with the results

While all but one of the participants preferred the experience of translating over post-editing, their reflections on the resulting translation products were more nuanced. Five out of eight translators were more satisfied with the end result translated by them 'from scratch', whereas two felt that there was no difference and one was not sure.

***Figure 5: Participants satisfaction with the end results***

Question: Which part of the exercise are you most satisfied with the end result for?




Two participants mentioned that for translating the first part, they had had to fully read and analyse the text in a way that they did not to post-edit the second part. One of them said that this resulted in a better translation, whereas the other said that this helped them to get a "feel for the author's voice and motivation for her writing". One respondent said that she felt that she was "able to translate more creatively, while I felt as if the machine translation hindered me from seeing other potential solutions to translating tricky passages". Four respondents claimed that they were more emotionally connected or engaged with the first text, which they felt contributed to a better final product, as demonstrated by the following reflection comparing the two experiences:

> Because it feels like mine. It feels like I have acknowledged the author's life-altering experience, empathised with it and rendered it accessible to more people, which is a very human thing to do. I went through the second part in a more objective manner, looking at micro-features of the text that MT sometimes gets wrong. The latter is probably a lot more practical in a professional setting, but I would like to think that the quality of our translations is better when we have the time and emotional energy to invest in such a text.

For the two participants who did not see a difference in the quality of the two outputs, the reasoning for this was different in each case. One person was equally happy with both, and that "after multiple rounds of post-editing […] was still able to come up with a translation that […] was creative and poetic". On the other hand, the other translator said that they were

unsure if they were able to successfully convey the emotion of the source text: “I think translating someone’s personal experience doesn’t feel entirely true to me as I’m only getting a snippet into their life and have no real sense of who they are as a person. I can sympathise with them but I don’t think I can empathise”. The respondent, who said they weren’t sure which results they were more satisfied with, reported that she was not very happy with either part. She said “I’m not sure I got into the text well enough to do it justice”.

## 5.6 Conclusions

While it is not possible to reach any firm conclusions given the small sample size of student translators, there are some interesting initial findings that warrant further investigation. The quantitative and qualitative results appear to suggest that using MT to translate emotionally taxing texts may have something of a distancing effect, reducing the emotional impact on the translator by requiring less emotional and cognitive effort. The findings indicate that the potential use of MT as a tool for emotion management in order to support self-care remains an interesting area for further research. It should also be noted that, according to these findings, while MT might be used as a self-care tool in certain circumstances, MT may also act as a barrier with the end result of translators’ experiencing a reduced enjoyment of working with the text. As previously highlighted, the work-happiness of translators in general, and literary translators in particular is characterised by the concept of ‘linguistic hedonism’ (Bednárová-Gibová, 2020), which means that the very act of engaging deeply with the text can be integral to translators’ wellbeing. On the other hand, this should be tempered by the potential real stresses and strains that can be experienced in working on emotional or traumatic texts, as noted in the sections above. Initial findings from the experiment indicate that MT and the process of post-editing may also potentially distance the translator from the author, characters and the text itself, which may impact on translators’ enjoyment of the text. The demographics of the participants should also be considered, since they are students with a limited amount of professional experience. An experiment with professional translator participants may produce different results. Considering the comments made by participants, it could be that the focus on understanding the language acted as a shield, which may not be the case for translators who are more experienced in translating from and reading from the source language. Here we should consider relevant research

demonstrating that experts are, in many situations, less vulnerable than novices to the consequences of resource competition on working memory (Lacruz, 2017, p. 388).

A number of additional issues worth considering have emerged from reviewing the data produced by the study. Many participants, through their responses to the questionnaire, demonstrated that the exercise had prompted a significant reflective process on the impact of MT and post-editing on their work, on how they perceive texts, and how they deal with emotions while translating. This indicates that it can be useful for individual translators to reflect on what their emotional limits are, what situations and topics may trigger them, and to think about how they can prepare themselves for this in a deliberate way. This may, for example, involve setting personal 'red lines' as to work that they would not engage with, and specific coping mechanisms for work that they would engage with, and may lead to recognising tailored self-care needs. This could be equally valuable for student translators who are just starting out on their professional life and for more experienced translators, especially those who may have had more limited exposure to MT and post-editing. These issues apply to all translators, and not only to literary translators, given that, as we discussed in the literature review above, all kinds of text can prompt a range of emotional responses in individuals.

