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The role of the translator's personality in the process of self-revision

[Rola osobowości tłumacza w procesie autokorekty]

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OŚWIADCZENIE

Ja, niżej podpisana

Olha Lehka-Paul

przedkładam rozprawę doktorską

pt.   The role of the translator's personality in the process of self-revision

(Rola osobowości tłumacza w procesie autokorekty)

na Uniwersytecie im. Adama Mickiewicza w Poznaniu
i oświadczam,
że napisałam ją samodzielnie.

Oznacza to, że przy pisaniu pracy, poza niezbędnymi konsultacjami, nie korzystałam z pomocy innych osób, a w szczególności nie zlecałam opracowania rozprawy lub jej istotnych części innym osobom, ani nie odpisywałam tej rozprawy lub jej istotnych części od innych osób.

Jednocześnie przyjmuję do wiadomości, że gdyby powyższe oświadczenie okazało się nieprawdziwe, decyzja o wydaniu mi dyplomu zostanie cofnięta.

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(miejscowość, data)   (czytelny podpis)

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Introduction

Whether translation is understood as a type of cognitive activity or as a text that appears as a result of this activity (Bell 1991), it cannot be seen in isolation from the *translator*, who is the main agent in the former and the author of the latter. Not only does a translator provide a link between two different cultures in the shape of a target text, but also between two mentalities and, ultimately, two minds – that of the author and that of the potential reader. Therefore, penetrating into the psychological aspects of the translator's personality seems to be an important step towards (re-)interpreting the translation process and product.

After Holmes ([1972] 2000) introduced the area of "psycho-translation studies" in the form of *process-oriented* approach to translation, research into the "black box" of the translator's mind revealed the findings that were so significant for the Translation Studies community that Chesterman (2009) suggested referring to the area as *Translator Studies*, Muñoz Martín (2010) as *cognitive translatology*, and Jääskeläinen (2012) as *translation psychology*. Along with the obvious advantages of studying translation from the cognitive perspective, the researchers found that there were a lot of behavioural patterns or the translator's "working styles" (Jakobsen 2003: 82) that they displayed across different tasks. Moreover, individual variations were reported almost in each process-oriented study. Given the above, there seems to be a need to treat translation not only as a result of the translator's complex cognitive processing, but also as a product of a highly individual and internalised form of "cognitive behaviour" (Wilss 1996) that may be potentially influenced by the translator's personality (e.g. "self-concept", Kiraly 1995, "psycho-physiological components", PACTE 2003).

Research into the role of the translator's personality in the translation process is scarce, with only a few studies devoted to comparing the personality of translators and interpreters in general (Henderson 1987; Kurz et al. 1996), investigating the role of intuition and Emotional Intelligence (Hubscher Davidson 2009, 2013a, 2013b), as well as affective factors (Rojo and Ramos 2016) in translation performance. One of the possible reasons for the scarcity of research into the issue is the lack of focus on a specific component of the translation process that may potentially reflect the role of personality in translation. Previous research (Jakobsen 2003; Englund Dimitrova 2005; Carl et al. 2005; Dragsted and Carl 2013, etc.) has shown that it is possible to identify certain patterns of behaviour in the translator's processes of *self-revision* that can only be accounted for by the translator's "individual psychology" (Mossop 2007: 19). Moreover, one of the key definitions of the translation process within the cognitive paradigm points to its *decision-making and problem-solving* character (Levý 1967), whose most obvious manifestations are traceable in the process of *self-revision* as a decisional activity (Piolat 1990). In addition, self-revision contributes to the final quality of translation and establishes the links between the translation process and product.

Considering the above, the aim of the present thesis consists in investigating the potential role of the psychological aspects of the translator's personality in the process of self-revision. In addition, it aims to explore whether translators possess a certain set of personality-based characteristics that may be helpful in their professional practice. Finally, it seeks to examine the relationship between the translator's personality and the outcomes of the decisional action of self-revision, i.e. the quality of translation products. The intriguing issue of whether translators with a certain set of personality characteristics are more predisposed to translating certain text types will be explored as a secondary focus.

The present thesis reports on an interdisciplinary study that combines personality psychology and translation process research. It is composed of two main parts – theoretical (chapters 1-3) and empirical (chapter 4). It opens with the concept of personality in psychology (chapter 1), proceeds with the discussion of the potential role of the translator's personality in Translation Process Research (chapter 2), and then concentrates on the process of self-revision as a stage of the translation process that may be influenced by the translator's personality. Each theoretical chapter culminates in a working definition of the core concepts (*personality*, *translation process*, and *self-revision* respective-

ly). Chapter 4 of the thesis presents the experimental study whose main aim was to investigate the role of the translator's personality in the process of self-revision.

Chapter 1 introduces the concept of personality in psychology with a particular emphasis on the approaches relevant to the present thesis, i.e. trait and typological, and the arguments in favour of combining them in one study. The chapter continues with the discussion of views on personality stability and change with reference to the key ideas of the trait and typological approaches. As the data for the study were collected from the samples of students and practising translators, the impact of personality on academic and occupational performance is explored. Chapter 1 finishes with an overview of existing studies into the psychological aspects of the translator's personality.

Chapter 2 focuses on identifying the potential role of the translator's personality in the translation process. It first describes the cognitive activities that a translator is involved in while translating. In particular, the selected models of the translation process are presented. The shared feature of the models is the prominence given to *decision-making, self-monitoring* and *self-evaluation* in translation, which may be partially influenced by the translator's personality. The chapter then traces the conceptual and methodological evolution of Translation Process Research across the four phases outlined by Alves and Hurtado Albir (2017), paying attention to the most important findings of each phase. One of the central issues explored within the cognitive approach to translation is that of translation competence and expertise, as it helps to identify among other things the translator's psychological predispositions that may be important for the development of the necessary competences and expertise in translation. Chapter 2 ends with the conlusion that the translator's personality may play the most significant role in the process of *self-revision*, which entails the above mentioned meta-cognitive processes of *decision-making, self-monitoring* and *self-evaluation.*

Chapter 3 describes the process of self-revision as a product-shaping stage of the translation process. First, it presents and compares the views on the concept of (self-) revision in writing and translation process research. Particular emphasis is placed on the potential impact of the translator's personality on the *decisional* and *quality-assuring* functions of self-revision. The chapter then provides an overview of research into self-revision in translation, and identifies its role in translator profiling.

Chapter 4 presents the experiment designed to tap into the relationship between the translator's personality, translation process (i.e. self-revision) and product. To test

the issue, five hypotheses have been formulated. The hypotheses proceed from describing the translator's dominant personality traits to identifying the role of the decision-related psychological functions in the process of self-revision, and exploring the links between the translator's personality features and the quality of translation performance. The experiment uses psychometric tests (HEXACO Personality Inventory and Myers-Briggs type Indicator) to describe the translator's personality, and key logging (Translog-II) to track the translation process. The results of the experiment are supplemented with the data obtained from the participants' self-report questionnaires. The findings of the study may be particularly important for translation trainers who might become aware of the need to raise the students' awareness of the role of their personality features in translation performance and in building their professional self-concept.

Chapter 1: Personality perspectives: From psychology to Translation Studies

Introduction

The chapter aims to provide a theoretical basis for the interdisciplinary research into the translator's personality by first concentrating on the concept of personality in psychology. The presentation of the leading theories in personality psychology is followed by the working definition of the key concept. The trait and typological approaches are then discussed in detail due to their application to the study of the translator's personality in the present thesis. The chapter proceeds with an explanation of the reasons for and the potential benefits of combining the two approaches. As the study relies on the data gathered from both translation trainees and practising translators, the issue of personality stability and change is next raised. In order to be able to relate the results of personality tests with translation performance, the chapter continues with the discussion of the relationship between personality traits and types and academic and occupational performance. Finally, the chapter presents an overview of existing research into the issue of the translator's personality in Translation Studies.

1.1. The concept of personality in psychology

From the Hellenistic philosophical explorations to the twentieth century psychometric testing, the notion of personality has integrated into a field of psychology that practices a vast scope of approaches and adopts a number of interdisciplinary perspectives. Such

diversity stems from the complexity of the construct and its multiple interpretations based on the subjects involved, methodology applied and the epistemological basis for the study of personality. Adopting a certain personality perspective for the purpose of this study would hardly be possible without a brief guide to the evolution of theories and research methodology.

Similar to other sciences, "the study of human psyche" (Hergenhan and Henley 2013: 1) was for many centuries considered a part of philosophy.[1] Among the conceptual issues discussed by the great minds were the nature of human being, temperament, character and the other aspects of the modern concept of personality. It is commonly agreed that the first personality taxonomy was offered by Hippocrates (4th century BC), according to which temperament is influenced by the four humours of the human body: blood, phlegm, yellow and black bile. The respective temperaments would be sanguine, phlegmatic, choleric and melancholic (Dumont 2010: 5). This idea, though currently believed to be primitive, was one of the sources of inspiration for the development of genetic approach to the study of personality in the twentieth century.

Throughout different historical periods the views on personality were changing together with the prevailing philosophical doctrines and cultural movements. The rise of Christianity triggered theological discourse and shifted the ancient belief in the uniqueness of human beings towards universality principle (Dumont 2010: 16), which continued through the Middle Ages until questioned by humanism during the Renaissance. The period of Romanticism advocated the importance of human emotions, and the Age of Enlightenment brought the scientific revolution and dissemination of knowledge, marked by strong interest in the rational human mind.

The full description of the historical evolution of personality-related premises goes beyond the scope and aims of this research, so the section shall proceed with the beginnings of modern psychology and personality theories. Wundt's nineteenth century initiation of experimental psychology (Hergenhan and Henley 2013: 238) was an important milestone on the way to setting up a separate discipline of psychology. It was also the period when the foundations for modern personality theories within the general field of psychology were established (Galton 1884; James 1890). Before empiricism took over conceptual thinking, Sir Francis Galton formulated the famous "lexical hy-

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[1] The word "psychology" most probably comes from Greek "psychē" meaning "breath, principle of life, life, soul", and "logos" meaning "speech, word, reason" (Hergenhan and Henley 2013: 1).

pothesis" (Galton 1884), according to which personality characteristics are embedded in language. The claim later served as an impetus for the development of one of the leading theories in personality research.

Early empirical insights into human personality were introspective, i.e. based on single case studies and verbal reports of psychiatric patients. The first modern personality theory goes back to Freud ([1915] 2013) and his psychoanalytic method, which gave rise to the psychodynamic approach to personality. The method of treatment consisted in listening to the patients' life stories, looking for reasons for their problems in the past and analysing them. Freud's ([1915] 2013) leading idea was that biological instincts affected a person's attitude to life and behaviour, and if not satisfied, they could lead to psychological disorders. This claim served as a starting point for most of his further theories about the psychosexual stages of personality development, anxiety and defence mechanisms, and the analysis of dreams as representations of suppressed wishes and drives (Schultz and Schultz 2009: 73). He also described the levels of personality – the conscious, the preconscious and the unconscious – that formed a coherent dynamic structure composed of ego, id and superego. The ego that functions on the conscious and the preconscious levels is "the rational master of personality" (Schultz and Schultz 2009: 58), which is in constant struggle with the inventory of biological stimuli, the id (the unconscious), in the attempt to control its drives. The superego is an external factor that people acquire in childhood, and it may be referred to as "the moral master of personality" (Schultz and Schultz 2009: 59). Thus, the ego is continuously influenced by both the id and the superego. This dynamic relationship between the conscious and the unconscious elements of the mind later gave name to the whole approach practiced by Freud ([1915] 2013) and his followers, the psychodynamic approach. Freud's ([1915] 2013) rather pessimistic views on human nature have oftentimes been criticised, but his contribution cannot be underestimated. In fact, it was the criticism of his ideas that initiated a number of experimental projects all over the world and the development of the new empirically tested and validated theories.

The neo-Freudian or neo-psychoanalytic theories started with Adler (1920) and Jung (1921), Freud's ([1915] 2013) disciples and his first critics. Jung ([1921] 1971) broadened his mentor's claim about the role of the unconscious and gave it even more power. In his studies he referred to "the collected unconscious" as the inventory of "[t]he experiences of humankind", and archetypes as "[t]he recurring themes that ex-

press these experiences" (Schultz and Schultz 2009: 126). Jung ([1921] 1971) also pioneered in differentiating between personality types on the basis of the preferred orientation of the conscious (extraversion or introversion) and the psychological functions that guide it. Jung's ([1921] 1971) attempt at a comprehensive and rational description of personality received the name of analytical psychology. Being one of the two personality theories applied in this thesis, Jung's ([1921] 1971) contribution will receive a more detailed coverage in the next sections.

Adler (1920) believed that people are motivated by "social interest" (Feist and Feist 2008: 65) rather than the unconscious drives, and denied Freud's ([1915] 2013) claim about the influence of the past on people's present behaviour. His theory is often summarised as "individual psychology" due to Adler's (1920) special emphasis on "subjective perception" that rule behaviour and define personality (Feist and Feist 2008: 76). Psychodynamic approach is still enjoying great popularity among psychologists, especially with the rise of psychometrics and the adaptation of Jung's ([1921] 1971) typology into one of the most famous personality tests, the Myers-Briggs Type Indicator (commonly known by its acronym as "MBTI").

The other approach, which has been thriving in personality psychology since the 1930s, is the trait approach (otherwise referred to as "genetic", (cf. Schultz and Schultz 2009); or "dispositional" approach (cf. Feist and Feist 2008)). It fundamentally differs from the previous one in at least three aspects: 1) it does not aim at providing therapy for the psychologically impaired patients, but at observing healthy individuals; 2) it is not concerned with case studies, but with a comparison of an individual's personality characteristics; 3) it denies the dominance of the unconscious in guiding people's behaviour, and emphasises the role of traits as individual dispositions or tendencies capable of predicting behaviour and thinking (Pervin et al. 2005).

The most prolific scholar and pioneer in the trait approach was Gordon Allport (1937), who published his seminal work, *Personality: A psychological interpretation*, which was a milestone for scientific personality research. Dwelling on the previously mentioned lexical hypothesis proposed by Galton (1884), Allport (1937) did extensive lexicographic search and found around 18,000 words in the dictionary of the English language that he classified as personality descriptors, or "trait names" (Bernstein and Nash 2008: 426). This database later served his followers in creating psychometric tests using statistical methods, i.e. factor analysis. Trait approach has seen remarkable evolu-

tion from Allport's (1937) belief in the uniqueness of personality and individual differences, the stability and heredity of traits to Cattell's (1973) operationalisation of the theories, followed by McCrae and Costa's (1987) validation of the theory and its application in popular personality tests. Trait approach will be discussed in detail in the next section, as it forms a part of the methodological basis for the present thesis.

The ancient concept of the four bodily "humours", as well as Allport's (1937) suggestion that certain traits are predetermined by individual genetics gave an impetus for the development of the biological approach (Corr and Matthews 2009; Schultz and Schultz 2016) in personality psychology.[2] Being its strongest advocates, Eysenck ([1970] 2013) and Gray (1991) were interested not so much in the individual variations in the distribution of traits, but in explaining the nature of these variations. For instance, Eysenck ([1970] 2013) argued that the different levels of certain personality traits (e.g. Extraversion, Introversion, Emotionality, etc.) in an individual might stem from the inherited differences in the nervous system and the neurological structures in the brain. In particular, some people may have the nervous system that operates on reduced levels of physiological arousal and high resistance to stress. Such individuals are therefore in constant need of excitement, which is associated with the dominance of Extraversion, and are also less prone to emotional breakdown, which shows the prevalence of the Emotional Stability dimension. Pickering and Gray (1999) provided a more detailed account of the inherited biological differences by referring to the two interrelated neurological systems in the brain – the behavioural *approach* system and the behavioural *inhibition* system. The dominance of either of the two systems in the brain is responsible for the person having a rather positive or negative life attitude. The assumption has also been supported by the neuroscientists' findings about the structure of the brain and its functioning (cf. Larsen and Buss 2005; Wacker et al. 2006).

In comparison with the trait theory, the representatives of the social-learning approach[3] opposed the idea of the prominence of genetics and the stability of personality traits. Extreme behaviourists (e.g. Skinner 1953) neglected the notion of personality as such, and promoted the role of observable behaviour and the process of learning via individual responses to the external situational stimuli. Some of the less radical social-

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[2] Some authors (cf. Bernstein and Nash 2008; Feist and Feist 2009) prefer not to divorce it from the trait approach, which is also sometimes called the "genetic" approach (Scultz and Schultz 2009).
[3] Also referred to as "behavioural", cf. Burger 2010; Schultz and Schultz 2016, or "social-cognitive" approach, cf. Bernstein and Nash 2008.

cognitivists acknowledged the role of internal characteristics and viewed the concept of personality as "[t]he full set of behaviours that people have acquired through learning and that they then display in particular situations" (Bernstein and Nash 2008: 433). Mischel (1968) then marked the climax of the conceptual disagreement with his famous "person-situation" debate, which shifted the focus from the description of personality traits onto the role of situational variables in guiding people's behaviour. In response to the debate, Bandura (1999) put forward the *interactionism* claim that tried to marry the ideas of the trait and social-cognitive approaches. The synthesis was revealed in Bandura's (1999) idea of the "reciprocal determinism", according to which the internal and external influences (personality and environment, or the "person-situation" variables) interact and account for the potential differences in behaviour. Following this, Mischel and Shoda (1999) eventually arrived at the conclusion that people behave differently due to the "cognitive person variables", which are their learned beliefs and expectations, but predicting people's actions becomes possible once the details of a given situation are considered. The other important contribution put forward within the social-learning approach is Bandura's (1999) concept of "self-efficacy", which assumes that people's behaviour largely relies on their expectations of success. This idea goes beyond the psychologists' wish to merely predict behaviour and points to the potential links between personality and the outcomes of people's performance.

The idea of self-fulfilment and the emphasis on the results of people's behaviour were also promoted within the humanistic approach. The humanists (e.g. Maslow 1971) believed that each person has a unique "phenomenology, or interpretation of the world" (Bernstein and Nash 2008: 436) that defines personality and behaviour. They also advocated the importance of the "self" and self-actualisation as the essential human need (Maslow 1971). In this respect the humanists' ideas resemble Freud's ([1915] 2013) emphasis on the role of the internal drives in building one's personality and guiding behaviour. On the other hand, humanistic thinking appears to reiterate Bandura's (1999) concept of self-efficacy mentioned earlier within the social-learning approach. The connections between different personality theories point to the fact that understanding the relationship between the internal personality characteristics, behaviour and the external influences seems to be the core task of personality psychology regardless of the approach one adopts.

Given the complexity of views, which may "([m]ost simply) reflect the changing dialectic between scientific and humanistic approaches" (Corr and Matthews 2009: 23), it is a daunting task to provide a single definition for the concept of personality in psychology. On the one hand, it embraces the internal, either conscious or unconscious, relevantly stable individual characteristics or dispositions. On the other hand, it is concerned with the dynamic and observable interaction between the psychological processes and situational variables. The agreement between the two views is reflected in Funder's (1997) definition of personality as not only "[a] set of *characteristics* […], but also a set of *dynamics* that account for these characteristics" (Funder 1997: 1-2). Furthermore, Bandura's (1999) interactionism theory provided a fruitful basis upon which the behavioural patterns may be explained by means of both personality and the specific situational influences.

In view of the aims of the present research and the above considerations, the working definition of the concept of personality may be summarised as follows:

- Personality is a complex set of the internal dispositions or "traits", and the dynamic psychological processes that interact and guide behaviour in a specific situational context.

Based on the suggested working definition, the thesis relies on the premises of the trait approach and Jung's ([1921] 1971) personality typology theory. As regards the methodology applied to study translators' personality, the study takes a nomothetic perspective by comparing the groups of individuals with the help of the psychometric tests. The situational variables will be the different text types viewed in their interaction with the dominant psychological processes so as to be able to predict certain behavioural patterns. The next sections will present in detail the psychological theories relevant to the present study.

1.2. Trait approach: The quantitative studies of personality

The formal establishment of personality psychology as an academic field is credited to the systematic analysis of traits that was initiated by Allport in the 1930s. Cattell

(1946), Eysenck ([1970] 2013), Goldberg (1981), Costa and McCrae (1987), Ashton and Lee (2001) then extended, operationalised and validated Allport's ideas in an attempt to create psychometric tools used to describe personality and predict behaviour.

The major assumptions that lay the foundation for the trait approach are the belief in the relative stability and predictability of traits across time and situations (cf. McCrae and Costa 2003), and the existence of a continuum of traits that accounts for the *quantitative* differences in people's personalities (Haslam 2007: 53). Tracking the evolution of views on the nature of traits in the following sections will help to define their role in the analysis of personality and show the prospective areas of application.