## 5.7 Limitations

While the findings of the experiment are interesting as a first point of departure, there are a number of limitations, some of which have already been referred to in the sections above. The sample size of eight participants is small and cannot be seen as representative in terms of the quantitative data, although it is big enough to uncover some interesting nuances in the qualitative results. The demographics of experiment participants is also a limiting factor. The participants are all students, at the very beginning of their career, with no or limited experience of paid work. In this sense, they are in a very different position to more experienced translators, who have a longer professional experience to draw on. On the other hand, students have a fairly significant exposure to technology, because it features both as a core part of the curriculum in translation classes and in technology specialisations which are required modules. Participants would therefore have learnt about and had practical experience in post-editing. This differs from the cohorts of participants of many other studies referred to above, where it was noted that the majority of the translators did not have either

a lot of exposure to post-editing, and/or not a very positive view of technology in the translation process. All the participants were female and under thirty-five years of age. This compares with literary translators who tend to be, on average, very experienced, for example in the ALTF survey of literary translators, 58% of respondents had practiced literary translation for over 15 years (ATLF, 2022, p. 3). Participants were not directly asked about their life experiences in terms of parenthood, loss and exposure to other traumatic events. It can be inferred that using an older cohort of participants with more professional and life experience may yield different results. Given the subject matter addressed in the text - the death of a child - reactions from participants with a longer life experience may include those who are themselves parents, which may yield very different results.

Other limitations include the short length of the text, which was considered necessary so as to make it manageable and not to put off potential participants with other competing commitments in their studies and lives, and due to the fact that there was only a very small token renumeration to compensate them for taking part. Two participants mentioned that they felt that the short length of the text impacted on their reactions. It is possible that participants' reactions may have been different if they had had access to additional extracts of the text to provide more context, or translated a larger portion of the text.

The difficulties of self-evaluation of emotions have been well acknowledged in psychology research, as referred to in Section 2.1.6 above. There are significant challenges associated with defining the parameters for evaluation, i.e. the emotions to be rated by the Likert scale. Any future experiment should dedicate more time and resources to defining a detailed research plan based on the methodology. Statistical limitations have also been referred to in section 5.4.1 above, regarding the choice to perform arithmetic operations (mean and standard deviations, in this case) on data from ordinal scales. While including such calculations was considered by the author to be a satisfactory solution for this exploratory study, if developed further, greater consideration of statistical analysis must be conducted in the planning stage, to refine the use of the Likert scale, for example some research suggests that it may be better to use a larger number of points on the scale (Wu and Leung, 2017, p. 531), or to use another kind of scale which can be considered continuous (interval or ratio scale) (Wu and Leung, 2017, p. 528). Performing non-parametric data analysis, which is generally deemed to be more appropriate with both small data sets and when using ordinal

scales (Mellinger and Hanson, 2022, p. 318; Wu and Leung, 2017, p. 531), could be considered for future research, but was beyond the scope of this study.

## 6. Opportunities for further research

Many of the limitations mentioned above occur as a direct result of this research being carried out as a master's thesis. The time and resources available for the project were therefore limited. Looking forward, there is potential to expand upon the findings of this research. It would be of interest to create a larger scale experiment with a more representative cohort of translators, including those with more professional experience and literary translators, having noted that literary translators may be seen as being a specific subgroup of translators who tend towards certain personality traits. It would also be important to include a wider age range of participants with potentially more varied life experiences and to include different gender perspectives.

In the results section above, it has been noted that participants' reactions to the text selected for the experiment were mixed and, in some cases, participants did not find the text particularly affecting. It would be interesting to adapt the experiment by using a more emotionally confronting text. It would also be important to explore different ways of defining the potential emotional impact of texts. With more available resources, the text for participants to translate could be longer, and more context could be provided to the translators – for example more background details or additional text to read before translating. It would be important to consider translators' workflows in the experiment design, rather than treating this as a stand-alone assignment. This would also be easier if working with professional translators who have established processes, tools and ways of working. There would be a potential to expand the experiment to look at other high-impact, emotionally taxing text types, for example human rights texts such as first-hand accounts from genocide survivors. The experiment design would need to build in sufficient safeguards and support to participants. It would also be interesting to consider the potential differences in processing emotions when working on fiction versus non-fiction texts. It should be noted that this research area is seeing increased interest; for example, Shaimaa Ahmad's Phd research, *Under Pressure: Emotion and Effort in Human vs. Machine-mediated Crisis Translation*, at the University of Surrey, in its early stages, looks at how technology integration impacts translators' emotional responses in crisis situations (University of Surrey, n.d). This