1.2.1. Allport's pioneering study of traits

As observed by Corr and Matthews (2009: 4), Allport (1937) in his "personological trait approach" examined the structure of personality and believed in the integration of its parts into a single unique whole. Influenced by both American and European psychological traditions, he eventually adopted an eclectic view of personality in which he emphasised the need for a comprehensive study of the nature and the degree of individual differences. Apart from being considered a founding father of personality psychology as an academic field, Allport (1937) was also the first in the USA to deliver a university course on social ethics and the psychology of personality (Feist and Feist 2009: 378).

Allport (1937) analysed 49 definitions of personality as used in many different disciplines prior to suggesting his own psychologically-grounded version: "Personality is a dynamic organisation within the individual of those psychophysical systems that determine his unique adjustments to his environment" (Allport 1937: 48). As Allport's ideas evolved, the ending of the definition was later modified to include the following: "[t]hat determine his characteristic behaviour and thought" (Allport 1961: 29). The author scrupulously selected each word in his definition, so that it could best reflect his standpoint. He sought to emphasise the *dynamics* of personality development, which is not arbitrary, but *organised*. The term *characteristic* denoted Allport's (1937) belief in the *uniqueness* of human personality. He claimed that personality is composed of the cooperation of *body* and *mind* functioning on different levels that together guide people's behaviour and thinking. The comprehensive definition implies that personality is

"[b]oth product and process; people have some organized structure while, at the same time, they possess the capability of change. Pattern coexists with growth, order with diversification" (Feist and Feist 2009: 379).

The lexical hypothesis (Galton 1884) inspired Allport and Odbert (1936) to compile a list of nearly 18,000 personality-descriptive words gathered from the 1925 edition of Webster's New International Dictionary (Feist and Feist 2009: 381). The list consisted of the terms that described people's temporary moods and emotions (e.g. "confused" Allport and Odbert 1936: 59), their social evaluation (e.g. "double-minded", Allport and Odbert 1936: 68) or physique (e.g. "good-looking", Allport and Odbert 1936: 83). Most importantly, though, the authors managed to select almost 4,500 neutral words describing people's personality traits, i.e. the so-called "trait names", such as "bold" (Allport and Odbert 1936: 49), "light-hearted" (Allport and Odbert 1936: 97), or "outspoken" (Allport and Odbert 1936: 113). In his later publication, Allport (1961) identified traits as the units of personality structure, which are measured on a continuum and interact with external stimuli. He referred to traits as individual characteristics or personal dispositions (Allport 1961), and believed that each person possesses a different degree of these characteristics, which explains the differences between people's behaviour. Allport (1961) classified personal dispositions into three categories: *cardinal dispositions* as extreme characteristics that rule people's lives[4], *central dispositions* as consistent and guiding traits, and *secondary dispositions* as the weakest and least conspicuous units of personality that are prone to change. In the following publication, Allport (1962) focused on the patterns of individual characteristics that each person possesses, so methodologically he advocated the morphogenic approach to the study of personality, based on intrapersonal observations and descriptions. All in all, Allport's contribution stimulated the development of personality psychology and the evolution of its approaches: his idea of personality being influenced primarily by individual genetics gave rise to the biological perspective, his recognition of the role of the environmental factors prepared ground for the social-learning theory, and his emphasis on the importance of motivation and goals triggered humanistic thinking.

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[4] Allport (1961) believed that not everyone possesses a cardinal trait. The examples of such dispositions are chauvinism or sadism, as noted by Schultz and Schultz (2009: 247).

1.2.2. Cattell's application of factor analysis to trait studies

Cattell's views are best reflected in his definition of the concept of personality: "Personality is that which permits a prediction of what a person will do in a given situation" (Cattell 1950: 2). With the background in exact sciences (physics and chemistry), Cattell's (1950) primary goal was to measure personality factors and use them to anticipate a person's reaction to the external stimuli. He concentrated on the study of healthy individuals, as he believed that psychological treatment was impossible without prior understanding of what was to be treated (Schultz and Schultz 2009: 264). Cattell (1950) was a disciple of Spearman (1904), the pioneer of factor analysis in statistical research, and applied Spearman's method to the study of personality traits, which was for the first time based on rigorous empirical observations.

According to Schultz and Schultz (2009: 268), Cattell (1950) regarded traits to be "[r]elevantly permanent reaction tendencies" in personality structure and classified them depending on: (1) their relevance to an individual (*common* and *unique* traits), (2) their role in one's self-fulfilment (*ability*, *temperament* and *dynamic* traits), and (3) their degree of stability (*surface* or impermanent, and *source* or permanent traits). In fact, the *source* traits were extracted on the basis of the multiple factor analyses conducted on Allport and Odbert's (1936) trait lexicon, and were used for further personality testing. Statistical analyses yielded 16 recurring personality factors (*source* traits), which represented normal distribution and showed dichotomous (bipolar) domains.[5] As a result of the testing, Cattell (1965) designed the *16 Personality Factors Questionnaire (16 PF)*, which has been since then extensively used in research and career advice.

In addition to personality testing, Cattell (1963) was interested in identifying the influence of heredity and environment on the development of personality. In particular, Cattell (1963) studied the behaviour of twins and non-twin siblings brought up either in the same family or apart, and found that one third of personality is genetically determined and two thirds are influenced by environmental factors (Cattell 1963: 20). Interestingly, intelligence was found to be one of the inherited personality factors.

To sum up, Cattell's (1965) methodological approach paved the way for the development of a series of instruments for measuring personality. Furthermore, his early

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[5] Cattell used the terms "traits" and "factors" synonymously (cf. Cattell 1965).

insights into the role of hereditary factors sparkled further research into the biological basis of personality traits.

1.2.3. Eysenck's three personality dimensions

Unlike Cattell's (1950) inductive reasoning behind the analysis and classification of traits, Eysenck ([1970] 2013) followed the deductive approach based on the initial hypothesis about the importance of the three major personality dimensions of Extraversion-Introversion, Neuroticism-Emotional Stability, and Psychoticism-Impulse Control. Similar to Cattell (1965), Eysenck ([1970] 2013) continued the use of factor analysis in the study of traits, but sought to provide a sound theoretical basis for it, making the results replicable and objective. Importantly, Eysenck ([1970] 2013) postulated that people who have different degrees of traits must also differ biologically, so his theory is often referred to as the "genetics of personality" (cf. Schultz and Schultz 2009: 270) or the "biological trait approach" (cf. Bernstein and Nash 2008; Corr and Matthews 2009).

The definition of personality proposed by Eysenck ([1970] 2013: 2), though similar to Allport's (1937), placed more emphasis on genetic influences and acknowledged the role of intellectual abilities: "Personality is the more or less stable and enduring organisation of a person's character, temperament, intellect, and physique, which determines his unique adjustments to the environment". His theory was built over three "gigantic" (cf. Corr and Matthews 2009: 23) personality dimensions, or "superfactors" (Eysenck and Eysenck 1985), or "types" (Eysenck [1970] 2013) displaying the highest level of personality organisation. According to Cattell (1965), the dimensions were bipolar, each of them composed of traits as "[a] co-variant set of behavioural acts" (Eysenck [1970] 2013: 9). Thus, Eysenck's ([1970] 2013) dichotomous dimensions differed from Cattell's (1965) 16 factors in that they incorporated the lower-level traits, which was an important step for the future generation of personality tests. The three dimensions were:

(1)   E – Extraversion versus Introversion
(2)   N – Neuroticism versus Emotional Stability
(3)   P – Psychoticism versus Impulse Control

On the basis of the results of statistical testing, Eysenck and Eysenck (1964) developed the *Eysenck Personality Inventory*, which since then has been used to study various aspects of personality from trait, biological and cognitive-learning perspectives (cf. Bullock and Gilliland 1993; Heaven and Ciarrochi 2006). Eysenck himself agreed with Cattell (1963) on the issue of the heritability of intelligence (Eysenck and Eysenck 1985), and offered some insightful explanations for the biological differences between extraverts and introverts (Eysenck 1990). In particular, Eysenck (1990) claimed that extraverts have a lower level of cortical arousal than introverts do, which makes them constantly seek excitement and contact with other people.[6] Further studies of personality traits showed that Eysenck's ([1970] 2013) three superfactors were too broad to provide a full description of personality, which brought Goldberg (1981) to offer his *Five Factor Model* that has become one of the most popular personality trait taxonomies of today.

1.2.4. Costa and McCrae's Big Five factors

Despite the obvious success of psycholexical studies, there was no unanimous agreement among scholars as to the number of primary traits that would best describe personality. Therefore, statistical analyses into the personality lexicon continued, and Tupes and Christal's (1961) tentative findings showed preliminary evidence for the five recurring factors (John et al. 2008: 119): Extraversion or Surgency, Agreeableness, Conscientiousness, Emotional Stability and Culture. The results were replicated by Norman (1963), Borgatta (1964), Digman and Takemoto-Chock (1981). However, it was owing to Goldberg (1981) that the five factors became known as the "Big Five", or the *Five-Factor Model (FFM)*. The name was supposed to reflect the scale of personality factors, each of them containing a subset of six lower-level traits or *facets*, as they were later defined (Costa and McCrae 1985). Despite the fact that the results of the initial cross-validation of the *Five-Factor Model* agreed on the number of factors build-

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[6] Cortical arousal is "[t]he activation of the reticular formation of the brain", which "increases wakefulness, vigilance, muscle tone, heart rate, etc." (http://www.oxfordreference.com/view/10.1093/acref/9780198568506.001.0001/acref-9780198568506-e-1684) (date of access: 13 Dec. 2017).

ing personality structure, the psychologists still lacked consensus as to which factors were universally representative. Using Cattell's (1965) selection of traits in their empirical research, Costa and McCrae (1985) performed analyses that yielded compelling evidence for the existence of Neuroticism and Extraversion dimensions, as well as Openness, which incorporated Cattell's (1965) initial proposal to include Imagination and Intellect traits into the main taxonomy. In line with the Big Five model, the three dimensions were extended to include Agreeableness and Conscientiousness factors that together constituted the first version of Costa and McCrae's (1985) NEO Personality Inventory.[7] The major drawback of the questionnaire was the lack of facets for the last two dimensions (Agreeableness and Conscientiousness). Costa and McCrae (1995) continued their analyses, trying to validate and refine their model with the necessary lower-level traits. Ultimately, NEO-PI-R, the revised version of Costa and McCrae's inventory (1995) included scale measurements for the five major dimensions, each including six facets:

(1)   Extraversion (facets: warmth, gregariousness, assertiveness, activity, excitement-seeking, positive emotions);

(2)   Agreeableness (facets: trust, compliance, altruism, straightforwardness, modesty, tender-mindedness);

(3)   Conscientiousness (facets: competence, order, dutifulness, achievement-striving, self-discipline, deliberation);

(4)   Neuroticism or Emotional Stability (facets: anxiety, hostility, depression, self-consciousness, impulsiveness, vulnerability);

(5)   Openness or Culture (facets: fantasy, aesthetics, feelings, actions, ideas, values).

Thus, the trait of Extraversion is related to one's predisposition to be talkative, easy-going and open. Agreeableness is responsible for the nature of social interactions, i.e. one's ability to be either naïve in trusting others (high on Agreeableness) or argumentative and being able to challenge somebody else's ideas (low on Agreeableness). The Neuroticism scale represents the degree to which a person is able (high Neuroticism/Emotional Stability) or unable (low Neuroticism/Emotional Stability) to cope with

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[7] The name of the inventory is an acronym of the three initially extracted factors – Neuroticism (N), Extraversion (E) and Openness (O).

different kinds of emotions. Conscientiousness is related to self-discipline and prudence, and Openness to creativity and intellectual curiosity (Costa and McCrae 1995).

A series of further studies confirmed that the five factors measured by NEO-PI-R were also retrievable from other psychometric instruments (McCrae and Costa 1989; Costa and McCrae 1992; McCrae and Costa 2003). For instance, it was found that the Openness trait was strongly correlated with the Sensation-Intuition dichotomy in Jung's ([1921] 1971) personality typology as operationalised with the Myers-Briggs Type Indicator (discussed in detail in the following section). In particular, McCrae and Costa (1989) pointed out that creativity is most often associated with the Intuitive function in Jung's theory, but also with the Openness dimension in the Big Five. Correlational analyses revealed that Jung's ([1921] 1971) Thinking and Feeling dichotomy was connected with the Agreeableness dimension, i.e. the Feeling types scored higher on the Agreeableness scale (McCrae and Costa 1989: 29). Notably, the Feeling types also ranked higher on the dimensions of Neuroticism and Extraversion, and lower on Conscientiousness (ibid.).

While Costa and McCrae's (1995) taxonomy was gaining acclaim within academia, it still lacked a sound theoretical explanation. Therefore, the *Five Factor Theory (FFT)* of personality was elaborated (McCrae and Costa 1996), according to which there are six predictors of behaviour – three central and thee peripheral ones that are all connected by causal relationships driven by dynamic processes (Feist and Feist 2009: 424). The functioning of components is illustrated in Figure 1:[8]

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[8] The core components are enclosed in rectangles, and the peripheral components – in circles.
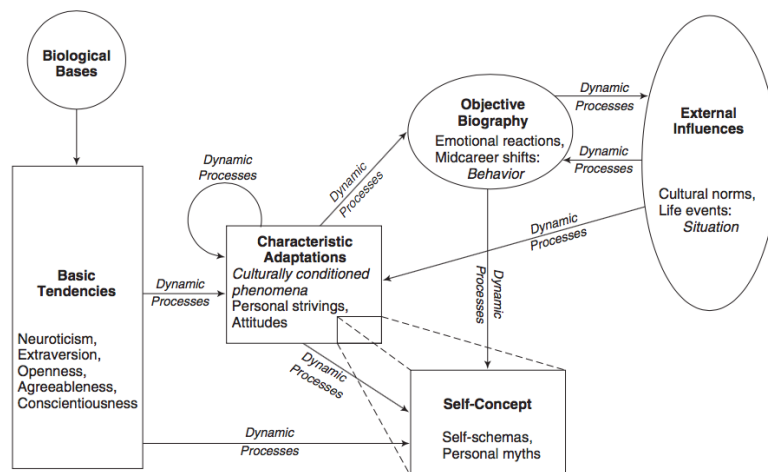
Fig. 1. Costa and McCrae's Five-Factor Theory (1996), as adapted by and quoted in Feist and Feist (2009: 425).

The three central components are basic tendencies, characteristic adaptations and a self-concept. According to McCrae and Costa (1996), the basic tendencies are the five major traits, which are inherited, stable and consistent across situations. The scholars also believed that cognitive abilities, intellect and language acquisition processes are incorporated in basic tendencies (McCrae and Costa 1996). The definition of the component reads as follows:

> Basic tendencies are the universal raw material of personality capacities and dispositions that are generally inferred rather than observed. Basic tendencies may be inherited, imprinted by early experience or modified by disease or psychological intervention, but in any given period in an individual's life, they define the individual's potential and direction. (McCrae and Costa 1996: 66)

Unlike basic tendencies, the characteristic adaptations result from people's interaction with the environment. These are the acquired habits, skills and knowledge, which are flexible and likely to change over time. The aspect of change is one of the core differential elements in the comparison of basic tendencies and characteristic adaptations, which accounts for "[t]he stability of personality and plasticity of personality" (Feist and Feist 2009: 426).

The component of personal self-concept[9] includes all feelings, beliefs and judgments about oneself, which may as well influence people's behaviour in particular situa-

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[9] The importance of the translator's self-concept was also mentioned in translation didactics and translation process research (Kiraly 1995). It will recieve more detailed coverage in chapter 2.

tions. For example, the belief in one's intelligence may help a person to be more confident in passing an examination or getting a new job (McCrae and Costa 2003).

Among the peripheral components in the scheme, McCrae and Costa (1996) attach specific importance to hormones, genes and the structure of the brain that constitute the biological basis for the five traits. The other element in the above graph is objective biography that includes "[e]verything a person does, thinks, or feels across the whole lifespan" (McCrae and Costa 2003: 187). Finally, external influences are the everyday situations a person is exposed to, which both influence and are influenced by all the other components of the theoretical model.

Costa and McCrae's (1995) five personality dimensions have been cross-culturally tested in over 50 different countries (Schultz and Schultz 2009: 283). The NEO questionnaire has been numerously applied to discover the traits' predictive force in correlation with emotional stability, social adaptation and life expectancy in relation with chronic illnesses (Watson et al. 1992; Anderson et al. 2001; Christensen et al. 2002; Heller et al. 2004), academic and job performance (Barrick and Mount 1996; Cardy and Carson 1996; Back et al. 2006) and physical health (Martin et al. 2007), among others. Even though the Five Factor Model still enjoys international acclaim in the field of psychology, the most recent cross-cultural studies have managed to recover the sixth personality trait. Thus, the six traits personality inventory will be discussed in the next section.

1.2.5. Ashton and Lee's six personality dimensions

Though Costa and McCrae's (1995) contribution may well be considered a climax in the psycholexical studies of personality structure, the scholars are still striving to develop a more precise, reliable and cross-validated taxonomy of personality traits. Extensive research (Saucier and Goldberg 1998; Paunonen and Jackson 2000; Ashton and Lee 2001; Ashton et al. 2004a, 2004b, etc.) suggested that there should be personality-related factors outside of the Big Five dimensions. Personality lexicons of over eleven Indo-European[10] (De Raad 1992, Caprara and Perugini 1994; Szarota 1995; Di Blas and

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[10] Initially these were Dutch, French, Hungarian, German, Italian, Polish, Korean, Filipino, Croatian, Turkish, Greek and English (Ashton and Lee 2008). Currently HEXACO website quotes seven other

Forzi 1999; Boies et al. 2001) and non-Indo-European languages (De Raad and Szirmak 1994) have been investigated, with results showing consistent evidence in favour of six recurring personality factors.

A powerful status of the five major dimensions of personality in the English language was questioned in Ashton et al. (2004b), when researchers conducted a thorough reanalysis on the archival sample of 310 informants on a set of 1,700 personality-related adjectives in English. The authors later claimed this to be "[t]he largest variable set so far investigated in lexical research" (Lee et al. 2005: 1442). The findings confirmed the hypothesis about the existence of six broad personality dimensions that were previously recovered in other languages. The scholars explained that previous research into the English personality lexicon was based on abridged, subjectively selected and manageable data sets that were not entirely representative. This might have been the reason for the inability to retrieve the six reported dimensions earlier (cf. Ashton and Lee 2008).

The six broad factors do not merely reflect the extension of the Big Five, but propose to rearrange some of them in accordance with the findings of cross-cultural research. In particular, the Agreeableness factor in the Big Five model does not include the "patience versus ill-temper" description (Ashton and Lee 2008: 1005) which is present in the Agreeableness dimension within the six factors framework. The Emotionality dimension is somewhat similar to the Big Five Neuroticism, but devoid of its pejorative connotations. Finally, the newly introduced factor of Honesty-Humility, which had been frequently found in the lexical studies in other languages, finally appeared in the six-dimensional model. The other three factors, which can be found in the Big Five, are Extraversion, Conscientiousness and Openness to Experience. The last one is an extended and slightly modified variant of Big Five original Intellect/Imagination dimension (Ashton et al. 2004a).

The results of the studies into the six personality dimensions were operationalised in the form of the HEXACO Personality Inventory, the psychometric test whose name is an acronym derived from the six factors (Lee and Ashton 2004, 2006). Each factor or "higher-level domain" consists of four lower-level facets:

(1)   Honesty-Humility (facets: Sincerity, Fairness, Greed Avoidance, Modesty);

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languages, namely Chinese (traditional and simplified characters), Japanese, Czech, Lithuanian, Persian, Romanian, Serbian, Spanish: http://hexaco.org/translations

(2)   Emotionality (facets: Fearfulness, Anxiety, Dependence, Sentimentality);

(3)   Extraversion (facets: Social Self-Esteem, Social Boldness, Sociability, Liveliness);

(4)   Agreeableness (facets: Forgiveness, Gentleness, Flexibility, Patience);

(5)   Conscientiousness (facets: Organisation, Diligence, Perfectionism, Prudence);

(6)   Openness to Experience (facets: Aesthetic Appreciation, Inquisitiveness, Creativity and Unconventionality).