research was inspired by anxiety arising from translating Covid-related media communications, and a curiosity to evaluate the potential impact of translators' use of MT to alleviate stress and discomfort (Shalaby, 2024).

Another potential valid approach would be to carry out analysis on translation outputs produced by experiment participants, analysing patterns and differences in translation choices. Taking the experiment one step further, the texts could also be analysed by readers in a user group, to look at readers' responses to the translated texts. Alternatively, to reach a deeper level of analysis the translators participating in the experiment could be asked to take part in focus groups, to explore more deeply their own reactions to the translation task. It would be possible to take a different approach to analyse individual reflections on the text by using some of the varied methods of process analysis described in Section 3.1 above, such as think aloud protocols, eye-tracking and heart rate monitoring. A combination of these methods could be used, with the advantage of data triangulation (Angelone, Ehrensberger-Dow, and Massey, 2016), depending on available resources. It would be interesting to consider translators' personal/life experiences and the potential relationship with their reactions to the text, which is not an area that I was able to cover during the experiment. In this sense, the case study presented above provides another interesting related angle, which could be developed further as a project in its own right, by interviewing a wider cohort of professional translators on the impact of bereavement on their professional lives, and the coping strategies they used to maintain a sense of wellbeing.

Finally, there has been considerable recent interest in the area of emotional AI from a wide range of industries for many purposes, as referred to in Section 2.1.5 of the literature review. Some recent applications of Emotional AI have been referenced above, for example in the medical field in training junior doctors in the difficult task of giving bad news, and in providing support to customer service professionals in gauging underlying emotion when communicating with customers. It would be interesting to consider the potential of applying Emotional AI to literary translation and whether this could provide support to translators as a self-care tool. This could build further on the work of Damien Hansen, who argues that CALT solutions that tailor MT systems to individual authors or translators provide promising results, despite a number of remaining challenges (Hansen, 2024, pp. 249–50). This technology could be integrated into a second phase of the experiment, in order to analyse the potential to

provide a more tailored and therefore practical support to professional literary translators in managing their emotions and maintaining their wellbeing.

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## APPENDIX A: CONSENT AND INFORMATION FORM FOR INTERVIEW PARTICIPANTS

| RESEARCH PROJECT:<br>Title: Could neural machine translation be used as a self-care tool to support translators to process emotions when translating challenging texts on grief? | |
|---|---|
| Research lead: | Catherine Fox, master's student, MA in Specialised Translation, Faculty of Translation and Interpreting, University of Geneva<br>Catherine.fox@etu.unige.ch,<br>+33 641 037346 |
| Research supervisor: | Professor Susan Pickford, Professor in Translation, Faculty of Translation and Interpreting, University of Geneva<br>Susan.pickford@unige.ch |

**Information for participants:**

Over recent years, there has been growing recognition of the importance of self-care in the language services professions, especially for interpreters working on sensitive material. Translator self-care has received less attention, although translating some types of content can be an emotionally taxing process and can affect translator well-being. Translators' interactions with technology have intensified significantly over the past decade, the major exception being literary translators, who remain broadly reluctant to adopt new technology. Some professional associations have begun to acknowledge the importance of supporting translators working in challenging situations or on emotion-eliciting materials (e.g. the Institute of Translating and Interpreting, UK). However, the tools and technologies transforming the sector have yet to be exploited in the context of self-care for translators.

**Research objectives:**

This research looks at whether the use of machine translation could support translators to process emotions, when translating challenging texts on grief. The research includes a literature review on the topics of translation and emotion, and translation and grief. Both translation and grief may be seen through the lens of transformation, as transformative processes. As part of the preliminary research, I aim to study the experience of one or more professional translators who have experienced bereavement, to understand how it affected their work as a translator both in the short-term and the longer-term, and what kind of approaches and tools helped to support them as they continue in their work.