Interestingly, the authors claim that there are functional differences in the distribution of factors in the model. In particular, three of the six dimensions (Honesty-Humility, Agreeableness and Emotionality) "[a]re relevant to individual differences in altruistic versus antagonistic tendencies", whereas the other there (Extraversion, Conscientiousness and Openness to Experience) "[a]re relevant to the individual differences in engagement within various domains of endeavour" (Ashton and Lee 2008: 1033). Thus, the last 3 are mostly associated with *social relations* (Extraversion), *task-related endeavours* (Conscientiousness) and *idea-related endeavours* (Openness to Experience) (Ashton and Lee 2007: 156).

Another important observation made by Ashton and Lee (2005) concerned the predictive value of facets as lower-level elements of broad dimensions. The authors encouraged researchers to include narrower traits (*facets*) in the analysis of personality structure due to their potential to explain many behavioural patterns that go beyond the predictive strength of more general constructs, as facets "[c]ontain substantial amounts of specific variance that are not accounted for by that higher-order factor model" (Ashton and Lee 2005: 1460).

HEXACO Personality Inventory is still being tested in different languages, but it has already been applied to investigate such issues as self-monitoring (Ogunfowora et al. 2013), workplace and organisational politics (Law et al. 2016), leadership and gender differences (Lemoine et al. 2016), industrial and organisational psychology (Šverko and Babarović 2016), creativity and motivation (Kinga et al. 2015) and many others. Despite the reported advantages of the six-factor model, it has been criticised by the Big Five proponents mainly for the redundant inclusion of the sixth dimension, Honesty-Humility, which is said to overlap with Agreeableness in the Five Factor model (cf. John et al. 2008). Nevertheless, extensive cross-cultural validation, internal consistency,

ease of use and free access to HEXACO questionnaire make it an attractive tool applicable in many areas, including the present research. As the working definition of personality adopted in the study accounts for both stable (traits) and dynamic (psychological functions) personality characteristics, the other relevant theory is Jung's ([1921] 1971) personality psychology, which will be presented in detail in the following section.

1.3. Jung's personality typology: The qualitative studies of personality

Contrary to measuring *quantities* of a certain trait to account for individual differences, Jung ([1921] 1971) makes *qualitative* distinctions between people by assigning them to certain personality types, as observed by Haslam (2007: 54). The trait approach aims to describe the structure of personality and use the knowledge about the amounts of each trait to predict behaviour, whereas Jung's ([1921] 1971) typology focuses on the mechanisms behind the structure, which contribute to the establishment of certain behavioural tendencies in an individual. In other words, while trait approach considers mostly non-cognitive personality characteristics, such as traits, Jung's ([1921] 1971) personality typology is concerned with the mental functions that mediate in the process of attaining information (Jung [1921] 1971).

In an attempt to describe the functioning of the conscious side of the psyche,[11] Jung ([1921] 1971) distinguished between its two orientations or attitudes, extraversion and introversion. The former was characterised by the external direction of the psychological energy, and the letter – by the internal. Jung ([1921] 1971) claimed that only one of the two attitudes could dominate in the personality, while the non-dominant attitude was integrated into the unconscious and could also guide behaviour on certain occasions (Schultz and Schultz 2009: 105).

Jung ([1921] 1971) also believed that behaviour is determined by the four psychological functions – Sensation, Intuition, Thinking and Feeling. The functions reflect opposing ways of reacting to the external and internal world. Jung further classified the four functions into rational (Thinking and Feeling) and irrational (Sensing and Intuition). The irrational functions "accept experiences" (Schultz and Schultz 2009: 106) and

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[11] Jung used the term "psyche" to refer to the full personality, i.e. in that it incorporates both the conscious and the unconscious (cf. Schultz and Schultz 2009: 104).

do not apply the processes of reason, whereas the rational functions "[i]nvolve making judgements and evaluations about our experiences" (ibid.). The functions represent dichotomous relations, so within each category, only one function becomes dominant or primary, and the other one remains auxiliary (Sharp 1987:18). The balance of primary and auxiliary functions is important to ensure stability and predictability of personality (Briggs Myers and Myers 1995). A detailed description of each function is provided in the following paragraph:

> The function of *thinking* refers to the process of cognitive thought, *sensation* is perception by means of the physical sense organs, *feeling* is the function of subjective judgment or evaluation, and *intuition* refers to perception by way of the unconscious [emphasis in the original, OLP]. (Sharp 1987: 14)

In other words, the psychological functions of Sensation and Intuition are related to the process of *perception* or *information gathering* (either through one's senses or intuition), and the functions of Thinking and Feeling are connected with *judgement* or *decision-making* (either based on analytical thinking and facts or on one's feelings of what is right). For example, those people with the primary Sensing function tend to concentrate on the information gathered by their five senses and pay attention to tangible details. Those with the primary Intuitive function, on the other hand, tend to see what is behind the information received from their senses, and often look for the underlying principles and unpredictable connections. The Thinking dominated personalities make their decisions based on impersonal analysis and logic, want to remain fair, truthful and unaffected by external evaluations, and are orientated towards the completion of a given task. In contrast, the people with the Feeling preference tend to first weigh the impact of their decisions on the situation, and attach more importance to the subjective values and people orientation (Haas and Hunziker 2006: 18-21).

Although it is possible to generalise somebody's preferences in terms of one attitude or function and refer to the person being of "the Extravert type" or "the Feeling type", the full psychological types are obtained as a result of the interaction between attitudes and functions. Jung ([1921] 1971) originally differentiated between eight psychological types derived from all possible combinations of the two attitudes (extraversion and introversion) and the four psychological functions. The number of types was later extended by Briggs Myers (1962), who are responsible for the famous operationalisation of Jung's ([1921] 1971) typology in the form of the MBTI test (Myers-Briggs

Type Indicator). The two additional functions, Judging and Perceiving, stem from Jung's ([1921] 1971) "rational versus irrational" distinction and account for the preferred way of dealing with life events – either through acceptance (Perceiving) or ordering (Judging). As a result, the MBTI measures sixteen personality types on the basis of individual preferences towards each of the four dichotomous categories (Extraversion and Introversion, Sensing and Intuition, Thinking and Feeling, Perceiving and Judging).

Myers-Briggs Type Indicator (MBTI) is a result of the joint work of two American psychologists, mother and daughter, who sought to design a test that could be successfully applied for staff selection after the turmoil of the Second World War. Being fascinated by Jung's theory ([1921] 1971) of personality typology, the researchers believed that different psychological orientations favoured different occupations, and the consideration of the personality type might be particularly meaningful in organising occupational settings (cf. Saunders 1991). After several testing sessions, both satisfactory and unsatisfactory, the test was ultimately bought by Consulting Psychologists Press in 1975 (Pittenger 1993: 468). Since that time Jung's ([1921] 1971) personality typology as operationalised in the MBTI instrument has enjoyed great popularity, especially in its practical applications in organisational context and career counselling (e.g. Dunning 2001; Martin 2010).

As for research implementation, the tool has oftentimes been used as a complementary methodological solution to tap into the effects of the personality type on the subject of research. For instance, Apostal (1991) identified that those college students who scored higher on Intuition were more attracted to creative careers than the Sensing types, who had more conventional interests. The finding is connected with the earlier ones showing positive correlations between the dominant Intuitive function and higher Openness to Experience scores, which is associated with creativity in the *Five-Factor Model* (McCrae and Costa 1989). Among the other insightful conclusions is the relationship between risk-taking and the Thinking-Feeling dichotomy, which was revealed by Filbeck et al. (2005) while studying the effects of the personality type on the behaviour of business investors. In particular, Thinkers were found to be more tolerant for risk factors than Feelers. With regard to cognitive functioning, Gram et al. (2005) found differences in the brain activity measured by EEG between the students with different personality preferences identified by means of the MBTI test. In particular, the strongest interaction was revealed between the cortical theta wave activation and the Sensing-

Intuition dichotomy.[12] The Sensing participants had significantly higher levels of theta activation, which implies that they were better able to relax and restore their cognitive functioning than the Intuitive types, who seemed to be constantly involved in internal processing (Gram et al. 2005: 43).

Despite the popularity of the MBTI test in popular psychology and career counselling, professional psychologists and psychometricians are often sceptical about the use of the test. In particular, the instrument is accused of having low test-retest reliability (Pittenger 1993), which means that some people may be classified into a different personality type when tested again some time later. Some psychologists claim that it probably lacks construct validity, e.g. McCrae and Costa (1989) found correlations between the Sensation-Intuition and Judgment-Perception dichotomies. However, in evaluating the test it is important to refer to Jung's ([1921] 1971) original idea of the underlying psychological functions that may help qualitatively describe the structure of personality. Therefore, comparing the results of MBTI with the power of the quantitative trait measuring tests may be misleading, whereas using the two types of tests in a supplementary way may prove effective. In other words, the trait approach provides quantitative data about one's personality dispositions, which may further be supplemented with the typological information about one's dominant psychological functions. The benefits of combining the two approaches will be discussed in the next section.

1.4. Combining quantitative and qualitative approaches to the description of personality

In identifying individual differences, the trait approach aims to measure the differences of *degree* that can be regarded as "continuous or quantitative" (Haslam 2007: 53), whereas Jung's ([1921] 1971) personality typology concentrates on the differences of *kind* that can be qualified as "discontinuous, typological, or qualitative" (Haslam 2007: 54). Thus, the trait approach is concerned with the amount of each trait that an individual possesses, and the type approach assigns an individual to a certain type depending on the dominant psychological function. The distinction between the units of measurement

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[12] Cortical theta wave is a brain wave actively released in the state of deep relaxation and meditation (https://medical-dictionary.thefreedictionary.com/theta+rhythm) (date of access: 14 Dec. 2017).

appears to be merely of conceptual character and does not eliminate the possibility of combining the two methods. Indeed, it encourages researchers to do the opposite: "The existence of these differences indicates that efforts to describe personality must incorporate traits *and* types, and not automatically favour one sort of difference over another" (Haslam 2007: 55).

Furthermore, it has been discovered that there are more similarities between the MBTI and Five-Factor Model results than differences. As mentioned earlier, enlightening research by McCrae and Costa (1989) revealed strong correlations between MBTI Thinking-Feeling paradigm and Agreeableness factor measured by NEO-PI, as well as between Judging-Perceiving dichotomy and Conscientiousness (McCrae and Costa 1989: 30). Similarly, significant correlations were found between the Extraversion-Introversion orientation in the MBTI and the factor of Extraversion in the NEO-PI, and between Sensing-Intuiting dichotomy and Openness to Experience (McCrae and Costa 1989: 32). In the latter case, the Intuitive psychological function was associated with higher levels of Openness, which is in line with other research into the relations between creativity and openness (cf. McCrae 1987), and creativity and intuition (cf. Apostal 1991).

These findings corroborate the view of the complementary power of the quantitative and qualitative personality approaches, and reflect the comprehensiveness of the concept of personality. It is crucial to consider various types of individual differences – rigorous and countable (traits), and more illustrative ones (psychological types) – to be able to understand the structure of personality and attempt to predict behaviour.

In conclusion, the present research applies both methodologies to develop a psychological profile of translator's personality composed of traits and psychological functions, i.e. non-cognitive and cognitive (conscious) characteristics, which interact with situational factors and guide behaviour. The thesis also seeks to address the prospects of personality development from a translation trainee to a professional as a result of greater exposure to professional practice. Moreover, it intends to define the potential role of personality characteristics in the decisional aspects of translation performance. The next sections will therefore concentrate on the issues of personality development over the lifespan, and the role of personality in the academic and occupational performance.

1.5. Personality stability and change

Whether personality is subject to change over time and across situations or not is a question, which psychologists have been struggling to answer for at least eighty years. With an array of arguments defending each of the two postulates, there seems to be enough room for their coexistence on the one hand, and mutual exclusion on the other (cf. Costa and McCrae 2006; Roberts et al. 2006b). Based on existing literature on the topic, the controversy appears to be due to three important aspects: the approach to-wards personality that one adopts (e.g. trait, typological, social-learning, etc.), the un-derstanding of stability as a construct, and the interpretation of processes that underlie stability and change of personality.

Previous sections of the chapter focused on presenting different views on per-sonality components that influence behaviour. Not only does each approach adopt a distinct stance on the issue, but it also defines the factors that may be responsible for personality stability or change. For instance, the proponents of the trait perspective be-lieve in the relative stability of traits, assuming at the same time the marginal im-portance of external factors and the organised interplay of traits and environment. Fol-lowing Allport's (1937) conviction of the biological origin of traits as "neuropsychological entities", the biological theories of personality were keen on map-ping traits onto the neurobiological system. For instance, evidence suggests that the aspects of Conscientiousness dimension in the Big Five Model relate to the regions of prefrontal cortex in the brain, which is responsible for executive control (Nigg 2000). Extraversion appears to be linked to areas conveying motivational impulses and goal achievement (Watson et al. 1999; Lucas et al. 2000), and Neuroticism seems to be asso-ciated with the areas controlling threat detection and withdrawal processes (Gray 1987; Watson et al. 1999). Interestingly, there is little evidence for the biological basis of the Openness trait, but some psychologists propose that it might be similar to that of Extra-version (Donnellan and Robins 2009). The claim, however, still requires rigorous em-pirical research.

The advocates of social-cognitive approach give more prominence to the chang-ing dynamics of situations, personal drives and expectations, while the followers of Jung's ([1921] 1971) typology assume that dominant orientations are formulated at the early stages of life (around the age of 7) and become even more distinct in adulthood

(Pittenger 1993: 470). Even though some theories seem to address common ground on the issue, there remains a concern about the understanding of stability they adopt.

Donnellan and Robins (2009: 193) proposed probably the broadest interpretation of stability which allows distinguishing between its two types: *homotypic* and *heterotypic*. The latter is sometimes referred to as "continuity", since it postulates that personality characteristics are stable across the lifespan, but may have different behavioural manifestations depending on age. For example, Caspi et al. (1996) found that children described as impulsive and resentful at the age of three were more prone to various kinds of addictions and delinquency as adults. Conversely, homotypic stability is concerned with measuring personality characteristics with the same instruments over meaningful periods of time, thus seeking statistically valid rather than conceptual explanations.

Depending on the methods applied, it is possible to discriminate between *absolute* and *differential* stability, which are best demonstrated by trait measurements. Absolute stability gauges the mean-level of trait intensity over the lifespan in longitudinal studies of the same individuals. For instance, Roberts et al. (2006a) summarised a large-scale study of the absolute changes of personality structure from adolescence to adulthood. Their findings suggest that mean-levels scores of Conscientiousness and Agreeableness dimensions gradually increase across lifespan, while Neuroticism gradually decreases. Extraversion was found to moderate increase up until a mild decline in the mid-fifties. Similarly, Openness showed an increase in the time of transition from adolescence to adulthood, and then remained stable until the mid-fifties gradual decrease. Psychologists explain such patterns by either *intrinsic maturational position* (Costa and McCrae 2006), according to which changes are caused by biological processes, or *life course position* (Roberts et al. 2006a), which assumes that changes occur due to an individual's engagement in certain social roles and experiences.[13] Although there seems to be unequivocal evidence for the biological underpinnings of traits, it is crucial to consider the critical periods in personality development − adolescence and young adulthood (Roberts et al. 2006a), which trigger change and adjustment to new social roles. In particular, Roberts et al. (2003) concluded that occupational experiences correlated with a variety of changes in personality traits, in particular greater work autonomy was associated with an increase in some of the performance-related facets of Extraversion. This

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[13] This again relates to the person-situation debate in personality psychology, which was discussed in section 1.1 of the chapter.

leads psychologists to believe in the interplay between intrinsic and extrinsic personality-bound factors.

Differential stability, on the other hand, focuses on the test-retest correlations of the degree (high or low) of the same trait measured in an individual over meaningful intervals of time (usually 7 years, Roberts and DelVecchio 2000). The findings of meta-analyses revealed that all personality traits measured by the Big Five model became further more acute and therefore stable across the lifespan, which proves that stability and change coexist and feed one another.

Such a variety of views on the issue of personality development leads to the re-interpretation of the processes that underpin stability and change as based on three important conclusions:

> Firstly, personality traits "draw out" or elicit particular responses from the social environment which can promote personality continuity. (…) Secondly, personality traits shape how people construe social situations. (…) Thirdly, individuals play an active role in selecting and manipulating their own social experiences. Given enough agency, it seems that individuals will seek out, modify, or even create environments that are consistent with their individual characteristics. (Donnellan and Robins 2009: 199)

The three reasons quoted above point to the obvious association between the internal (e.g. personality traits) and external situational factors that influence the continuity of personality. The interplay has become known as a *corresponsive principle of personality development* (Caspi et al. 2005; Roberts et al. 2008), which among other things is related to academic and occupational performance. Further sections of the chapter shall therefore concentrate on the applications of personality psychology in real life settings.

1.6. From pure to applied psychology: Relevant implementations of personality research

The task of applied psychology is to implement the conceptual psychological propositions in solving real-life problems related to human behaviour and experience (Davey 2011). The evidence-based method (Davey 2011: 4) used in applied psychology consists in establishing cooperation between the findings of scientific enquiries and obser-

vations of reality. Considering the fact that the thesis aims to generate outcomes that may be further adapted to practical use, it is important to delineate the areas of application of the key premises of the personality theories discussed above.

Amongst the branches of applied psychology are those that focus on an individual with a view to providing treatment (clinical, counselling, health and neuropsychological) and support during the stages of psychological, cognitive and physical development (educational psychology). Professionally oriented branches such as industrial and organisational psychology (IO) and sport and exercise psychology extend their influence from an individual onto the level of an organisation, and forensic psychology concentrates on fighting societal problems in the realm of criminal justice (Davey 2011: 2). Each of the branches is directly linked to daily reality and is therefore responsive to change in both theoretical paradigms and practical experience. For example, neuropsychologists seek to implement the latest advancements in neuroimaging to the prevention and treatment of mental disorders, and career counselling is becoming further more popular with informing job seekers about their prospects.

From the viewpoint of applied psychology, the present thesis is best affiliated with the branches of educational and industrial and organisational psychology, as it attempts to explore the links between the translator's personality and her/his academic and then professional behaviour and its outcomes. In addition, a part of the assumptions relate to the issue of personality development and the comparisons between students and professionals. Therefore, further attention shall be devoted to the influence of personality characteristics on academic and occupational performance, and the role of personality in the professional life of an individual.

1.6.1. The impact of personality on academic performance

Academic attainment is most often associated with intellectual abilities, learning styles and skills development, but there are other non-cognitive aspects such as motivation, goal-setting, personal interests, self-concept and personality traits that require careful consideration. In particular, a range of studies postulates that personality traits can boost academic motivation and lead to increased performance (Costa and McCrae 1992; Chamorro-Premuzic and Furnham 2008; Komarraju and Karau 2005). Likewise, it has

been suggested that non-intellective personality characteristics can "[n]icely complement cognitive ability and other measures when included in prediction batteries" (Zeidner 2009: 734).

Since the power of the Five-Factor Model of personality structure was acknowledged, research on the relationships between personality and academic performance has been mostly centred on this theory. Amongst the most notable findings, Conscientiousness has been systematically reported to be the strongest predictor of academic achievement from preschool to college and university levels (Ackerman and Heggestad 1997; Shiner et al. 2003; Noftle and Robins 2007; O'Connor and Paunonen 2007). High Conscientiousness scores have been associated with properties important in educational settings, namely goal-setting, self-organisation and self-discipline (Chamorro-Premuzic and Furnham 2003). Notably, self-discipline has been found to better foresee academic performance than cognitive abilities among girls (Duckworth and Seligman 2005). There is also evidence showing that lower-level facets within the dimension of Conscientiousness may be stronger predictors of academic attainment than the broad trait itself (Roberts et al. 2005; Noftle and Robins 2007).

The findings of research into the relationship between Openness to Experience trait and educational performance are controversial. Ackerman and Heggestad's (1997) meta-analysis showed rather modest associations between Openness and standardised academic performance measures, while Farsides and Woodfield (2003) controlled for intelligence scores and still found similar results to those of Ackerman and Haggestad (1997). In a different study, Noftle and Robins (2007) used a battery of different personality tests, including NEO-PI-R for the Big Five traits and HEXACO for the six dimensions to determine the personality-related predictors of academic outcomes. To ensure strong validity, the scholars conducted personality tests on 4 samples of undergraduate students (11,900 participants altogether). Their evidence showed that the Openness trait correlates strongly with verbal aptitude scores, but not with maths scores in the final examination results of high school students. This finding may hint at the importance of different sets of personality dispositions associated with verbal and numerical aptitude, and partially explain the controversy over the role of Openness in predicting overall academic performance. The authors concluded that verbal aptitude has probably more in common with being creative and inquisitive than organised and conscientious. Such an assumption may be also referred to the earlier mentioned association

between the trait of Openness and Jung's ([1921] 1971) psychological function of Intuition (McCrae and Costa 1989), which is in its turn related to creativity. The finding is also in line with Ackerman and Heggestad (1997) and Ashton et al. (2000) who observed moderate to strong correlations between the trait of Openness and crystallised intelligence, and weak or no correlations with fluid intelligence.[14]

The trait of Extraversion has been reported to positively correlate with academic attainment at the level of primary school, but negatively at higher educational levels (Entwistle and Entwistle 1970; Chamorro-Premuzic and Furnham 2003). Zeidner (2009) attempted to explain such differences by the relatively undemanding atmosphere of elementary school as opposed to the highly competitive, achievement-oriented surroundings at college and university.

Honesty-Humility, the sixth factor added in the HEXACO trait model, has been associated with achievement goals and higher motivation in educational situations of high-school students (Dinger et al. 2015). Kajonius (2016) tested the same factor in its relation with student's self-estimated academic performance and observed significant negative correlations between Honesty-Humility, especially its Sincerity and Modesty facets, and the dependant variable. Kajonius (2016) suggested a possible interpretation of the finding, according to which highly ambitious individuals (those scoring low on Honesty-Humility factor) feel more confident in their abilities, and therefore estimate their performance higher.

As for the traits of Agreeableness and Neuroticism, their impact on academic performance has been reported mostly insignificant (Busato et al. 2000; Shiner et al. 2003; Heaven et al. 2002). However, some analyses suggest that Neuroticism is related to study attitudes and emotional well-being and may therefore predict poor academic achievement (e.g. Credé and Kuncel 2008).

To sum up, three of the Big Five personality dimensions, Conscientiousness, Openness to Experience and Extraversion, although to different degrees and in different contexts, have been observed to be associated with academic attainment. However, most of the studies acknowledge the moderating power of personality traits, warn

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[14] Crystallised intelligence is a type of a person's ability to use skills and knowledge accumulated through life experience, e.g. reading comprehension and verbal fluency; fluid intelligence is the ability to solve new problems independently of previous experience (Cattell 1971).

against assigning all predictive potential to individual differences and encourage careful consideration of situational factors.

Research into the relationship between Jung's ([1921] 1971) personality types and academic achievement showed, for instance, that the attitude of Extraversion and the psychological function of Intuition were most consistently correlated with well-rated seminar behaviour in terms of performance, oral in-class participation and general teacher's evaluation (Furnham and Medhurst 1995). The study was conducted on a sample of 21 full time psychology students, whose MBTI results were correlated with seminar behaviour and general course outcome measures in a longitudinal study that lasted for three consecutive years. In general, the findings showed that "[e]xtraversion more than introversion, intuition rather than sensing, feeling rather than thinking and perceiving rather than judging" (Furnham and Medhurst 1995: 206) were the personality characteristics of those students who received the most consistent positive evaluations from their tutors. However, those were the Introvert rather than Extravert types that obtained higher written examination scores. In the same study, Eysenck's personality test and Cattell's 16 Personality Factors Inventory were used to measure the participants' personality traits and look for the potential correlates between them and the students' final course outcomes. Interestingly, none of the traits or psychological functions were correlated with the students' successful course completion. Furnham and Medhurst (1995) suggested that probably traits are not the best predictors of "actual behaviour" (Furnham and Medhurst 1995: 207), and acknowledge possible effects of the intervening and confounding variables.

The relationships between the nursing students' MBTI types and their academic achievement and satisfaction were analysed by Kim and Han (2014). The results indicated that the Judging types scored significantly higher on academic achievement than Perceiving types, and Extraverts were more satisfied with their studies than Introverts. Thus, it seems that the correlations between the personality type and academic achievement may be partially dependent on the type of the profession that the students pursue. Bearing this important note in mind, the chapter shall proceed with the discussion of the role of personality characteristics in professional life.

1.6.2. The role of personality in industrial and organisational psychology

Industrial and organisational psychology (IO psychology) examines human "[b]ehaviour and mental processes in the workplace" (Bernstein and Nash 2008: 591) through the practical application of psychological theories. It particularly dwells upon the premises of social, cognitive and personality psychology, and addresses such issues as personnel selection, training, work health and safety, professional development, leadership, management styles, the quality of work life, etc. Although personality studies only partially contribute to the complex theoretical and methodological basis in IO psychology, it deserves particular attention given the aims of the present research.

Just as the concept of personality itself, the recognition of its significant role in occupational life has a long-established tradition. It dates back to the year 370 BC, when Plato ([370 BC] 1991: 317) postulated: "We are not all alike; there are diversities of natures among us, which are adapted to different occupations". Recently reconsidered from the perspective of interactionism in the "person-situation debate" (Mischel 1968), the concept of "person-organisation fit" (Pervin 1989; Kristof 1996) was proposed. It assumes the idea of reciprocal influence of personality characteristics and situational factors, and may be defined as "[c]ompatibility between people and the organisations in which they work" (Kristof 1996: 1). High levels of congruence result in successful job performance and satisfaction, boost emotional well-being and professional motivation. The concept of fit is most widely employed as a predictive measure in recruitment and training, and as a type of treatment in occupational therapy (cf. Law et al. 1996). In research settings, however, particular attention is paid to the role of personality in predicting professional performance (Corr and Matthews 2009: 748).

Considering the variety of applications of "person-occupation fit", it becomes essential to define the boundaries of personality characteristics. These include skills, needs, motivation, self-concept, as well as personality traits and type (Schneider and Smith 2004: 91). Notable appreciation of the latter aspects is accounted for by the acceptance of the Five-Factor Model as a valid tool for the description of individual differences (Corr and Matthews 2009: 749). Different aspects of job performance have been correlated with certain higher-level and lower-level traits and some of the most interesting findings will be discussed further in the chapter.

1.6.3. The impact of personality on occupational performance

Barrick and Mount (1991) were the first to present a systematic analysis of research into the relationship between personality traits in the Five-Factor model and various aspects of professional performance across a number of occupations. They concluded that Conscientiousness is the best predictor of successful job performance irrespective of the occupational group or performance criteria (Barrick and Mount 1991). The findings were later supported by other research teams (Barrick et al. 1993; Ones and Viswesvaran 1997; Frink and Ferris 1999). Interestingly, Barrick et al. (1993) discovered that Conscientiousness was even stronger related to successful job performance in occupations with a high degree of autonomy (e.g. managers, sales representatives, etc.), which Sackett and Wannek (1996) tried to explain by the conceptual links between Conscientiousness and integrity, as well as goal-setting. Dudley et al. (2006) claimed that the facet scales within the Conscientiousness dimension are even better predictors of overall job performance and called for their inclusion in further research.

Emotional Stability appears to be the next strongest predictor of professional performance across jobs and criteria (Barrick and Mount 1991), whereas Neuroticism was found negatively correlated with job performance in the same study. However, a more recent investigation by Perkins and Corr (2005) revealed that the Anxiety facet under the Neuroticism trait was able to predict job performance in those individuals who scored high in cognitive abilities tests.

Agreeableness has been found to predict occupational performance in interpersonal-oriented settings (Hurtz and Donovan 2000), i.e. those jobs that require extensive contact with people such as sales, management, customer service and teaching. Agreeableness appears to correlate with training success (Salgado 1997) and teamwork (Judge et al. 1999). People's predisposition to work in a team has also been found to correlate with the Extraversion trait (Barrick et al. 1998; Morgeson et al. 2005; Bennet and Burch 2007), which together with Conscientiousness seem to be the strongest predictors of leadership (Judge et al. 2002; Bono and Judge 2004). Notably, Kaiser and Hogan (2007) concluded that personality traits are much better predictors of leadership skills than intelligence and cognitive abilities tests.

Rothmann and Coetzer (2003) observed that the relationship between Openness to Experience and overall professional performance is equivocal, most probably due to

the differences in job requirements. The dimension has been reported to have predictive power in jobs connected with consulting (Hamilton 1988), training (Barrick and Mount 1991; Vinchur et al. 1998), and unstable working conditions (Rothman and Coetzer 2003).

As for the issue of career choice, it is worth mentioning Holland's (1996) Personality Inventory, which is one of the most widely recognised tools in career counselling, designed on the basis of the Big Five traits. In their meta-analysis of the links between the Five-Factor Model and Holland's occupational types[15] (Holland 1997), Barrick et al. (2003) showed that the trait of Extraversion is predictive of the enterprising and social types of experts, and Openness to Experience – of the artistic types.

The six-factor model, HEXACO Personality Inventory, has so far been used in 21 studies investigating the role of personality in industrial and organisational psychology, according to the website of the instrument.[16] Among the most recurrent topics are the incremental validity of the Honesty-Humility factor over cognitive abilities and the Big Five traits (Oh et al. 2014), a new trait of Honesty-Humility as a predictor of job performance ratings (Johnson et al. 2011), as well as Honesty-Humility and perceptions of organisational politics (Wiltshire et al. 2014). Such a close attention to the Honesty-Humility factor must be due to the fact that it is a newly recovered trait that requires more analyses and validation. HEXACO has also been employed to identify personality predictors of leadership styles (De Vries 2012), with findings showing direct effects of Honesty-Humility on ethical leadership, Extraversion on charismatic leadership, and Agreeableness on supportive leadership and Conscientiousness on task-oriented leadership styles. A research by Šverko and Babarović (2016) into career adaptability revealed positive correlations between Openness to Experience and creative interests, Emotionality and Extraversion with social interests, Extraversion with managing interests, and negative correlations between Emotionality and technical interests, and Honesty-Humility and interests in business and finance. The same study found that HEXACO

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[15] According to Holland (1997), "[t]here are six types of vocational personalities: 1) realistic, those who prefer practical or physical activity; 2) investigative, those who are analytical and curious; 3) artistic, those who are imaginative and introspective; 4) social, those who enjoy working with and helping other people; 5) enterprising, those who enjoy managing and leading others; and 6) conventional, those who enjoy organizational and administrative work" (Corr and Matthews 2009: 757).

[16] http://hexaco.org/references (date of access: 28 Jan. 2017).

traits had a predictive advantage in accounting for interests over the Big Five dimensions.

The cases of the application of Jung's ([1921] 1971) psychological types and the Myers-Briggs Type indicator in research related to job performance are less numerous than trait theories. It may probably be due to the predominantly practical orientation of the psychometric measure and its descriptive qualitative power. Still, MBTI was successfully used to study the correlations between managerial practices in the Chinese and European cultures and the managers' personality type (Furnhman and Stringfield 1993). The study revealed that the management practices in the Chinese business environment are correlated with the attitudinal preference towards Extraversion and Introversion, whereas in the European culture with the decision-making preferences towards Thinking and Feeling.

In a different study devoted to the behaviour of managers, Gardner and Martinko (1996) concluded that the managers with the Sensing function preference were more effective in lower-level positions that involved a high level of routine, and those with the preferred Intuitive function were better in upper-level jobs that demand creative problem-solving (Gardner and Martinko 1996: 76). An interesting observation was made with regard to the Thinking-Feeling dimension, as most of the managers who participated in the study reported preference towards the Thinking function, which was explained by the fact that logical and analytical type of decision-making is probably more efficient in managerial practice (Gardner and Martinko 1996: 76). The prevalence of the Thinking types among managers was also observed by Higgs (2001) in his research into the relationship between the MBTI type and Emotional Intelligence. He also found that the high level of the Intuitive function was significantly correlated with high Emotional Intelligence in managers (Higgs 2001).

Trying to relate personality types with intelligence scores, Furnham et al. (2007) found that the functions of Intuition and Perception were positively correlated with high scores of both crystallised (ability to acquire, store and conceptualise information) and fluid intelligence (ability to establish connections and understand abstract ideas, Cattell 1971). In the extension of the study, Furnham et al. (2008) sought to correlate the managers' personality types, intelligence scores and assessment centre expert ratings. The results showed that the independent experts most often positively rated the managers with the Intuitive and Thinking preferences. This was explained by the fact that the

Feeling function had been previously reported to correlate with Neuroticism, which is in its turn related to high stress levels. However, the managerial position is not suitable for individuals who tend to experience stress and anxiety (Furnham et al. 2008). All in all, Intuition was found to be related to intelligence and efficient performance in non-routine tasks. Thinking was reported to be the preferred decision making function of business managers and people in leadership positions.

The relationship between MBTI type and medical speciality choice was studied by Stilwell et al. (2000), who observed that those with the preference towards the Feeling function chose family medicine and primary care specialities and were mostly women, and those with the Thinking preference were more inclined to go for surgical specialities and were predominantly men. This finding is important in that it indicates that the links between personality preferences and professional choice may be mediated by gender.

In conclusion, there has been extensive research into the relationships between personality traits and occupational performance, which has presented strong evidence for the role of personality in predicting occupational outcomes. Importantly, Conscientiousness has been reported to be the most effective predictor of occupational attainment across jobs and performance criteria. Openness to Experience relates to success in occupations involving creativity and unconventionality, and Extraversion is best predictive in positions requiring active socialising and leadership. In response to the findings showing the links between personality traits and people's performance in specific occupational settings, the "trait activation theory" was proposed (Tett and Burnett 2003). According to the theory, "[t]rait activation is the process by which individuals express their traits when presented with trait-relevant situational cues" (Tett and Burnett 2003: 502). The theory may be seen as an extension of the earlier mentioned "person-organisation fit", as it suggests that the job-related demands serve as situational cues that may activate the required personality traits and contribute to the interaction between the professional surrounding and personality.

Having discussed the relevant issues of personality psychology, it is now important to narrow the focus and situate the concept of personality within the field of Translation Studies. Since the thesis looks into the relationships between personality and translation, the next section will present an overview of available research into psychological aspects of translator's personality in Translation Studies.

1.7. Review of research into the psychological aspects of the translator's personality

Starting from the 1960s, the issue of translator's personality has been approached in a number of ways, enjoyed varying degrees of popularity, and probably culminated in Chesterman's (2009) idea to give it its own name of Translator Studies. The author of the present thesis suggests that the views on the psychological aspects of the translator's personality should be chronologically divided into three periods based on their theoretical and methodological advancements:

(1)   Early conceptual views on translator's personality: 1960s-70s.
(2)   First empirical insights into translator's personality: 1980s-90s.
(3)   Interdisciplinary studies into translator's personality using multi-method approach: Since 2000.

The progress made in each period will be discussed in detail in the next sections.

1.7.1. Early conceptual views on translator's personality: 1960s-70s

While reflecting upon the challenges that a literary translator faces, Savory (1968: 36) in *The art of translation* suggested that "[t]o linguistic knowledge and literary capacity, a translator must add sympathy, insight, diligence and conscientiousness."[17] This was probably one of the earliest subtle hints at the important role of personality characteristics in translation profession.

The first attempt at employing psychological approaches to the description of translator's personality can be credited to Reiss ([1971] 2000), who used Spranger's ([1914] 1928) characterological typology to hypothesise about the non-cognitive aspects of the translator's self. Spranger ([1914] 1928) distinguished between six types of people based on their value orientations: 1) theoretical (interested in the discovery of truth

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[17] Interestingly, Savory was also the author of such books and monographs as *The spider's web* (1952), *Introduction to zoology* (1968), *Animal taxonomy* (1970), *Introduction to arachnology* (1974), thus being one of the greatest minds of the twentieth century Britain, whose range of interests included literature and translation.

through observations and reasoning with the final aim to systematise knowledge); 2) economic (interested in the practicality of things with an emphasis on the realisation of bodily needs); 3) aesthetic (most values form and harmony of life ruled by diversity as opposed to the theoretical type); 4) social (most values social relations and love of people); 5) aggressive, or political (sees power and influence as the highest values); 6) religious (interested in the idea of unity with the world, is often reserved and meditating). Based on these distinctions, it is possible to consider Spranger's ([1914] 1928) theory under the social-cognitive perspective of personality structure. It was probably due to the typology's social focus that Reiss ([1971] 2000) applied it to speculate about the relations between personality characteristics and one's aptitude to translate certain text types. As Reiss ([1971] 2000) sought to develop the functional translation-oriented text typology, she believed that aesthetic type would be the best translator of literary texts and poetry, theoretical type would be successful in translating technical and philosophical texts, economic type would be well suited for appeal-focus texts, and the aggressive type would most likely be unfitting in translation profession (Reiss [1971] 2000: 111-112).

Despite the absence of empirical evidence for such claims, Reiss ([1971] 2000) was the first among Translation Studies scholars to pave the way into the intricacies of translator's personality from psychological perspective, and can be aptly considered a pioneer in this new research avenue (Hubscher Davidson 2009: 178). Importantly, Reiss's ([1971] 2000) idea about the links between personality and text type preference has not yet been empirically tested, hence forming a niche that the present research would like to fill.

1.7.2. First empirical insights into translator's personality: 1980s-90s

The next two decades witnessed the appearance of the first empirical insights into translator's personality. Henderson (1987) initiated an ambitious study comparing the psychological profiles of translators and interpreters, which came out under the title *Personality and the linguist: A comparison of the personality profiles of professional translators and conference interpreters*. In an attempt to describe the representatives of both professions, the researcher aimed to draw other scholars' attention to potential dif-

ferences, encourage translation teachers to consider psychological aspects in their training programs, and dispel certain myths about people exercising these occupations. Henderson (1987) designed his research in the period when trait approach and the use of psychometric tests in psychology came to the fore. Cattell's 16 Personality Factor Inventory (1965) was applied to a sample of one hundred professionals, 65 translators and 35 interpreters, who were asked to complete two sets of questionnaires: Cattell's (1965) personality test and a background questionnaire that sought to gather demographic data about the participants. Statistical analyses showed that translators and interpreters personalities in general were rather alike, and the differences proved to be non-significant. This finding was especially important for those concerned with the tale of "split personalities" presumably typical of those who combined the two practices, as well as rejected the stereotype about translators being mostly introverts and interpreters being mostly extraverts. However, the former were unexpectedly found to be more practical, and the latter – more imaginative. Henderson (1987) summarised the results of his research in the following trait-based descriptions of a translator's and an interpreter's personality:

- Translators: reserved, intelligent, emotionally stable, humble, sober, conscientious, shy, apprehensive, self-sufficient, controlled and conservative (Henderson 1987: 125).
- Interpreters: outgoing, intelligent, assertive, happy-go-lucky, venturesome, self-assured, group-dependent and expedient (Henderson 1987: 125).

A close look at the two groups of adjectival labels allows one to notice that there is a shared component of intelligence, while the divergent features consist in translators leaning towards the Conscientiousness dimension, and interpreters towards the Extraversion dimension, if compared to the traits in the Big Five model. This is an interesting observation, which points to two important inferences. Firstly, it might be due to the fact that Henderson (1987) recruited an uneven number of subjects in each group that the differences between them, though generally observable, were not statistically significant. Secondly, the participants may have been exposed to both professions, which could influence their personality structure by forcing them to activate traits that were essential for successful professional performance (cf. Schweda-Nicholson 2005). In conclusion, Henderson's investigation prepared room for further insights into transla-

tor's (and interpreter's) personality, which, however, were to come in rather distant future.

Kurz et al. (1996) continued Henderson's comparative research direction, but applied a distinct methodology, based on Casse's (1981) *communication value orientation model* from organisational and behavioural psychology. The model presents four different communication styles depending on an individual's dominating interests or "orientations", and assumes that each person can be inclined to one of them:

(1)   Action-oriented (what?)

(2)   Process-oriented (how?)

(3)   People-oriented (teamwork)

(4)   Idea-oriented (why?)

The study was conducted on a group of 31 beginners and 39 advanced students of translation and interpreting department at the University of Vienna. Their task was to fill in the questionnaires with answers that would best describe the personalities of interpreters and translators. The findings revealed that a typical translator was people- and process-oriented, and a typical interpreter was people- and action-oriented. In their final remarks, Kurz et al. (1996: 15) admitted to the limitations of their study and encouraged further research into the personalities of translators and interpreters. Despite the use of different methodology, Henderson (1987) and Kurz et al. (1996) agreed on seemingly more adventurous character of interpreters (action orientation), while the latter study also showed that both translators and interpreters are professionally engaged in social contacts that they feel responsible for (people orientation).

Though lacking empirical evidence, Barboni (1999) made another important contribution into the issue of translator's personality. Employing her knowledge of clinical psychology and psychoanalysis, Barboni agreed with Reiss ([1971] 2000) on the fact that certain personalities may be attracted to translating certain text types. The researcher considered translation a stressful activity, which requires from translators the use of deference mechanisms that are visible in their translation process and product. Barboni (1999) defined the mechanisms as behavioural patterns influenced by personality traits, fixed in childhood and individual background.