**Process:**

You have agreed to be interviewed as part of this research project.

Only a minimum of personal data will be collected, which will be held for a limited period of time. Strict procedures of data storage will be followed, which are described in detail below.

This interview will last for a maximum of 45 minutes. It will take place virtually. The interview consists of a short series of questions, which focus on: your experience of translating after going through bereavement; how this process has affected your work as a translator; and the coping mechanisms you have used to support you in your work.

With your permission, the interview will be recorded to make it easier to transcribe accurately. You will be sent a transcript of your interview within seven working days of the interview for you to review and send any feedback. Alternatively, if you do not agree for the interview to be recorded, full notes will be taken during the interview.

**Data management and protection:**

The data from the interview (audio recordings, transcripts of the interviews and observations recorded during the interview) will be saved on the research lead's computer Hardrive and on the University of Geneva's OneDrive, in password protected folders, which can only be accessed by the research lead (Ms Fox) and the research supervisor (Prof Pickford). The audio recordings will only be held until the transcript has been agreed with the participant (maximum 1 month). The remaining data – the transcript, written observations of the interviewer, and the consent form - will be held for an unlimited period of time (a minimum of 5 years) under the care of the research supervisor Prof Pickford.

If, following the interview, you wish to change your mind and not participate in this process, you should inform the research lead so that we can immediately destroy all data related to your participation in the process.

We will carry out the interviews using the ZOOM software licensed by the University of Geneva. The use of ZOOM involves the collection of personal data. The ZOOM platform is certified by the Swiss-US Privacy Shield agreement. The meeting link will be sent to you by e-mail. You will be notified when the audio/video recording starts, and we will ask you to confirm your agreement to the recording orally. The recording will be local (not on the cloud) and for research use only. Audiovisual recordings will be destroyed immediately after the interview.

**Results of the research**

If you would like to be kept informed of the results from this research, please contact Ms Fox from October 2024 at the above email/telephone number.

**Consent to participate in the research**

On the basis of the information provided above, I consent to participate in the research project "Could neural machine translation be used as a self-care tool to support translators to process emotions when translating challenging texts on grief?" and I hereby authorise:

- The use of this data for scientific purposes, with the understanding that this data will be stored securely as described above ☐ YES ☐ NO

- The audio recording of this interview ☐ YES ☐ NO

- The author to refer to you by name in their research (you will have the opportunity to review the transcript of the interview) ☐ YES ☐ NO

I have voluntarily chosen to participate in this research. I have been informed of the fact that I can change my mind at any time without need for any justification, and any data on me will be destroyed.

This consent does not relieve the research leads of their responsibilities. My rights remain protected by the law.

Full name .....

Signature .....

Date .....

**COMMITMENT OF RESEARCHER**

The information which appears on this information and consent form and additional information provided orally or in written form to the participants describe the precise nature of the project and their contribution to the project. I am committed to conduct myself according to the ethical norms concerning research projects involving human participants, and in applying the following university directives:
*Directive relative à l'intégrité dans le domaine de la recherche scientifique et à la procédure à suivre en cas de manquement à l'intégrité* de l'Université de Genève (https://memento.unige.ch/doc/0003).

I am committed to share with the research participants a copy of this consent form.

Name .....

Signature .....

Date .....

## APPENDIX B: INTERVIEW PLAN

**Topics of the interview:** Translation and grief; translation and self-care

**Questions**

1. Thanks for sharing your experience of translation and grief on your blog. You experienced the loss of both parents, and your life was affected over years. Can you tell me a bit more about how you feel that your experience affected your translation at the time?
   A) Was working helpful during this time? B) Did translation take you out of your lived experience as a distraction? C) Did you find that you were more affected emotionally by what you were translating?

2. Do you think that your practice of translation may have been affected in the longer-term by these experiences?

   How are you affected by texts? Have your interests changed in your translation work? Has the way you approach texts changed at all?

3. Are there tools or practices which helped you out in continuing translating during the difficult times? You mention a few things in your blog. Can you tell me a bit more about these?

4. Do you find/have you found since losing your parents that in translation work you are triggered more often by emotional content, or not?
   Can you give me an example of what kind of things might cause this?
   How do you deal with this when it happens.

5. Do you have any coping strategies of dealing with difficult emotional content during translation?
   Can you give an example of when you have been faced by difficult emotional content? What kind of techniques did you use to help yourself through it?

6. How did it impact you to talk about these experiences with others, when you gathered experiences for your blog post?

7. Is there anything else you would like to talk about or add?

8. Is there anything you would like to ask me about the research?

## APPENDIX C: CONSENT AND INFORMATION FORM FOR EXPERIMENT PARTICIPANTS

| RESEARCH PROJECT:<br>Could neural machine translation be used as a self-care tool to support literary translators to process emotions when translating challenging texts on grief? | |
|---|---|
| Research lead: | Catherine Fox, master's student for MA in Specialised Translation, the Faculty of Translation and Interpreting, University of Geneva (UNIGE)<br>Catherine.fox@etu.unige.ch,<br>Tel: +33 641 037346 |
| Research supervisor: | Susan Pickford, Professor in Translation at FTI, UNIGE<br>Susan.pickford@unige.ch |

**Information for participants:**

You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research us being done and what participation will involve. Please note that there will be no impact on your university studies or your grades, whether you decide to participate or not. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

**Background**

Over recent years, there has been growing recognition of the importance of self-care in the language services professions, especially for interpreters working on sensitive material. Translator self-care has received less attention, although translating some types of content can be an emotionally taxing process and can affect translator well-being. Translators' interactions with technology have intensified significantly over the past decade, the major exception being literary translators, who remain broadly reluctant to adopt new technology. Some professional associations have begun to acknowledge the importance of supporting translators working in challenging situations or on emotion-eliciting materials (e.g. the Institute of Translating and Interpreting, UK). However, the tools and technologies transforming the sector have yet to be exploited in the context of self-care for translators.

**Research Objectives:**

This study aims to evaluate the potential of neural machine translation (NMT) as a tool for translator self-care. The study investigates if NMT could support literary translators to process emotions when translating challenging texts on grief.

**Process:**

In order to explore this issue, an experiment will be set up with a small number of volunteer translators (between 6 and 10). The translators will be students in translation at the Faculty of Translation and

Interpreting at the University of Geneva, with English as their A language and French as a B language. You have agreed to be a participant in the experiment.

Only essential personal data will be collected, which will be held for a limited period of time. Strict data storage procedures will be followed, which are described in detail below.

Your part in the experiment will be to translate two short extracts of a literary text about a personal experience of grief. Each part of the text is approximately 300 words. The text is in French and to be translated into English. You may translate the text in a place of your choice and whenever is convenient to you.

For the first part of the text, you may use only bilingual and monolingual dictionaries and other online resources such as linguee and wordreference. You may not use machine translation or AI. For the second part of the text, you will be asked to use a NMT engine of your choice (e.g. Deepl, Google Translate) to translate the text, and then to post-edit it.

You will also be asked to fill in two short online questionnaires, after completing each part of the translation. The first questionnaire will ask about your experience translating the first part of the text. The second part of the questionnaire will ask about your experience translating the second part of the text and ask you to compare your experiences of translating these two parts of text.

You will also be offered an optional interview with the research lead, if you wish to discuss the issues arising, the process and the experience.

The research lead will be on hand for any questions you may have, and you may contact her at any point during the process.

**Data management and protection:**

Your personal data (name, email, phone number) will be stored separately from the questionnaire data, by using a correspondence key attached to a unique participant number. Anonymised data from the questionnaires will be saved in two places: on the research lead's computer hard drive and on the UNIGE OneDrive, in password protected folders, which can only be accessed by the research lead (Ms Fox). The consent forms will be stored separately on a password protected USB key. The personal data will be saved separately from the research data. The consent form will be saved on another password protected USB key held by Ms Fox. The USB keys will be held in a secure cupboard locked by key.

As soon as the research is completed, or no later than 30 October 2024, the personal data will be deleted. The remaining anonymous questionnaire date, which will then be completely anonymous, will be kept along with the consent forms for an unlimited period of time (not less than five years) under the care of the research supervisor.

If, at any point in the experiment, you wish to change your mind and you no longer want to participate in the process, you should inform us so that we can immediately destroy all of your data.