With an approach of the new millennium, it became obvious that Translation Studies needed a thorough interdisciplinary endeavour into the psychological aspects of translator's personality. It might among other benefits account for some of the individual differences revealed in both translation process and product research.

1.7.3. Interdisciplinary studies into translator's personality using multi-method approaches: Since 2000

Chesterman (2009) while referring to Holmes's (1988) *Name and nature of Translation Studies*, made a strong claim for shifting the paradigm from predominantly textual perspective towards the agent model and establishing the branch of Translator Studies. Chesterman (2009) sketched the division of the branch into three subfields: cultural, sociological and cognitive (Chesterman 2009: 19), the latter focusing on "[m]ental processes, decision-making, the impact of emotions, attitudes to norms, personality, etc." Jääskeläinen (2012) gave a similar statement with reference to Holmes's identification of the process-oriented branch as "the psychology of translation" (Holmes 1988: 72, as quoted in Jääskeläinen 2012). Similar to Chesterman (2009), Jääskeläinen (2012) highlighted the benefits of putting the translator in the forefront, and bringing together translation sociology and the psychological and cognitive aspects of translation process. Muñoz Martín (2010) pointed to the need to acknowledge the rise of a new branch of *cognitive translatology*, which is primarily concerned with translation process research and the role of the translator. O'Brien (2013) in her article *The borrowers: Researching the cognitive aspects of translation*, reviewed the disciplines that have most generously contributed to *cognitive translatology*, and encouraged translation scholars to continue their cooperative endeavours, paying particular attention to such areas as psychometrics, neuroscience, writing and reading research. These ideas demonstrate that Translation Studies is ready to enter into the dialogue with other disciplines, and stimulate the rise of interdisciplinary research, whereby Translation Studies is "[n]ot only a borrower, but also a lender" (O'Brien 2013: 14).

The new surge of multi-method empirical insights into the personality issue was initiated by Schweda-Nicholson (2005) who wanted to identify the personality types that are most attracted to the profession of an interpreter. The study was conducted on

68 interpreting trainees, who were asked to complete the online version of Myers-Briggs Type Indicator (MBTI), based on Jung's ([1921] 1971) personality typology. Based on the description of each of Jung's ([1921] 1971) four dichotomies, Schweda-Nicholson (2005) hypothesised that interpreters should be "[E]xtravert (E), Intuitive (N), Thinking (T) and Judging (J) or, in the vernacular of the MBTI, 'ENTJ'" (Schweda-Nicholson 2005: 118). Contrary to expectations, the results showed almost an even distribution of Extraverts and Introverts, as well as Intuitors and Sensors, and only moderately larger number of Judgers over Perceivers. Interestingly, some of the students who were Introverts at the beginning of their training became Extraverts in the course of their interpreting training programme.[18] Another unpredictable finding was that Thinkers significantly outnumbered Feelers in the sample, which Schweda-Nicholson (2005) explained by the fact that interpreting demands quick and logical decisions, whereas translators normally take their time and use multiple resources to come to the final version. The decision-related conclusion shall be partially taken up in the present dissertation and explored to design translator's personality profile.

Hubscher Davidson (2009) presented the first empirical study that brought together methods from psychology and Translation Process Research with an aim to link translator's personality and translation process. To measure the translator's personality, Hubscher Davidson (2009) employed Jung's ([1921] 1971) typology in the form of Myers-Briggs Type Indicator (MBTI). To collect translation process data, the method of Think-Aloud Protocols was used.[19] Twenty translation trainees participated in an experiment, whose stages included: 1) completing a background questionnaire, 2) translating an extract of a literary text from French (their L2) into English (their L1)[20] and simultaneously verbalising their mental processes, 3) filling out a retrospective questionnaire, and 4) taking an online MBTI test. The trainees' outputs were evaluated against an assessment sheet designed for the purpose of the experiment in order to gauge the participant's translation performance. The findings showed that Intuitive types produced higher quality translations than Sensing types, which was also supported in the decision making process as reflected in think-aloud protocols. One the downsides of the study is

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[18] This reminds the *life course position* claim (Roberts et al. 2003), according to which some of the personality traits may change under the influence of situational factors, e.g. greater work autonomy.

[19] Methodology applied in Translation Process Research is discussed in detail in chapter 2 of the thesis.

[20] In language acquisition studies, "L1" stands for "first/native language", "L2" stands for "second/foreign language".

the lack of statistical analysis that would boost the reliability of the results. Nonetheless, the research seems to be methodologically effective and inspiring, and shows prospective research avenues, which binds personality psychology and *translation psychology* (Jääskeläinen 2012) within the cognitive paradigm (Chesterman 2009).

A methodologically similar study was conducted by Karimnia and Mahjubi (2013), who used Myers-Briggs Type Indicator to investigate the relationship between translation trainees' personality types and the quality of their translation performance. The participants of the study were 35 undergraduate senior translation students with Persian as their L1 and English as their L2. They were asked to translate three different text types according to Reiss' text typology ([1971] 2000), operative (an advertisement), informative (a scientific text), and expressive (a narrative). Before starting the experiment, participants filled out a background questionnaire, and a retrospective questionnaire was completed after the experiment. The target texts were evaluated on the basis of the modified version of Hubscher Davidson's (2009) assessment sheets. Statistical analyses showed that Intuitors were significantly better at translating the expressive text than the Sensing types, which shows that there might be some correlations between personality type and one's predisposition to translate a certain text type, which has been initially suggested by Reiss ([1971] 2000).

Hubscher Davidson (2013a, 2013b) in her recent publications focused on the role of emotional intelligence (EI) trait and intuition in translation performance. Drawing from the data collected for the above-mentioned research into the relations between personality types and translation performance, Hubscher Davidson (2013b) looked closely into the Think-Aloud Protocols of one student as he was translating three excerpts of a text about Paris. The aim of the study was to discover "[t]he mechanisms of intuitive behaviour during the translation process and to gain a better understanding of its influence during decision-making" (Hubscher Davidson 2013b: 219-220). Some of the most interesting observations included the idea that conscious and non-conscious processing seem to appear simultaneously when dealing with a translation problem, and that whenever a problem is treated as particularly challenging, intuition may be favoured over purposeful analysis (Hubscher Davidson 2013b: 223). In her conclusions, Hubscher Davidson (2013b) pointed to the didactic implications of the study and expressed the need to attract the attention of translation trainees to their intuitions as they gain their expertise, and invite them to reflect on their final decisions by contrasting

them with the initial unconscious ideas, even if they were false. By doing so, the author implicitly suggested that intuitive task-related behaviour might become part of professional training.

The other emerging area of research into the non-cognitive aspects of translator's personality intends to discover relationships between positively or negatively laden emotions, self-esteem and Emotional Intelligence (further referred to as "EI") trait and successful translation or interpreting performance. The purpose of Hubscher Davidson's (2013a) pioneering article was to stress the importance of studying translators' and interpreters' EI in order to gain a more profound understanding of translation and interpreting processes. The researcher paid particular attention to the role of high EI trait for a literary translator involved in conveying creative and affective content. This observation suggests that different text types would require from translators to have different levels of EI, which might explain why some people are more attracted to literary translation than others. Interestingly, Hubscher Davidson (2013a) argued for the adverse impact of high EI trait on translators' and interpreters' performance when faced with negatively loaded materials (Hubscher Davidson 2013a: 16).

Having provided a theoretical basis for the study of the translators' Emotional Intelligence, Hubscher Davidson (2016) engaged in an empirical investigation with an aim to test the relevance of high EI trait for literary translators. In particular, the researcher wanted to identify the links between the trait and such variables as career success, job satisfaction and literary translation experience. Hubscher Davidson (2016) hypothesised that literary translators with high EI would be better apt for transferring the sensitive and emotional content of expressive texts into a different language and culture. The aims of the study were to find the differences between EI trait levels of literary and non-literary translators, and evaluate the type of association between EI, career success and job satisfaction. The experiment was conducted on a sample of 155 translators recruited from international organisations worldwide. The subjects were first asked to fill out a detailed background questionnaire, and then they were asked to complete the online version of the TEIQue psychometric test (Petrides 2009) to gauge their EI levels. The data were subject to statistical analyses, which revealed differences between EI scores of literary and non-literary translators on factor and facets levels, and positive relationships between high EI and self-perceived job satisfaction, literary translation experience and career success. In particular, significant differences were found

between literary and non-literary translators with regards to emotion regulation, stress management and self-control, which according to the author is consistent with findings in psychology and writing research (Abdolrezapour 2013; Shao et al. 2013). Hubscher Davidson (2016) went on to surmise that high EI levels might explain students' vocational choices, and thus their preference for literary translation. Conversely, students' involvement in creative tasks may also influence their EI scores (cf. Shao et al. 2013), thus pointing to the reciprocal relationships between non-cognitive and cognitive personality characteristics, as well as the impact of expertise on personality features.

Lehr (2013) conducted an empirical study to assess the influence of emotions on the quality of translation performance. The experiment was conducted on a sample of professional translators who were invited to engage in two translation sessions. After the first session participants were randomly assigned to two groups, one of which received positive feedback on the translation task, and the other one got negative feedback. Then the second translation session followed. In the analysis part, both translations were assessed for creativity (the quality of rendering idioms and stylistic features of the text), and accuracy (the quality of translating terminology). The results revealed that positive feedback fuelled creativity, and negative feedback increased accuracy. Rojo and Ramos (2016) replicated Lehr's methodology and reported similar findings. The experimental design in Rojo and Ramos (2016)'s study was complemented by a psychometric test, namely the Spanish version of Block and Kremen's (1996) ego-resiliency scale, and a self-reporting questionnaire. Unlike Lehr (2013), Rojo and Ramos (2016) conducted their experiment on translation students. As for resiliency measures, the results did not reach statistical significance, yet the data suggested that high resiliency levels contribute to better translation performance under negative emotional feedback than average or low resiliency.

Bontempo and Napier (2011) aimed to explore the role of personality characteristics of Australian signed language interpreters on their self-perceived professional competence. To measure personality dimensions, International Personality Items Pool[21] and Rosenberg Self-Esteem Scale were used. The results showed that such traits as Emotional Stability, Openness to Experience, Conscientiousness and self-esteem appear to be predictive of interpreters' self-reported competence. Using the same methodology,

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[21] http://ipip.ori.org (date of access: 28 Dec. 2017).

Bontempo et al. (2014) replicated the study in a worldwide survey of sign language interpreters, and the findings corroborated previous results indicating that high self-esteem, as well as "emotional stability, openness to experience and conscientiousness are important predictors of sign language interpreter confidence" (Bontempo et al. 2014: 39).

A recent study of Cifuentez-Férez and Fenollar-Cortés (2017) aimed to explore the impact of self-esteem, emotion regulation and expressivity on the performance of 45 Spanish translation students. Throughout the semester the students were asked to translate three texts, which were assessed against an agreed evaluation sheet. The findings show significant relationships between emotion suppression and negative expressivity, which means that those who tend to inhibit emotional input and supress their emotions in everyday life perform better than those who do not. Unlike Bontempo et al. (2014), Cifuentez-Férez and Fenollar-Cortés (2017) did not find significant relationships between student's self-esteem and translation quality, which is an interesting result that might suggest that while high self-esteem is important for sign interpreters (who work actively with people rather than texts), it might not prove effective for the successful written output of translation students (who work closely with texts rather than people). Such interpretation would be in line with the findings of Kurz et al. (1996) regarding action (interpreters) and process orientation (translators), as well as people orientation shared by both professions. On the other hand, the effect may not have been found due to the differences in the level of expertise, since Bontempo et al. (2014) conducted their experiment on a sample of professional sign language interpreters.

Nevertheless, the findings of research into the affective features of translators' personality offer a new inspiring interpretation of the individual variations frequently noticed by many researchers dealing with the cognitive aspects of translation process (cf. Lehka-Paul and Whyatt 2016). What remains unclear, however, is the answer to the question of whether and how these personality-driven variations relate to specific elements of the translation process in particular and translation competence in general. The next chapter will therefore intend to make an overview of some particularly relevant research into the translation process that might shed some light on studying translator's personality in its relation to the process and product of translation.

Conclusions

The chapter presented an overview of the leading approaches to the concept of personality in psychology, with a special focus on the trait and typological theories due to their relevance to the present thesis. The suggested working definition of the concept of personality points to its two important features: (1) the role of both relevantly stable (e.g. personality traits) and dynamic (e.g. psychological functions) personality characteristics in predicting behaviour, and (2) the interplay between personality and situational factors. The observed interplay between the internal personality-based and external situational factors in guiding people's behaviour indicates that there is a relationship between personality and academic and occupational performance. Moreover, the "person-organisation fit" assumption holds that people with certain personality characteristics are attracted to certain types of professions, and the "trait activation theory" states that certain dominant traits are activated under the influence of the relevant situational hints, e.g. one's professional practice. For example, Conscientiousness trait is believed to be the best predictor of academic and occupational performance, and Openness to Experience trait and the psychological function of Intuition are related to success in tasks that involve creativity and verbal aptitude. The dominant Thinking function appears to be connected with managerial behaviour and situations that require risk-taking. All in all, it is possible to determine two types of relationships: (1) between personality traits and the quality of one's performance (e.g. the quality of translations), and (2) between the psychological functions and certain task-related behaviours (e.g.the process of translation). The final part of the chapter traced the evolution of research into the role of personality in translation. To this end, three main periods were identified, which differ in their conceptualisation of and methodological approaches to the issue of translator's personality. The present thesis belongs the third stage of research into the translator's personality, and combines personality psychology and Translation Process Research using multi-method approaches. It relies on the *trait* and *typological* theories in an attempt to provide both *quantitative* and *qualitative* characteristics of the translator's personality, and relate them to the selected aspects of the translation process and product. Chapter 2 will focus on identifying the place of the translator's personality in the translation process by pointing to its elements that may be particularly subject to the influence of personality.

Chapter 2: Translator's personality in Translation Process Research

Introduction

The process of translation takes place primarily in the translator's mind, which makes it inaccessible for direct observation. Nevertheless, scholars working within the area of Translation Process Research have been trying to tap into the "black box" of the translator's mind by studying the process of translation from the cognitive perspective. It has been many times observed that there are considerable individual variations in the behavioural characteristics of the translation process, which leads to the assumption that the translator's personality may be one of the contributing factors. Thus, the main aim of the present chapter is to pinpoint the potential links between the translator's personality and the translation process. The chapter starts with the identification of the object of the present research with regard to the traditional differentiation between translation product and process orientations. The chapter proceeds by first providing a brief outline of the selected cognitive models of the translation process, and then tracing the evolution of methodology within Translation Process Research. As the role of the translator's personality has been acknowledged in research into the translator's competence and expertise, the final part of the chapter is devoted to the discussion of the process-oriented studies into translation competence and expertise. The chapter finishes with the summary of ideas and the conclusions relevant to the aims of the thesis.

2.1. Major research orientations in Translation Studies

On his famous map of Translation Studies, Holmes ([1972] 2000) divided Descriptive Translation Studies into *product*-, *process*- and *function*-oriented, which has since then served as a traditional classification of the objects of research in the field. Holmes ([1972] 2000) himself argued that the product orientation with its linguistic, mostly text-driven focus had already received extensive coverage from scholars, whilst process orientation was yet to receive closer attention. In fact, Holmes ([1972] 2000) believed that the study of how the "black box" of the translator's mind works might evolve into a separate field of "translation psychology or psycho-translation studies" (Homes [1972] 2000: 177), which would greatly contribute to the understanding of the complexity of translation as a cognitive activity.

In a similar vein, Bell (1991) explained the ambiguity of the term *translation* by distinguishing among three types of theories: translation as a product (*theory of translated texts*, Bell 1991: 22), as a process (theory of translating, ibid.), and both as a product and as a process (*theory of translation and translating*, ibid.). He emphasised the importance of the third and referred to it as "[t]he long-term goal for translation studies" (ibid.).

When Holmes's ([1972] 2000) predictions about the rise of interest in studying the process of translation came true, and Bell's (1991) proposal of a theory of translation incorporating both lines of approach began to be tested empirically, Englund Dimitrova (2005) put forward the following claim:

> Translating means producing a text. The translated text is tangible evidence of the translation process that precedes it and leads to it, and the text has long been the main object of study in translation studies. A study with a focus on the translation process and how the task is performed will have more validity if it also takes into account the product of the process, the translated text. (Englund Dimitrova 2005: 3)

Following Englund Dimitrova's (2005) suggestion, the present study takes a process-oriented perspective with the ultimate aim to identify the possible links between the translator's psychological characteristics guiding the *process* of translation on the one hand, and the quality of the translation *product* on the other, thus contributing to the general *theory of translation and translating* (Bell 1991). Prior to discussing how this can be achieved empirically, it is essential to identify the role of the translator in the

translation process, and describe the process in conceptual terms, e.g. by means of models.

2.2. Translator as the main agent in the translation process

Levý ([1967] 2000) in his seminal article entitled *Translation as a decision process* was the first to consider translation to be a purposeful communicative activity.[22] Moreover, he played a pioneering role in bringing the translator into the limelight and recognising the complexity of the translation task, in particular the problems that a translator is faced with and the risks that she or he is bound to take. Levý ([1967] 2000) analysed the process of translation from the formal standpoint of the mathematical game theory, and concluded that translation is "[a] game with complete information" (Levý [1967] 2000: 149) like chess, where each decision depends on the previous ones along with the situational variables. He went on to claim that translation training informs students about the range of "optimal" (ibid.) translation variants, whereas the actual translation practice requires the use of the "minimax strategy", which "[p]romises a maximum of effect with a minimum of effort" (Levý [1967] 2000: 156).

Levý ([1967] 2000: 150-151) also recognised the role of both conscious and unconscious factors in the translator's decision making process, conscious being objective or "[d]ependent on the linguistic material", and unconscious being "[s]ubjective, of which the most important are the structure of the translator's memory, his aesthetic standards, etc.". Levý's ideas were prophetic in a sense that Hönig and Kussmaul (1982) and then, more radically, Reiss and Vermeer (1984) took over the functional aspect of translation in their "skopos" theory,[23] and the issue of translator's decision-making and problem-solving processes has been many times revisited by scholars analysing translation from the cognitive perspective (e.g. Krings 1986; Tirkkonen-Condit 1992; Wilss 1996; Hubscher Davidson 2009). Finally, Gile's effort model (Gile 1995) in interpreting studies attracted attention to the cognitive demands that interpreting involves. What is more, the role of the unconscious elelments such as personality traits,

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[22] In the article Levý stated that he analysed translation "[f]rom the teleological point of view" (Levý [1967] 2000: 148). The word "telos" comes from Greek and means "[u]ltimate object or aim" (Online Etymology Dictionary (http://www.etymonline.com), date of access: 29 Dec. 2017).
[23] "Skopos" comes from Greek and means "aim" or "purpose" (Munday 2008: 79).

emotions and intuition (e.g. Hubscher Davidson 2013; Lehr 2013; Lehka-Paul and Whyatt 2016; Rojo and Ramos 2016) in the translation process has recently received a lot of attention in the Translation Studies community. Levý's ([1967] 2000) contribution, therefore, triggered the rise of descriptive (process-oriented) and pragmatic (functional) approaches to translation, which a few years later appeared on Holmes's ([1972] 2000) historic map of Translation Studies.

Similar to Levý ([1967] 2000), Seleskovitch (1977) viewed translation as a communicative activity of "[c]omprehension and re-expression of ideas" (Salama-Carr 2001: 113). Seleskovitch (1977) put forward the Interpretive Theory of Translation based on her personal experience in conference interpreting.[24] Drawing from the latest advancements in developmental and experimental psychology (e.g. Piaget 1967), linguistics and neuropsychology (e.g. Barbizet 1968), Seleskovitch (1977) was the first to model the process of interpreting with a special focus on the construction of *sense*.[25] According to the theory, *sense* is the central element on the way from the source language message to the target language message, and its interpretation depends on both the meaning of a certain linguistic unit and the individual "cognitive inputs" (Lederer 2010: 175) of translators that have been shaped by their own extra-linguistic knowledge and experience. Thus, a translator was regarded as the main agent in the construction of *sense* in the process of translation.

Delisle (1980) readjusted the Interpretive Theory to the process of written translation. According to Delisle (1980), translation starts with *comprehension* where linguistic meaning interacts with contextual information, then proceeds to the *reformulation* stage (or "reverbalising", Salama-Carr 2001: 113), where the translator uses her/his cognitive resources to find the corresponding means to convey the concepts in a target language, and finishes with the translator conducting "[q]ualitative analysis of selected solutions and equivalents" (Salama-Carr 2001: 114) at the *verification* stage. The Interpretive Theory, despite the lack of sound empirical evidence to support it, was an important contribution that fuelled further research into the translator's cognitive activities involved in the process of translation and interpreting.