If you have any questions arising about the research, do not hesitate to contact the research lead or research supervisor, whose contact details are provided above.

**Results of the research**

If you would like to receive a copy of the results of the research, you can contact Ms. Fox at the email address above from 30 October 2024. As research data will have been anonymised, no individual results can be shared.

**Consent to participate in the research**

On the basis of the information provided above, I consent to participate in the research project "Could neural machine translation be used as a self-care tool to support literary translators to process emotions when translating challenging texts on grief?" and I hereby authorise:

- The use of this data for scientific and teaching purposes and to illustrate research results, with the understanding that this data will be stored anonymously ☐ YES ☐ NO

I have voluntarily chosen to participate in this research. I have been informed of the fact that I can change my mind at any time without need for any justification, which will result in all data relating to my participation being destroyed.

This consent does not relieve the research leads of their responsibilities. My rights remain protected by the law.

Full name .....

Signature .....

Date .....

**COMMITMENT OF RESEARCHERS**

The information which appears on this information and consent form and additional information provided orally or in written form to the participants describe the precise nature of the project and their contribution to the project. I am committed to conduct myself according to the ethical norms concerning research projects involving human participants, and in applying the following university directives:
*Directive relative à l'intégrité dans le domaine de la recherche scientifique et à la procédure à suivre en cas de manquement à l'intégrité* de l'Université de Genève (https://memento.unige.ch/doc/0003).

I am committed to share with the research participants a copy of this consent form.

Name .....

Signature .....

Date .....

## APPENDIX D: INSTRUCTIONS FOR EXPERIMENT PARTICIPANTS

Contact details for the Research Lead: Catherine Fox catherine.fox@etu.unige.ch

### STEP ONE:

You have received the text to translate, which is separated into two parts. Please translate Part One (as marked). For this part, you must NOT use any machine translation tools (or AI). You may use any other online and paper resources that you wish (e.g. WordReference, Linguee, dictionaries etc).

### STEP TWO:

Fill out Sections 1 and 2 of the online questionnaire, which has been sent to you by email.

### STEP THREE:

Translate Part Two of the text using a machine translation tool of your choice (e.g. DeepL, Google Translate etc.) as well as any other resources you wish, then post-edit the text until you are happy with it.

### STEP FOUR:

Fill out Section 3 of the online questionnaire. When you are finished click submit.

### STEP FIVE:

Email me your translated text.

**A few tips:**

- The text you should translate is an emotional text. Make sure you build in enough breaks to help you process the text.
- Please remember that the translation will not be graded or assessed. The questionnaire focuses on your experience of translating.
- Try not to leave *too* long a gap between translating the two texts, so you can compare the experience of translating both parts.
- You can include comments to the imagined client or editor if you feel it helps you in the process, but you don't need to.
- If you would like to talk to me to ask any questions or to share any thoughts from the process, please let me know, I will be happy to arrange this.
- If you feel upset or distressed at any point during or after this exercise, you may contact the UNIGE Student Health Service. For information, you can go to the **Health and Psychology Service Reception** at the Campus Life information point, located in the UNIGE shop on the ground floor of Uni Dufour. They can be reached by email at sante@unige.ch or by phone at +41 22 379 13 33.

## APPENDIX E: THE TEXT AND SHORT BACKGROUND PROVIDED TO PARTICIPANTS

The extracts of text are taken from a book called *Le fleuve* by Sylvie Drapeau, a French-Canadian author. This is based on her personal experience of the death of her brother, who drowned when she was five years old. The book is written from the perspective of the author as a child.

**PART ONE: (*to be translated <u>without</u> machine translation – see instructions for more details*)**

Nous, la meute, on fait semblant d'être encore des enfants, avec des poupées dans les bras, des animaux en peluche dans des brouettes, mais ça ne couvre jamais le son assourdi de l'oppression générale. On fait semblant de toute façon, car la vérité, c'est qu'on a oublié comment on fait pour jouer. Avant, ça venait tout seul, maintenant on doit se forcer et ça sonne faux. Nous faisons semblant. Pour faire quelque chose. Parce que si nous regardons papa et maman, tout va s'effondrer et il ne restera rien, comme après les tremblements de terre, nous ne pourrons plus nous tenir debout.

Le monde intérieur. Des traces de toi partout. Les vêtements et les jouets bien sûr, mais aussi des mots écrits sur des bouts de papier, sur tes vieux cahiers d'école. Tes vieux cahiers de cancre. La calligraphie figée dans l'enfance. Ton coupe-vent noir, nouvelle doudou pour l'épave qu'est désormais maman, doudou toujours mouillée de ses larmes. Maman. C'est bien nous qui avons tué ses yeux, lorsqu'à bout de souffle, nous avons crié que tu étais resté dans l'eau, que tu ne remontais plus, que tu étais « pris » dans l'eau. On les a vus mourir, ses deux yeux, en même temps, en parfaite synchronicité. Comme quand on éteint, le soir avant d'aller dormir et qu'on ne voit plus où on est, que tout se transforme complètement en une fraction de seconde. Et tout ça à cause du doigt sur l'interrupteur. Noir. Clair. Noir. Clair. J'ai peur. Ça va. Vivant. Mort. Ils étaient vivants, et tout de suite pendant qu'on parlait tous en même temps, en lui disant que tu étais resté dans l'eau, ils se sont éteints, les deux phares en même temps.

(286 mots)

**PART TWO: (*to be translated <u>with</u> machine translation – see instructions for more details*)**

Puis elle ne parle plus de toi. Jamais. Souvent elle pleure de ses yeux morts. Toujours, il me semble. Elle pleure de ses yeux creux. Elle n'a plus d'enfants. Ses yeux morts ne lui permettent plus de nous voir, nous les autres, les pas morts. Ils ne peuvent que couler, s'écouler d'eux-mêmes comme ça jusqu'à autrement ? Nous, nous sommes entrés dans la transparence, comme noyés avec toi. Elle est le fleuve des larmes, une mère fleuve, oui, liquéfiée, intarissable d'eau salée, une forme triste de maternité trouée, ou un poisson mort sous les eaux, le ventre ouvert, béant. Brisée. Coupable. On a beau cogner contre la paroi de son désespoir, elle ne nous entend plus. Puis on ne cogne plus. Ce prénom intolérable dans son unique syllabe, il devient silence. Il devient l'air même qu'on respire, avec les fumées de l'usine. Nous, nous continuons. Papa aussi. Il remet son complet, sa cravate et son chapeau et retourne travailler. Comme ça, nous avons encore une maison, des vêtements et de quoi manger. Elle aussi. A partir du moment où elle se relève, elle se remet à caresser la maison avec un linge blanc de la cave jusqu'au grenier, du matin jusqu'au soir. Elle continue à nous faire à manger, à laver nos vêtements. Ils assurent, nos parents. Nous, je ne sais pas. Je ne sais pas si on sait faire ça.

Ce qu'il reste de toi. L'absence magnifie la moindre de tes traces. Plus rien te concernant n'est ordinaire. Toujours tu resteras celui qui a été emporté par le fleuve, toujours nous resterons les survivants déroutés, hébétés sur la berge glacée. Nous voilà comme une meute de loups-zombies égarés.

(279 mots)

## APPENDIX F: QUESTIONNAIRE FOR EXPERIMENT PARTICIPANTS

**Questionnaire: Experience of translating a text on grief**

**indicates compulsory question*

Section 1: Introductory questions

- Your name: *

Please write your answer here:

- How would you describe your gender identity? *

Please choose only one of the following:

- Male
- Female
- Other
- I prefer not to say

- Do you have any professional translation experience? *

Please choose only one of the following:

- Yes
- No

If yes, please explain briefly about who you worked for, for how long and the type of texts you translated. Please mention any paid translation work, but not internships.

Please write your answer here:

- Are you still happy for your data from this experiment to be used as described in the consent form you signed? *

Please choose only one of the following:

- Yes
- No

Section 2: Reflections on translation - Part 1

You have just translated Part One of the text without using machine translation.
These questions will ask you about your experience of translating this part of the text.