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[24] Seleskovitch (1977) first applied her model to interpreting, but later it was extended to the translation process as well (Seleskovitch and Lederer 1984).
[25] The Interpretive Theory is also known as "the theory of sense" (Salama-Carr 2001).

Shifting the focus onto the process of translation made researchers aware of the role of the translator, and the need to investigate the complex set of cognitive activities that s/he performs in the translation process. In order to understand the nature and the type of these cognitive activities, the translation process began to be studied empirically and its models summarising the findings started to appear. The next sections will present some of the available models of the translation process with a particular emphasis on the role of the translator, and track the evolution of methodology used in the field of Translation Process Research (further referred to as "TPR").

2.3. Selected models of the translation process

The definition of the term "model" is viewed in the section in line with Chesterman's statement that "[t]hey [models] are often understood as being intermediate constructions, between theory and data. A model typically illustrates a theory, or a part of a theory" (Chesterman 2000: 15). Explaining the reasons for the multiplicity of research models, Chesterman (2000: 16) argued that they represent "[d]ifferent ways of testing or developing a theory or producing or exploring new data to stimulate new theories or test existing ones". Thus, the "theories" of the translation process are developing both as a consequence of and in response to methodological advancements, so new dimensions and new "illustrations" or "models" become possible.

Seleskovitch's Interpretive theory of the translation process (Seleskovitch and Lederer 1984) was an early example of a stratificational model of translation (Carl and Schäffer 2017: 51), whereby the translation process consists of a series of intermediate steps or "strata". Lörscher (1991) found that translation is not a linear process, but many different sequences of actions become possible depending on an individual. In a different study, Lörscher (1996) referred to the professional translators' characteristic preference for extensive and recurrent target text revision as the "ex-post-realisation of translation problems", pointing to the decision making and problem solving nature of the translation process (cf. Levý ([1967] 2000). Similarly, Wilss (1996) regarded translation to be a type of the translator's "cognitive behaviour" that depends on both cognitive (e.g. knowledge, experience) and non-cognitive (e.g. intuition) factors. All in all, mod-

elling the translation process is a challenging task, but it seems to be an important step towards further investigating various cognitive aspects of the translation process.

The suggested taxonomy of the selected models of the translation process is presented with some brief characteristics in Table 1. The list, though, cannot be considered exhaustive, as it only focuses on those models that represent theoretically different perspectives of the translation process. Such a selection method may help to compare the models, and thus make a more objective choice of the elements of the translation process that may be subject to the influence of the translator's personality. Following is the description of each of the chosen models in the chronological order.

Table 1. A suggested taxonomy of the selected models of the translation process.

No.	Researcher(s)	Year	Name	Theoretical background	Data support[26]
1.	Bell	1991	Information processing model	Systemic functional linguistics, artificial intelligence	No
2.	Hönig	1995	Ideal-type model of the translation process	Skopos theory and translation process research	Yes
3.	Kiraly	1995	Psycholinguistic model	Psycholinguistics	Yes
4.	Wilss	1996	Decision-making and problem-solving model	Cognitive Psychology	No
5.	Hansen	2008	Semiotic model of the translation process including self-revision	Semiotics and translation process research	Yes

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[26] In the table, the category of *Data support* involves the availability of results of experimental studies into the translation process.

Each of the above models and its relevance to the present thesis will be briefly discussed in the next sections of the chapter.

2.3.1. Bell's translation process model

Triggered by the technological upsurge in the 1980s, Bell (1991) offered to consider translation within the "information-processing paradigm" (Alves and Hurtado Albir 2010: 29), which assumes the top-down and bottom-up processing modes widely discussed in psycholinguistics of that period. He applied the structural knowledge of artificial intelligence and systemic functional linguistics in order to create his model of the translation process.

According to the model (Figure 2), the short-term and long-term memory systems take part in the process of decoding the source and encoding the target text. For the source language unit to be fed into the "cognitive processor", it needs to be first visually recognised, then a syntactic analyser parses it and sends it to the lexical search mechanism, where it is processed on the lexical level in a frequent lexis store to be later submitted for semantic and then pragmatic analyses. The complete semantic representation is ready once approved by the idea organiser and a planner that act together in order for the translation decision to be ready for the encoding phase, which operates through the pragmatic, semantic, lexical and syntactic synthesisers that altogether contribute to the emerging translation output. Bell (1991) claimed that the order of synthesisers is not fixed, which allows for online revisions of the previously made decisions. Upon describing his suggestion of the model, Bell prophetically stated that the modelling of the translation process should "[b]e the goal which translation theory should now set itself" (Bell 1991: 75).
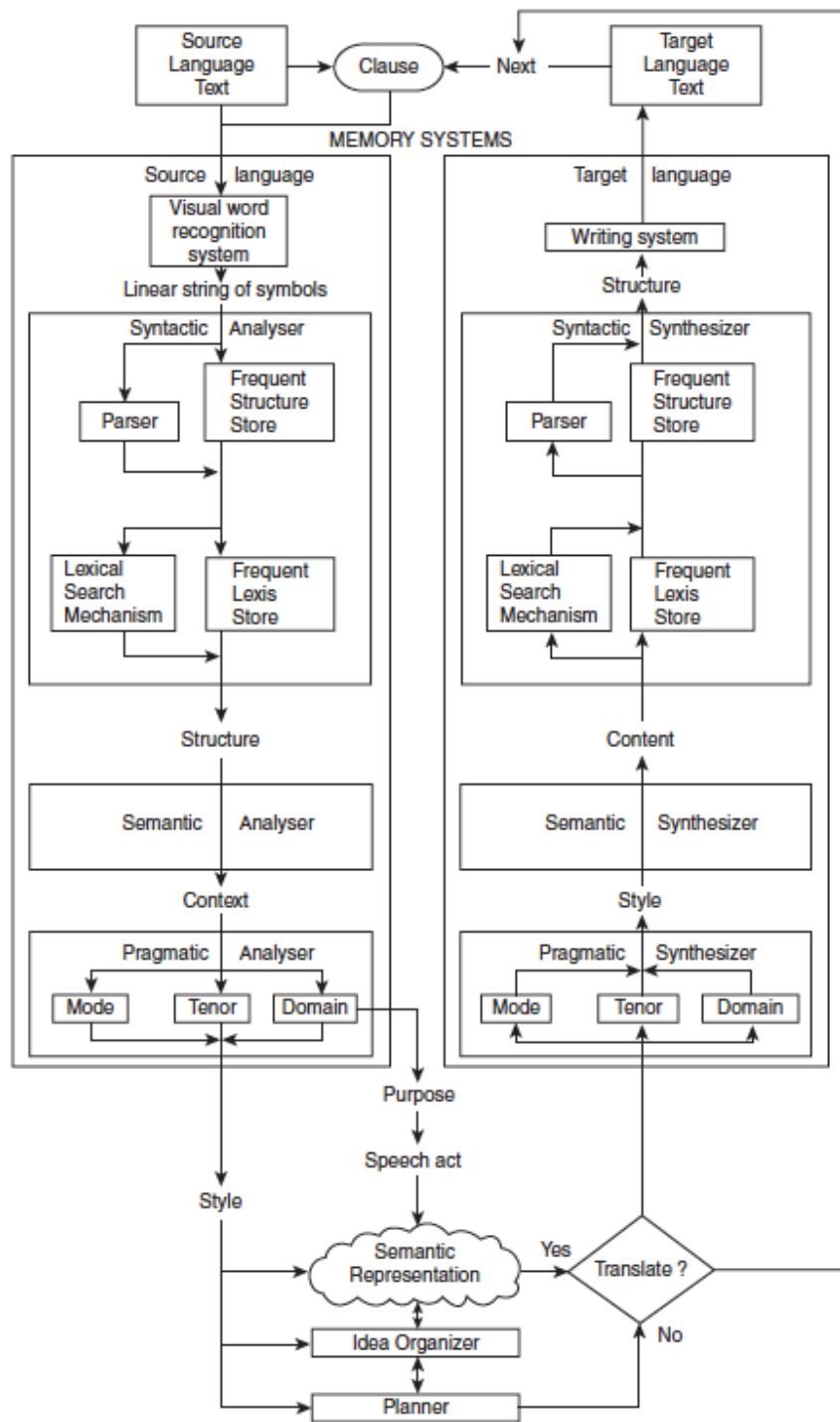
Fig. 2. Bell's model of the translation process (Bell 1991: 55, as quoted in Alves and Hurtado Albir 2009: 57).

2.3.2. Hönig's translation process model

Hönig (1995) presented the ideal model of an expert (or "qualified", Hansen 2006: 29) translator's process of translation (Figure 3). The model was largely based on Vermeer's (1978) Skopos theory, and displayed target text orientation. Hönig (1995) believed that the mental processes involved in the translation phase occur simultaneously, and outlined two main elements of the expert translator's processing behaviour.
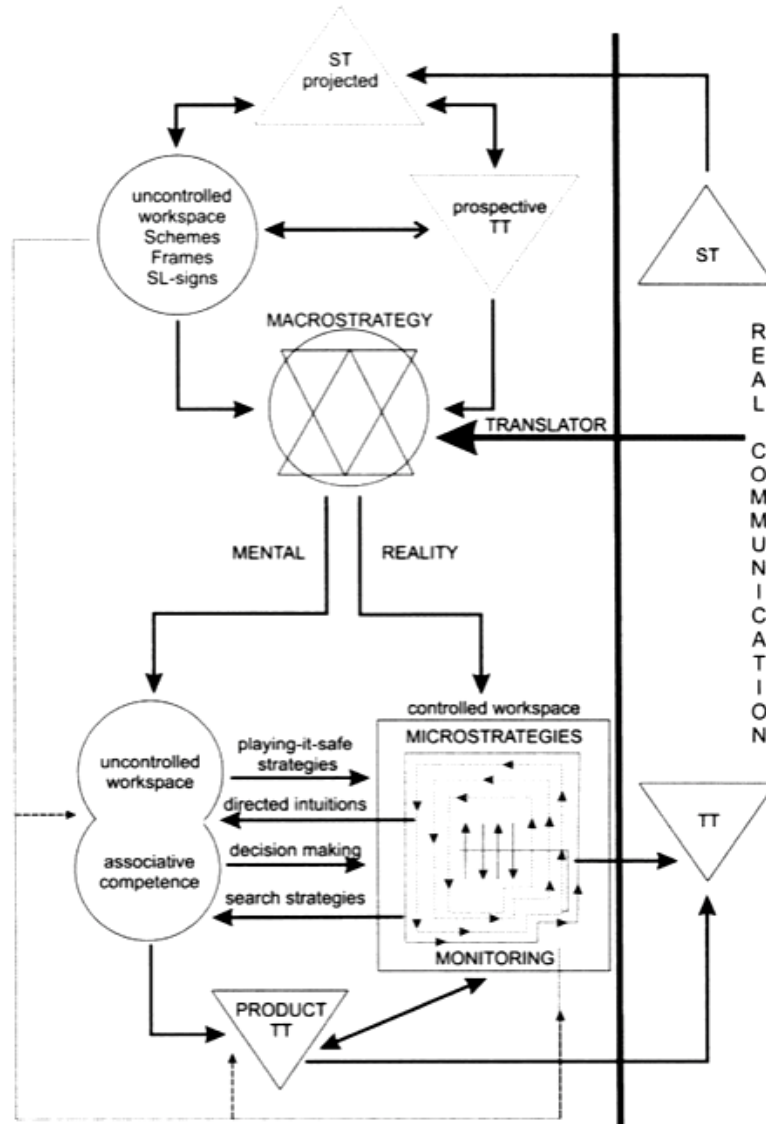
Fig. 3. Hönig's model of the ideal translation process (Hönig 1995: 51, as quoted in Göpferich 2009: 14).

The process starts with the reading of the source text, which is influenced by the translation task that a translator has in mind from the very beginning. Once fed into the mental

reality, the source text undergoes processing in both the uncontrolled workspace and the controlled workspace. The uncontrolled workspace includes the relevant cognitive schemes and frames that need to be activated from the long-term memory store, which trigger "[e]xpectations with regard to structure, style, and content" (Göpferich 2009: 15) of the projected source text in relation to the prospective target text. Once the information processed by the uncontrolled workspace is integrated with the expectations of the projected source text and the prospective target text, the translator develops a *macrostartegy*, which then monitors and supervises the use of *microstrategies* (relevant rules and procedures, cf. Bell's 1991 "synthesisers"). According to Hönig (1995), the development of a macrostrategy should ideally come before the actual translation phase (the choice of rules and procedures to translate). One of the two most essential components that contribute to the processing in the *uncontrolled workspace* is the "associative competence", which was previously referred to as the "innate translation ability" (Harris and Sherwood 1978). According to Hönig (1995), the associative competence is conducive to the acquisition of the translation competence, which, on the other hand, can be achieved once a translator is able to develop the *macrostrategy* (Göpferich 2009: 17). The *macrostrategy* ensures the desired translation quality by constantly *monitoring* the *tentative decisions* and *evaluating* them against the quality criteria that a translator has established. To sum up, Hönig (1995) argued that the successful development of translation competence might be related to the translator's individual predispositions, i.e. personality characteristics, while the translator's ability to follow a macrostrategy is connected with the meta-cognitive functions of *monitoring* and *evaluation*.

2.3.3. Kiraly's translation process model

Kiraly (1995) viewed translation as both the internal (cognitive) and external (social) activity, and therefore presented two models of the translation process, a *psycholinguistic* model and a *social* one. To elaborate the former (Figure 4), Kiraly (1995) analysed the data received from think-aloud protocols of the translation processes of students and professional translators, and the findings of a range of case studies.
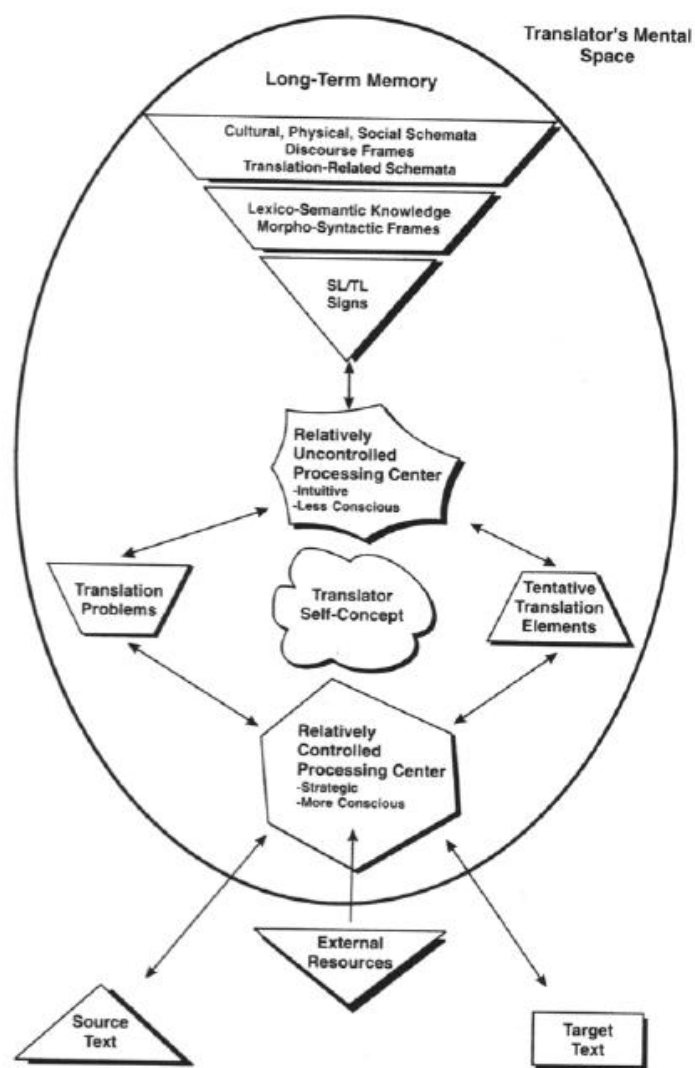
Fig. 4. Kiraly's (1995: 101) psycholinguistic model of the translation process.

The researcher claimed the translator's mind is a special type of information-processing system, and the translation occurs as a result of both intuitive (uncontrolled and unob-servable) and controlled (and thus observable) processes supported by both linguistic and extra-linguistic information. Considering the definition, Kiraly (1995) designed a model of the translation process, which consists of: (1) information sources, (2) the intu-itive workspace, (3) the controlled processing centre (Alves and Hurtado Albir 2010: 30). Similar to the other researchers (cf. Alves 1995; Wilss 1996), Kiraly (1995) argued that a translation problem arises once the intuitive (subconscious) workspace fails to provide a solution. The problem is then transferred to the controlled processing centre,

which is supposed to choose a relevant strategy. Unless the problem is solved, it is again transmitted to the intuitive workspace for evaluation until the tentative solution is finally offered. According to Kiraly (1995), the central element in the model is the translator's *self-concept*, which he defined in the following way:

> The self-concept includes a sense of the purpose of the translation, an awareness of the requirements of the translation task, a self-evaluation of capability to fulfill the task, and a related capacity to monitor and evaluate translation products for adequacy and appropriateness. (Kiraly 1995: 100)

According to the definition, the translator's *self-concept* refers to both product- and process related awareness that the translators need to develop. As regards the former, the translator's self-concept contributes to fulfilling the pragmatic function of translation and ensuring adequate translation quality. As for the latter, self-concept is involved in the cognitive processes of analysing the source text, monitoring and evaluating decisions (cf. Hönig's (1995) concept of a *macrostrategy*), and eventually maintaining the translator's own level of confidence with respect to a given translation task.

Kiraly (1997) placed translator's *self-concept* in a continuum "[e]xtending from the simple retrieval of spontaneous associations at the word level to a complex, multistage, problem-solving process in which extra-linguistic factors are taken into consideration" (Kiraly 1997: 152). It is probably due to its developmental nature and the focus on the role of the translator in the translation process that Kiraly's idea of a self-concept was employed in the translation competence models of the PACTE (PACTE 2003) and TransComp (Göpferich and Jääskeläinen 2009) research groups. In particular, in the TransComp model, self-concept is one of the basic components that influence further development and acquisition of the translation competence.

Muñoz Martín (2014b) took the dynamic aspect of the translator's self-concept even further and put forward the notion of a "working self-concept", which involves reacting to and adjusting to the requirements of a given translation task. He suggested that "[w]e understand and handle situations and face difficulties in ways coherent with our current activated self-concepts and avoid courses of action that are not consistent with it" (Muñoz Martín 2014b: 31).[27] Similarly to Muñoz Martín's "working self-concept", Ehrensberger-Dow and Massey (2013) claimed that self-concept is related to

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[27] This statement resembles the idea of the "person-organisation fit", discussed in section 1.6.2.

the specific translation act. To test the continuum idea and relate self-concept to translation competence, Ehrensberger-Dow and Massey (2013) conducted an empirical study with translation students and professional translators as informants. The findings showed that students were mostly concerned with word-for-word transfer and thus displayed lower levels of translation competence, whereas professional translators focused on pragmatic and textual issues. Heeb (2016) investigated the self-concepts of unidirectional and bidirectional translators in a study using retrospective verbal protocols. No considerable differences between the two groups in terms of self-concept were found, which Heeb concluded to be the failure "[t]o provide support for considering L2 translation inferior to L1 translation" (Heeb 2016: 84). In other words, both groups of participants displayed equally developed levels of translation competence, which probably supports Muñoz Martín's (2014) idea of a "working self-concept" as a dynamic type of self-awareness in translation.

2.3.4. Wilss's translation process model

Wilss (1996) studied the mental processes involved in translation within the framework of cognitive psychology. Wilss (1996) emphasised the importance of approaching translation as a decision making and problem solving activity, which progresses "[f]rom the point at which they [translators] recognise that a decision must be made, through a gradual elimination of the pertinent problem, up to post-decision evaluation and correction" (Wilss 1996: 190). Wilss (1996) admitted, though, that each translator's decision making process is individual, which explains the multiplicity of translations produced by different people: "There is a covariation between the individual translator and that person's decision-making behaviour which is determined by the translator's individual traits – with the result that many translations are characterised by closely interwoven personal, sociocultural and intellectual dispositions" (Wilss 1996: 180).

The researcher also differentiated between "macrocontextual and microcontextual decision-making" (Wilss 1996: 176), the former being concerned with the general content of the source text, its purpose and the readers' expectations, and the latter with solving individual text-based (syntactic, semantic, etc.) problems. Wilss (1996: 188)

proposed a model of decision-making in translation, which consists of the following elements:

(1)   Problem identification;

(2)   Problem clarification (description);

(3)   Research of, and collection of, background information;

(4)   Deliberation of how to proceed (pre-choice behaviour);

(5)   Moment of choice;

(6)   Post-choice behaviour (evaluation of translation results).

According to Wilss (1996), decision-making processes are connected with a broader notion of problem-solving activities that altogether require the activation of both procedural (knowing how) and declarative knowledge (knowing what). Consequently, Wilss (1996) stated that translation is an activity based on "organised knowledge" that includes schemas, or cognitive units, which help to acquire and store new knowledge. Finally, Wilss (1996: 37) viewed translation as an intelligent kind of "cognitive behaviour" determined by two core properties, knowledge and skills, which are "[t]he pillars of information-processing procedures designed to determine the conditions for situationally adequate translation processes and to substantiate them evaluatively". Such intangible mechanisms as *intuition* and *creativity* were also considered to be important elements of the decision-making model of the translation process developed by Wilss (1996). All things considered, Wilss (1996) offered an extended interpretation of Levý's (1967) statement about translation being a decision-making process, and placed it within the paradigm of cognitive studies.

2.3.5. Hansen's translation process model

Despite some conceptual differences, all of the models discussed above agree that the relationship between the source text and the target text is developed primarily in the translator's mind via complex processing that involves the activation of both conscious and unconscious mechanisms. The results of such processing are the translator's *decisions* that may, however, undergo changes in the translation process to meet the re-

quirements of the source text and translation quality standards, to adhere to the rules of the target language, translation brief (cf. Bell's 1991 "synthesisers"), etc. Thus, the translator's process of making decisions, evaluating and revising them seems to be an important element of the translator's cognitive processing involved in translation, which was incorporated in Hönig's (1995) and Kiraly's (1997) models in the form of *macrostrategy* and *self-concept* respectively. Moreover, the translator's personality characteristics (Wilss 1996) may be among the factors that influence her/his decision-making process. In her model, Hansen (2008) also acknowledged the importance of the translator's decision-making that involves monitoring and evaluation, but applied the term "self-revision" used in Translation Process Research to refer to the translator's activity of reviewing her/his translation decisions.

Hansen's (2008) model of the translation process (Figure 5) is affiliated with the classic semiotic theories with a particular focus on Bühler's (1982) view of signs as "[u]nits of different dimensions like morpheme, word, phrase/clause, paragraph and even text. As signs they are used in actual situations where we refer to phenomena or in general statements where we refer to classes of phenomena" (Hansen 2008: 263).
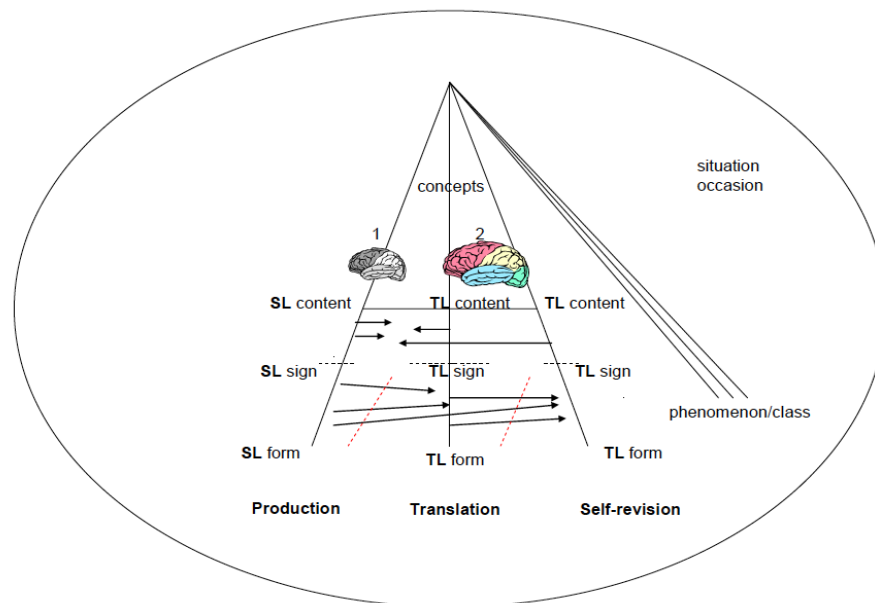
Fig. 5. Hansen's (2008: 264) model of the translation process.

The model features the brain of the author and that of a translator, which means that it includes both the author's production and the translator's translation processes. The

three lines leading to the phenomenon/class shows that the relation between signs, which were produced by the author and then suggested by the translator at the drafting and self-revision stages, does not necessarily need to be equivalent or overlapping. Self-revision received a separate place in the model, as Hansen (2008) believed that the processes of translation and self-revision are complementary and may affect each other, i.e. revisions may lead to a change of the translation strategy, and vice versa. From a more practical viewpoint, Hansen (2008: 263) advised translators to put aside their work and revise it later, not immediately after the first draft, because "[p]eople fall in love with their own formulations". Hansen's (2008) model shows an interesting endeavor to combine the source text with the final product by dividing the task between two brains, two mental realities and two semiotic systems with a special emphasis on the role of self-revision.

Based on the above discussion of the selected models of the translation process with a focus on the role of the translator, the working definition of the translation process adopted for the study reads as follows:

- Translation process is a result of the interplay between the translator's *subconscious* and seemingly automatic *intuitive* processing, the *conscious* and *controlled* monitoring operations, and the *evaluative* activity based on both subconscious and conscious processing.

The present thesis is concerned with identifying the role of the translator's personality characteristics in the complex set of processing opreations involved in translation (Hönig 1995; Wills 1996; Kiraly 1997; Hansen 2008), and the translator's individual predispositions or "traits" in the development of translation competence and expertise (Hönig 1995; Kiraly 1997). Empirical investigations into the cognitive aspects of the translation process would hardly be possible without appropriate methodology, which first arrived in the 1980s from the field of psychology. Since that time the methodological framework for the investigation of the cognitive aspects of the translation process has evolved remarkably to suit the needs of different types of research. The aim of the next section is to track the evolution of methodology in Translation Process Research and present the key findings revealed at each of the developmental stages, as well as identify the tools and methods that may be particularly revelant for the present research.

2.4. Evolution of methodology in Translation Process Research

Jääskeläinen (2011) and then Alves (2015) marked three generations of translation process research studies as based on research design and the kinds of issues explored. Jääskeläinen (2011) offered to add the fourth generation of research that would include large-scale studies, such as Hansen (1999, 2002), PACTE (2003). The research questions and hypotheses, as well as experimental designs could not have evolved, however, without the methodological advancements in the field. All of these important criteria were aptly incorporated in Alves and Hurtado Albir's (2017) summary of the evolution of research into the cognitive aspects of translation from a chronological perspective. Considering the latest developments in the field, the scholars offered to delineate four formative "phases" (the same term was reiterated by Jakobsen (2017) in his general account of the translation process research in the same volume) in the evolution of methodology in Translation Process Research, which will be briefly covered in the next sections.

2.4.1. The first phase: Explorations with Think-Aloud Protocols

Alves and Hurtado Albir (2017) refer to the phase as *Predominance in the Use of Think-Aloud Protocols*, and state that it lasted for a about decade, from the mid 1980s to the mid 1990s (Alves and Hurtado Albir 2017: 542). Think-Aloud Protocol (further referred to as "TAPs") is an introspective method borrowed from psychology (Ericsson and Simon 1984; Börsch 1986) and used to study the conscious mental processes in their relation to a certain task.[28] Ericsson and Simon (1984) treated human cognition as an information processing system, and believed that it was possible to retrieve and verbalise the information processed in the short-term memory concurrently with a given task. Thus, the method consisted in participants verbalising their thoughts in the course of completing a certain task.

In Translation Studies, the method was taken over by Krings (1986) in his attempt to explore what was going on in the translator's mind in the process of transla-

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[28] The method is also known as "concurrent verbalisation" (Bernardini 2001), "verbal reporting" (e.g. Jääskeläinen 2011) or "introspection" (e.g. Saldanha and O'Brien 2014).

tion. Like most of the other pioneers of empirical translation process research, Krings (1986) viewed translation as a decision-making and problem solving activity. He aimed to identify the types of problems translators faced and the strategies they used to overcome those problems. The analysis of the protocols allowed Krings (1986) to compose a list of *problem indicators*, such as the use of reference materials, pauses, the instances of hesitation while looking for potential translation variants, and solutions monitoring, etc. (Bernardini 2001: 246). Krings (1986) also identified five *strategies* that translators applied as soon as a problem appeared: (1) comprehension (reliance on inferences or reference materials), (2) equivalent retrieval (by means of associations), (3) equivalent monitoring (testing the meaning hypothesis through the comparison of the source text item and the target text item), (4) decision-making (choosing the appropriate solution from a range of possibilities), (5) reduction (sacrificing some of the features of the source text) (Bernardini 2001: 246). As Krings ([1995] 2001) was further interested in post-editing, he extended the number of strategies to over 200 (Jakobsen 2014: 70).

In a similar study using TAPs, Gerloff (1986) classified the "text-processing strategies" into the categories of "[p]roblem identification, linguistic analysis, storage and retrieval, general search and selection, text inferencing and reasoning, text contextualisation, and task monitoring" (Bernardini 2001: 246). Apart from strategies, Gerloff identified seven "units of analysis" in translation, ranging from the level of a morpheme to that of discourse (Bernardini 2001: 249).

Lörscher (1991) reported on one of the largest TAP studies, where 48 language learners with German as their mother tongue and English as their first foreign language produced 52 target text verbalisations in both directions.[29] Lörscher defined a translation strategy as "[a] potentially conscious procedure for solving a problem faced in translating a text, or any segment of it" (Lörscher 1991: 8), and suggested that the translation process is composed of a range of strategies, each including a set of smaller steps, and both strategies and steps can appear in different combinations. Despite high individual variability, though, Lörscher (1991) believed it was possible to generalise about the emergence of the taxonomies of translation strategies as based on those different combinations.

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[29] The participants' task was to translate a written text in the spoken form, i.e. perform sight translation.

Shifting the focus from language learners to professional translators, Séguinot (1989, 1996) conducted several case studies to analyse the TAPs of professional translators, as well as learners with varying degree of language proficiency (Séguinot 1991). The findings revealed 4 strategies that may be considered characteristic of a professional translator: "[i]nterpersonal strategies (brainstorming, correction, phatic function), search strategies (dictionaries, world knowledge, words), inferencing strategies (rereading ST and TT, consulting) and monitoring strategies (rereading ST and TT, consulting, comparing" (Bernardini 2001: 247). Séguinot (1996) claimed that the strategies were randomly repeated, translation proceeded mostly on the sentence level and was interrupted by doubts and long pauses.

It becomes evident that the early insights into the cognitive aspects of the translation process were mostly confined to the study of translation strategies with language learners as research subjects. However, viewing translation as a decision-making process, "[f]or which the flow chart was a suggestive analogy" (Jakobsen 2014: 69), was not enough and further investigations comparing novices' and professional translators' performance with the help of think-aloud were destined to appear within the first generation of research. Lörscher (1996) presented one of the first comparative studies using verbal protocols to tap into the differences between the cognitive processes of foreign language students and professional translators. He found that the translation processes of non-professionals and professionals have a lot in common with regard to the type and quality of strategies employed, yet the quantitative characteristics (such as the number and distribution of strategies) differ quite substantially. In addition, Lörscher (1996) stated that the two groups take divergent "process-oriented approaches to the translations" (Lörscher 1996: 30). For instance, Lörscher (1996) observed that professional translators monitored their target text production more extensively than non-professionals, revising their output even when the problem had not been previously detected. He referred to the phenomenon as "ex post realisation of translation problems" (Lörscher 1996: 31) and believed it to be one of the most characteristic features of proficiency in translation. Among other important findings, Lörscher (1996) concluded that professional translators mostly followed *sense* orientation as opposed to the *form* orientation displayed by foreign language learners; the former group paid more attention to conveying the source text style and the relevant qualities of the text type, while the latter group mainly concentrated on resolving the problems they encountered. Professional

translators were able to deal with larger source text segments, i.e. units of translation, and adopted a more global perspective on problem solving, whereas non-professionals focused on overcoming problems of a local type, e.g. lexical transfer, which Lörscher (1996) explained by their "[l]ack of competence in SL or TL" (ibid.).[30] With his contribution into studying the translators' conscious mental processes happening during the translation task, Lörscher (1996) made an important step that encouraged other scholars to further embark on the more in-depth investigations of the issue.

Jääskeläinen (1993) developed Lörscher's (1991, 1996) ideas and differentiated between local and global translation strategies, the former concerned mostly with resolving lexical problems, and the latter dealing with the issues such as style, the expectations of the target audience, etc. Jääskeläinen (1993) in her theoretical discussion assumed that the local strategies should be more illustrative of non-professional behaviour, which is also less coordinated and pre-planned than that of professionals.

In her later research, Jääskeläinen (1996) compared the findings of two methodologically similar studies by Gerloff (1988) and herself (Jääskeläinen 1990). Jääskeläinen (1996) observed that the level of the participants' competence and experience in translation did not correlate with the quality of their translations, i.e. some novices and laymen outperformed professionals in both studies. However, the time and effort that the authors of the best quality target texts devoted to the translation task did bear fruit. The researcher, therefore, concluded that the duration of the translation process is a poor indicator of proficiency, and the professional translators do not necessarily perform better than non-professionals. Jääskeläinen (1996) went on to suggest that professional translators invest more time and effort particularly in non-routine tasks (those that are thematically or otherwise unfamiliar to the translators) and use more automatic processing in routine ones (those that the translators are more experienced in and used to), whereas novices are "[b]lissfully unaware of their ignorance" (Jääskeläinen 1996: 67), so they often translate faster and encounter fewer problems than professionals irrespective of the task type. Jääskeläinen (1996) referred to this observation as the "developmental stages" (ibid.) in translation competence. The other important point that Jääskeläinen (1996) mentioned was the impact of affective factors, such as translators' motivation and emotional engagement in the task, on the quality of

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[30] "SL" and "TL" are the widely accepted abbreviations for "source language" and "target language".

their performance. Similar findings were reported by Laukkanen (1996), Tirkkonen-Condit (1997), Tirkkonen-Condit and Laukkanen (1996).

Despite the fact that introspection allowed investigating the cognitive processes in translation, researchers soon acknowledged the limitations of the method (cf. Fraser 1996; Jakobsen 2003). For instance, professionals verbalised considerably less than students, which could be explained by their increased problem sensitivity, better monitoring skills and greater awareness of the need to switch from less conscious "automatic" to the more conscious "marked" processing whenever the problem occurred. Moreover, research during the next TPR phases revealed that concurrent verbalisations slowed down the participants' translation process by around 25% (Krings [1995] 2001; Jakobsen 2003), had a negative influence on segmentation (Jakobsen 2003), and created additional cognitive load (Jakobsen 2014). Jakobsen (2003), however, found that the think-aloud condition did not influence the amount of time that the translators devoted to the process of self-revision. Still, the first generation of research was not methodologically confined to concurrent verbalisations, but also featured dialogue protocols, IPDR (Integrated Problem and Decision Reporting) and retrospection,[31] as well as interviews, questionnaires and translators' diaries, which all yield "[s]oft, qualitative and subjective" (Göpferich and Jääskeläinen 2009: 172) type of data. The more objective and "hard" methodology is associated with the beginning of the new generation of translation process research, when the researchers focused on more specific research questions and started combining different methods through triangulation.

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[31] Dialogue protocols consist in two participants translating the text together and voicing their thoughts at the same time. The method proved to be particularly efficient in translation didactics, as it helped trainees improve their own translation strategies through cooperation with colleagues (cf. Hönig 1995; Kussmaul 1995). IPDR (Integrated Problem and Decision Reporting) is another method that was found to be unfitting for research due to the incomplete data it generated (cf. Gile 2004; Pavlović 2009), but appeared to be useful in translation training. It involves participants writing down their ideas regarding different problems they encounter and solutions they offer and eventually decide on as they perform the translation task. Retrospection is a popular method that requires from participants to report on their translation processes immediately after they have finished the task. The method has been extensively used in experimental settings in combination with the other methods, e.g. key logging, and provides rich data for analysis depending on the research aims (cf. Englund Dimitrova and Tiselius 2009; da Silva 2015).

2.4.2. The second phase: Narrowing the focus with key-logging and triangulation

According to Alves and Hurtado Albir (2017), the second phase spanned from the late 1990s to around 2005, and was connected with the "[i]ntroduction of technological tools and of a multi-methodological paradigm (triangulation)" (Aves and Hurtado Albir 2017: 543). Jääskeläinen (2011) and Alves (2015) associated the beginning of the second phase with the arrival of key logging. Jakobsen (2014) and then Alves and Hurtado Albir (2017) rightly noticed that the invention of Translog initiated the beginning of what is now understood as Translation Process Research proper that "[w]orks within a behavioural-cognitive experimental paradigm", and "[s]eeks to answer one basic question: by what observable and presumed mental processes do translators arrive at their translations?" (Jakobsen 2017: 21).

Fuelled by the ambitious aim of providing a more detailed and in-depth analysis of the translation process, Jakobsen and Schou (1999) invented Translog, the key-logging programme, "[i]n response to a personal research frustration with trying to make sense of think-aloud data" (Jakobsen 2014: 72). The programme recorded all keyboard and mouse activities produced in the process of translation (or any other written task), with a replay function that enabled a researcher to view the production of the text with all the editorial changes and pauses as they appeared in real time. It is hardly possible to provide a better account of Translog functions than the inventor himself did in the following excerpt:

> The basic technique of keystroke logging is simple. The main function of a key logging programme is to record what key was struck exactly and when. From a log of this information, the translation process (strictly the typing process) can be replayed any number of times at different speeds, if relevant, and can also be shown in a linear representation with all the keystrokes, including deletions, insertions, corrections, editorial changes, mouse movements, and so on, together with indications of the duration of all, or a selected number of, time intervals between keystrokes. Instead of having only the end product, the researcher has access to a record of the entire typing process by which the final product emerged. (Jakobsen 2017: 29)

The history of the programme has already witnessed its four versions, Translog 2000 (Jakobsen 1999 and Schou), Translog 2006 and two updates (versions 2.0 and 2.24) of Translog-II (Carl 2012), whereby the latest one enables Chinese and Japanese characters and is adjusted to combine with eye tracking, another methodological development that appeared at the turn of the third phase of TPR and will be discussed further in the

chapter. Translation Studies Bibliography Online returns 45 hits[32] for "Translog" as a search item and features the implementation of the tool to explore such issues as the influence of dictionary use on the translation quality (Livbjerg and Mees 1999), translators' coping tactics while translating under time pressure (Jensen 1999; Jensen and Jakobsen 2000), comparing the methods of think-aloud and key-logging (Jakoben 2003), the advantages of triangulation of methods (Alves 2003), inferential decision-making in translation (Alves and Gonçalves 2003), post-editing effort in machine translation (O'Brien 2005), the differences between expert translators and novices with regard to segmentation and speed (Jakobsen 2005; Dragsted 2005), and creativity in translation (Heiden 2005). The overview of the Translog-related publications at the second phase of TPR studies point to the leading role of the researchers at the Copenhagen Business School, the birthplace of the programme, in the improvement and promotion of the tool, as well as in introducing innovations in research designs and methodology. Owing to its numerous advantages in investigating the translation process empirically, the method will also be used in the present study.

As the popularity of key logging was increasing, other methods such as screen-recording, retrospective protocols, questionnaires and interviews, if relevant to the research questions explored, also found their way in TPR at that stage. The introduction of triangulation (Alves 2003) in Translation Studies encouraged researchers to combine different tools and methods in order to obtain more reliable data and interpret the results in a more comprehensive and objective manner.[33]

Among the most notable contributions of the second phase of TPR was Jakobsen's (2002) division of the translation process into orientation, drafting and end revision, with the identification of translation-specific behavioural patterns. In particular, translation students were found to devote more time to the drafting stage than professionals, who preferred revising their translations at the end revision stage more extensively than students. The study was ground-breaking not only in a scientific, but also terminological sense, with the type of revisions that a translator would typically intro-

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[32] The data is valid as of 25 Feb. 2018.