- How did translating this text make you feel? *

Please write your answer here:

- Please rate the extent to which you experienced the following feelings while translating the text, on a scale of 1 - 5, where:
  1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; and 5 = extremely. *

Please choose the appropriate response for each item:

1 2 3 4 5

Distressed

Interested

Upset

Inspired

Anxious

How intense was the overall emotional experience of translating the text, on a scale of 1 (not at all intense) to 5 (extremely intense)? *

Please choose only one of the following:

1 2 3 4 5

Section 3: Reflections on translation - part 2 + overall

You have now translated both parts of the text (part one without and the part two with machine translation).

This part of the questionnaire will ask you about:

- your experience of translating (post-editing) part two of the text
- some questions about your overall experience of translating the text.

- How did translating this text (the second part) make you feel? *

Please write your answer here:

- Please rate the extent to which you experienced the following feelings while translating (post-editing) this part of the text, on a scale of 1 (very slightly or not at all) – 5 (extremely).

Please choose the appropriate response for each item:

1 2 3 4 5

Distressed

Interested

Upset

1 2 3 4 5

Inspired

Anxious

- How intense was your emotional experience of translating (post-editing) this part of the text, on a scale of 1 (not at all intense) to 5 (extremely intense)? *

Please choose only one of the following:

1 2 3 4 5

- Do you think that using machine translation (for Part Two) affected your emotional response to the text? *

Please choose only one of the following:

- Yes
- No
- Not sure

Make a comment on your choice here:

Please write your answer here:

Only answer this question if the following conditions are met:

Answer was at question ' [Q11]' (Do you think that using machine translation (for Part Two) affected your emotional response to the text?)

- What did you like about the experience of using machine translation for the second part of the text? *

Please write your answer here:

- What did you dislike about the experience of using machine translation for the second part of the text? *

Please write your answer here:

- Did you prefer your experience of translating: *

Please choose only one of the following:

- Part one
- Part two
- No difference: the same for both parts
- I'm not sure

- Please explain your choice

Please write your answer here:

- Which part are you more satisfied with the end result for? *

Please choose only one of the following:

  - Part one
  - Part two
  - No difference: the same for both parts
  - I'm not sure

- Please explain your choice

Please write your answer here:

- Do you have anything else you would like to share with the researcher about this experience?

Please write your answer here:

- Which machine translation tool did you use for the second part of the text? *

Please choose only one of the following:

  - Google Translate
  - DeepL
  - Other - please specify which in the comment box

Make a comment on your choice here:

- What other resources did you use? Please explain if this was the same for both parts of the text or if you used different tools for each part.

Please write your answer here:

## APPENDIX G: PERMISSION FROM CUREG (UNIVERSITY OF GENEVA ETHICS COMMITTEE)

UNIVERSITÉ DE GENÈVE

CUREG 2.0

COMMISSION UNIVERSITAIRE POUR UNE RECHERCHE ETHIQUE A GENEVE (CUREG)

**DECISION FORM: CUREG-MM-2024-04-48**

**CUREG DECISION: Certification of Ethical Compliance**

- ☒ **PROCEDURE APPLIED TO MASTER'S PROJECT OR MASTER OF ADVANCED STUDIES (MAS)**
- ☐ **FAST TRACK PROCEDURE APPLIED TO RESEARCH PROJECT**
- ☐ **IN-DEPTH PROCEDURE APPLIED TO RESEARCH PROJECT**
- ☐ **MODIFICATION OF A PREVIOUSLY APPROUVED PROJECT**

| | |
|---|---|
| **1. Title of the research project** | Could neural machine translation be used as a self-care tool to support translators to process emotions when translating challenging texts on grief? |
| **2. Responsible researcher(s)** | Susan Pickford |
| **3. Funding** | |
| **4. Faculty / Interfaculty center** | FTI |

| | |
|---|---|
| Date of submission to the Commission | 02.04.2024 |
| Decision of ethical compliance | yes ☒ no ☐ |
| Date of acceptance (sent by e-mail) | 13.05.2024 |
| Expected completion date of the project | 30.09.2024 |
| Signature of CUREG President: |  Sébastien Castelltort Date: 16.05.2024 |

*This authorization is valid only until the date of completion of the project.*

*Any changes to the project (title, number of participants, duration of the research, etc.) must be reported to the CUREG before the completion date.*
*Please contact us at "commission-ethique@unige.ch".*

**Commission Universitaire pour une Recherche Ethique à l'Université de Genève**
**Rue du Général-Dufour 24**
**1211 Genève 4**