[33] Triangulation is a method of combining "[s]everal instruments of data gathering and analysis" (Alves 2003: 7) in order to investigate the central research question. It originally comes from geometry, but has been adapted for use in social sciences, psychology, and recently, in Translation Studies. In the third phase triangulation in TPR became even more common and often referred to as a "multi-method approach".

duce at the drafting phase being referred to as *online revisions*, and those introduced after the first draft was finished as *end revisions*.

Another important finding was reported by Dragsted (2005), who studied the issue of cognitive segmentation in novices and professional translators. The researcher defined cognitive segmentation by the size and nature of translation units (or "segments"), and the speed of their production. It was hypothesised that the difficulty of the task would influence the three variables, as well as "[t]rigger a more novice-like behaviour in professional translators" (Dragsted 2005: 51). The results of statistical testing showed no significant effects with regards to production speed, whereas the source text difficulty was found to have an influence on the size and nature of translation segments as hypothesised. An important observation was made with regard to the nature of translation units, whereby novices processed mostly on the lexical level irrespective of the text type as opposed to professional translators who were able to shift from clause to lexical level whenever the text was more difficult. On the basis of her findings, Dragsted (2005) offered to differentiate between two cognitive processing styles, *analytic* and *integrated,* the former characterised by "[s]hort average segment size, low production speed and long pauses, processing at word/phrase level, many single-word segments, and few exceptionally long segments", and the latter by "[l]ong average segment size, high production speed and short pauses, processing at clause/sentence level, few single-word segments, and many exceptionally long segments" (Dragsted 2005: 66). In case of a difficult (unfamiliar) text, both professionals and students resorted to the analytic processing mode, and while dealing with an easy text professional translators employed the integrated processing mode, but novices still preferred the analytic one. In her conclusions, though, Dragsted (2005) admitted to discovering considerable individual variations in both groups of participants, which was one of the factors that forced the researcher to subtract the end revision phase in her evaluation of production flow. This is an interesting observation, which might be relevant to the present thesis, as it shows that self-revision time is one of the variables that might be associated with the translators' individual processing style in addition to the cognitive styles revealed by Dragsted (2005).

Inspired largely by Ivir's (1981) "literal-translation-default-hypothesis" and Toury's law of interference (Toury 1995a), as well as a meta-analysis of some of the TPR studies using different methodology (e.g. TAPs in Tirkkonen-Condit 2002; Trans-

log in Martikainen 2001), Tirkkonen-Condit (2005) put forward the "monitor model" of the translation process. According to the model, literal rendering is a default translation procedure that is supervised by the monitor, which interrupts the automatic processing whenever a problem appears. Carl and Dragsted (2012) put the model to experimental testing by comparing 10 text-copying sessions and 15 translation sessions recorded with Translog 2006, which collected keystroke and gaze movements data. Behavioural data showed that the unproblematic ("unchallenged", Carl and Dragsted 2012: 144) translation process and text copying had a similar number of source text fixations measured by the eye-tracking method,[34] whereas pauses and source text fixations were longer and more frequent in the translation condition, which corroborated the hypothesis that the monitor intervenes more in the process of translation than in text copying. Based on their findings, Carl and Dragsted (2012) arrived at a "[s]urprising conclusion that comprehension does not precede, but follows text production" (Carl and Dragsted 2012: 144). It seems obvious, however, that producing a translation variant cannot be possible without understanding the source text unit, which casts doubts on Carl and Dragsted's (2012) conclusion. The data might have in fact suggested that literal default procedure occurs as a result of parallel comprehension and production processes, and once comprehension is disturbed, the monitor interferes and modifies the process, which might account for longer source text fixations and pauses in translation. The explanation seems to complement Dragsted's (2005) cognitive styles, whereby the integrated style involves flexible shifting from the fast and automatic to the controlled and more conscious processing patterns.

Englund Dimitrova (2005) combined the methods of concurrent verbalisation with key logging to tap into the individual translation process profiles of nine participants with varying degree of proficiency: professional translators, translation students and foreign language students.[35] Englund Dimitrova (2005) observed that all of her participants resorted to literal renderings in their translation process irrespective of their level of experience, which corroborated the "literal translation hypothesis". The researcher surmised that writing down the immediate target language variant might serve translators to reduce cognitive effort. Englund Dimitrova (2005) noticed, however, that

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[34] The method of eye tracking will be discussed in section 2.4.3 of the thesis.
[35] Englund Dimitrova (2005) used ScriptLog in her study, which is a key-logging programme similar to Translog, but more extensively used in writing research. Another popular key-logging programme is Inputlog.

professional translators wrote down literal version more frequently than students and used it "[a]s an intermediate step in their process" (Englund Dimitrova 2005: 232), probably because they were better equipped with the tools to deal with literal translation afterwards. The researcher went on to suggest that literal translation "[c]an be assumed to have an important role in actually allowing them to process larger units, since writing down a part of a sentence in the TL liberates STM[36] capacity for the processing of further parts of the sentence" (ibid.). On the basis of translators' behavioural data at different stages of the translation process, Englund Dimitrova (2005) offered to distinguish between different profiles of translators, which due to their relevance to the present thesis will be discussed in detail in chapter 3.

Thus, the introduction of key logging (Jakobsen and Shou 1999) was a turning point for the experimental paradigm in TPR, which allowed researchers to distinguish between different stages of the translation process and tap into the issue of cognitive segmentation in translation. Moreover, the new method encouraged the investigation of the role of pauses as indicators of task complexity (cf. Schilperoord 1996). The researchers were intrigued by identifying what was going on during the pauses, so the field opened to eye-tracking, the empirical method in cognitive psychology, which came to be extensively used together with key logging and retrospective protocols at the third phase of TPR development.

2.4.3. The third phase: Methodological integration and the introduction of eye-tracking

The third phase in Alves and Hurtado Albir's (2017) classification covers the period from 2005 to 2010 and is associated with the "[c]onsolidation of the multi-methodological paradigm (triangulation) and the introduction of eye tracking" (Alves and Hurtado Albir 2017: 543). Muñoz Martín (2014b) chose the period from 2006 to 2013 for his extensive review of the TPR publications, as it was in 2007 when the EST community gathered for the Congress in Ljubljana "[w]ith the motto *Why Translation Studies Matter*" (Muñoz Martín 2014b: 51). The scholars then agreed on the fact that

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[36] STM stands for "short-term memory" here.

one of the main factors causing Translation Studies research to move forward is the emergence of robust experimental studies into the process of translation within the cognitive and psycholinguistic paradigms. Muñoz Martín (2014b) provided a rough calculation[37] of the TPR publications and marked a positive trend in the quantity of contributions, which "[r]aises hopes that we are getting closer to understanding how the translators' minds work during translation" (Jakobsen 2017: 22). Much of the hopes can be attributed to the integration of eye tracking, which was introduced to Translation Studies (O'Brien 2006) to explore the issue of cognitive effort involved in translation as an information processing activity. According to the "eye-mind hypothesis" (Just and Carpenter 1984), the item that the eye is fixated on is being simultaneously processed by the mind. The hypothesis, however, needs to be interpreted with caution, as the eye very often either lags behind or precedes the actual processing, which means that "[t]he eyes seem to behave somewhat like a dog on a leash held by the mind rather than there being a perfectly straightforward relationship" (Jakobsen 2017: 34). Nonetheless, the use of eye-tracking has exerted considerable influence on the study of the nature of the translation process by allowing researchers to contemplate about the type and distribution of cognitive effort invested by translators.

Motivated by the possibility of methodological integration, researchers were able to revisit some of the earlier investigated issues and pursue the new ones. All in all, Muñoz Martín (2014: 52) mentioned that such research problems as translation competence and expertise, mental load and linguistic complexity, writing, revision and metacognition, as well as advances in research methods were frequently raised in TPR. The multi-methodological paradigm and the triangulation of results allowed researchers to tap into such issues as the type of cognitive effort translators expend while using translation technology (O'Brien 2006), pauses as indicators of cognitive effort (Immonen 2006), the role of metacognition (Alves et al. 2009), the distribution of user activity data (UAD) (Carl et al. 2008), and the characteristics of translation competence (Alves and Gonçalves 2007; Göpferich and Jääskeläinen 2009; PACTE 2008, 2009).

In a study comparing translation with monolingual text production, Immonen (2006) looked at the differences in time use and pause patterns. The data were collected with Translog followed by retrospective protocols from a sample of 18 professional

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[37] Muñoz Martín (2014: 52) admits that he only considered the publications that appeared in indexed journals or edited volumes.

translators. The statistical analyses of the data revealed that translation and monolingual writing differed in terms of pause length at all linguistic levels, with translation proceeding slower at word and clause levels, and monolingual writing being a faster process at the levels of a sentence and a paragraph. Immonen (2006) accounted for the findings with the difference in segmentation units, whereby "[t]ranslation requires more time for word choice and clause formation, while text production requires more processing on larger text structures" (Immonen 2006: 333). Another important observation concerned the allocation of time to the revision and monitoring phase, which was found to be considerably longer in translation than in writing. The findings of the study implicitly corroborate the "monitor model" (Tirkkonen-Condit 2005) as regards the continuous supervision of the monitor that controls the default rendering procedure, which in its turn influences the length of pauses at word and phrase levels, and then requires careful revision of the target text at the end revision stage of the translation process.

Another important contribution to the study of the translation process was made by Jakobsen and Jensen (2008), who compared four different types of reading tasks (for comprehension, for translation afterwards, for simultaneous sight translation, for simultaneous written translation) in a group of six translation students and six professional translators using eye tracking. The data showed that gaze behaviour was clearly influenced by the reading purpose, which might be accounted for by the fact that "[a] fair amount of pre-translation probably enters into the reading of a text as soon as it is taken to be the source text for translation" (Jakobsen and Jensen 2008: 116).

Alves et al. (2009) reported on an exploratory study based on the triangulation of eye tracking, key logging and retrospective verbalisations to get an insight into the metacognitive activities involved in the translation processes of professional translators. Alves et al. (2009) pursued three goals in their research: (1) to test for data reliability as based on average fixation lengths obtained from two different filters; (2) to explore the impact of directionality on the time devoted to the three stages of the translation process and the number of fixations; (3) to get an insight into the levels of metacognitive activity involved in direct translation by looking at retrospective verbalisations produced while dealing with a particular cohesive device. With regards to the first methodologically oriented goal, the data revealed that the minimal threshold of 175 ms for the average fixation rate works equally well for both the process data and retrospective protocols. As for the second dimension, directionality was found to have no significant effect

on the time variable in both tasks, but when the process was subdivided into the three stages (orientation, drafting, end revision) the effect was revealed on revision time in the inverse translation task regardless of the order of texts. It was also found that participants spent more time on translating the first text irrespective of the task type (direct or inverse translation). The eye-tracking data showed that the number of fixations might not be a useful variable in evaluating cognitive load related to directionality, at least with the complex methodological basis chosen for the study. As regards the third goal, the translators were mostly commenting on the problems they encountered and the solutions they found during the drafting phase, and were largely reluctant to answer guided questions at the last stage of the experiment. The study therefore showed the positive value of data triangulation in an attempt to investigate the (meta-) cognitive aspects of the translation process.

Carl et al. (2008) proposed and then Carl and Jakobsen (2009) verified a different example of triangulation, which involves the integration of the translation process and product data. The researchers offered to align a Translation Unit (TU) extracted from a combination of key-stoke and eye-tracking data, with the corresponding Alignment Unit (AU) in the translation product. The two units were considered to be the indicators of the *dynamic* cognitive processes involved in translation (TUs) and *static*, product-based outcomes (AUs), which altogether formed User Activity Data (UAD), defined as "[a]ny kind of data which is consulted or generated by a translator during a translation session" (Carl 2009: 226). To meet the general aims of the study, the complex alignment procedure was designed to explore the way to identify, quantify and qualify translation problems with a final aim to predict them, and subsequently enable more efficient integration of translation tools in human translation production. One of the observations reported by Carl and Jakobsen (2009) concerned the high individual variations in the duration of and the amount of activities performed at the end revision stage of single units, which may be of relevance to the present thesis in that it shows that the translator's personality characteristics may play a role in the translator's process of *end revision* (Jakobsen 2002).

Although the current overview of research is by no means complete, it makes it possible to conclude that the third phase of the development of TPR was marked by a clear tendency towards "objectification" (Wilss 2004) of research and findings due to extensive methodological (e.g. key-logging, eye-tracking and retrospection, Alves et al.

2009) and data (e.g. translation process and product data, Carl and Jakobsen 2009) triangulation. It is worth noticing that TPR opened to the use of additional methods such as screen, video and audio recording in order to better capture different phenomena in the translation process. The trend required the elaboration of more robust hypotheses and experimental designs, as well as the application of statistical analyses to ensure the generalisation and reliability of findings. Such a comprehensive approach to discovering the nature of the translation process as based on the behavioural data from the actual translator's performance made researchers aware of the need to consider the role of the biological (in particular, neurological), situational and non-cognitive factors involved in the process of target text production.

2.4.4. The fourth phase: Embodied Cognition and further dialogue between disciplines and methodologies

Alves and Hurtado Albir (2017: 544) characterised the fourth phase by the "[f]ocus on interdisciplinarity, convergence of tools, and development of applications", and chronologically placed it in the period from the early 2010s to the present date. Among the issues being explored during the fourth phase of the TPR development are the human translation styles based on data triangulation (Carl et al. 2011), the comparison of translation and monolingual text production in terms of pauses (Immonen 2011), translation competence acquisition (PACTE 2011; Göpferich et al. 2011), the comparison of the processes of post-editing of the human translation and machine translation (Carl et al. 2015), the evolution of translation as a human skill (Whyatt 2012), directionality in translation (Ferreira 2014), and the links between affective and non-cognitive aspects of translator's personality and translation performance (Hubscher Davidson 2009; Lehr 2013; Rojo and Ramos 2016; Lehka-Paul ad Whyatt 2016, etc.).[38]

Carl et al. (2011) reported on an experiment triangulating process and product data obtained from the key logging (*Translog*, Jakobsen and Schou 1999) and eye tracking methods. Carl et al. (2011) based their translation styles on the behavioural data from the three translation phases (orientation, drafting, end revision). As for initial ori-

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[38] For a comprehensive account of the findings related to the issue of personality and translation performance, see section 1.7.

entation, Carl et al. (2011) identified such patterns as (1) "systemic initiation orientation", which entails consistent reading of the ST before getting down to the TT production; (2) "skimming", characterised by the quick reading of the ST; (3) "quick planning", where only the first few sentences or phrases are read before the first key is pressed; and (4) "head-start", which means that translators skip the preliminary reading stage. With regards to the drafting stage, the researchers differentiated between the following behaviours: (1) "large-context planning" that involves reading the whole sequences or sentences far ahead in the ST; (2) "small-context planning", whereby only a few words ahead are fixated on; (3) "backtracking", marked by the re-fixations on the already translated units; and (4) "non-backtracking", by which the translated units are not systematically re-fixated. A regards end revision phase, which was divided into online revision (revision performed during the drafting stage, measured by the number of deleted keystrokes), and end revision (measured by the number of keystrokes deleted after the draft has been finished, and the duration of the end revision phase). Carl et al. (2011) referred to the following revision styles: (1) "online revision preferred" (most of the revision is performed while drafting the TT); (2) "end revision preferred" (20% of the total task time or more is devoted to end revision); and (3) "constant revision" (the first two styles combined). When the differences between the behavioural patterns of professional translators and novices were considered, preliminary results showed that the translators preferred systematic initial orientation, large-context planning and online revising, and novices went for head-starting, small-context planning and end revising (Carl and Buch-Kromann 2010). Further empirical evidence (Dragsted and Carl 2013) for the different translation styles based on process data with special attention to self-revision patterns will be reviewed in chapter 3.

In light of the most recent developments in cognitive psychology, Muñoz Martín (2016) "reembeds" translation process research by diverting from the view of the mind as an information-processing system to that of embodied cognition, i.e. "[a] paradigm inspired by 4EA cognition, i.e., an embodied, embedded, extended, enactive, affective approach to the mind" (Muñoz Martín 2016: 9). Translation begins to be studied as a contextualised entity in its (inter-) dependence with the functioning of the brain, translation ergonomics and the use of technology, emotions and affective states, etc. For instance, García et al. (2016) propose an insight into the neurological basis of translation-related mental activities with the help of a variety of sophisticated methods. Their tenta-

tive findings suggest that the neurocognitive mechanisms that accompany translation and interpreting processes are situated in the cognitive domains that serve multiple purposes. In the same volume, Ehrensberger-Dow and Heeb (2016) argue that the translator's working conditions might affect the translation process and the quality of the outcome in different ways, and thus encourage research into translation ergonomics.

As the previous sections have shown, the early empirical investigations into the cognitive aspects of translation focused on comparing the performance of novice translators or foreign language students and professional translators to tap into such phenomena as problem-solving and decision-making, the use of relevant translation strategies, text segmentation, etc. Not only did the studies try to reveal the cognitively efficient and relevant translation behaviours, but also identify the differences between the types of behaviours that may occur as a result of different levels of expertise in translation. In other words, the comparative (nomothetic) approach in experimental designs aimed to tacitly explore the trajectory of translation competence development and acquisition that eventually leads to expertise in translation (cf. "expertise trajectory" in Lajoie 2003). Research into translation competence and expertise has been quite extensive (Muñoz Martín 2014b), as it supplements the knowledge of what a translator does in the process of translation with what it actually takes to be a translator in terms of both cognitive and non-cognitive characteristics. As the present thesis presents an experimental study with a nomothetic design and aims to contribute to understanding the psychological basis for the development of translation competence and expertise, the next section will focus on the discussion of the leading empirical and theoretical studies into these constructs.

2.5. The role of the translator's personality in translation competence and expertise development

Muñoz Martín (2014b: 55) noticed that researchers conceptualise "[w]hatever it is that leads some people to translate or interpret well" in different ways. For example, Bell (1991) and Neubert (1994) viewed translation competence as a multicomponent construct composed of the knowledge of the source and target languages, subject knowledge, and the ability to decode and encode the source text message in a target language. Risku (1998) assumed that competence is something that only experts have,

i.e. competence is a sub-component of expertise. Conversely, Englund Dimitrova (2005: 16) understood the concept of expertise as a sub-category of the overarching construct of translation competence. Shreve (2006) referred to competence as the translator's ability to activate the numerous task-specific cognitive resources, which may further evolve into expertise. Alves and Gonçalves (2007: 28) differentiated between "narrow-band" and "broad-band" translators, with the link between the two being "[a] cline that entails a set of cognitive behaviours" that range from merely linguistic transfer in narrow-band translators to the use of higher-rank meta-cognitive operations by broad-band translators. Thus, Alves (2015: 25) suggested that "[e]xpertise in translation would be a term which better accounts for the complexities entailed in the behaviour of expert translators".

Muñoz Martín (2014b) explained that much of the terminological ambiguity derives from the fact that *competence* is originally a linguistic construct, and *expertise* belongs to the field of cognitive psychology. While *translation competence* seems to be mainly referred to as a complex set of expert knowledge that translation students should gain in the course of their translation training (cf. PACTE 2003; Göpferich and Jääskeläinen 2009), *expertise* in translation involves the translator's ability to apply the set of expert knowledge so as to "[y]ield sustained outstanding performance", (Muñoz Martín 2014b: 55), i.e. consistently produce high quality translations. Even though the element of sustained quality of performance is related to translation expertise, empirical studies often report on "[t]he uncomfortable finding that professional translators do not always produce high-quality translations" (Jääskeläinen 2010: 219). In an attempt to explain it, Jääskeläinen (2010) offered to differentiate between the concepts of *expertise* and *professionalism*, as not all professionals become experts that display consistently superior performance. The above definition of expertise also implies that experts might perform quicker, more automatically and invest less cognitive effort than novices. However, research into both writing and translation processes have shown quite the opposite. For instance, Gerloff (1988) observed the "translation-does-not-get-easier" phenomenon, in which successful translators displayed more effortful processing than novices or less successful professionals. Thus, the trajectory from translation competence to expertise in translation appears to involve a lot of intermediate steps that among other things depend on the translator's individual predispositions.

The development of both competence and expertise in translation requires the activation of a range of cognitive and attitudinal factors, motivation, personality traits, abilities and aptitudes (Muñoz Martín 2014b; Kuznik and Hurtado Albir 2015). Thus, the following sections will seek to identify the possible role of the translator's personality in translation competence and expertise development by analysing the findings of some of the process-oriented studies into the above constructs.

2.5.1. The PACTE project: The holistic research into translation competence and its acquisition

The aim of the PACTE group is to identify the competences needed to translate, to trace the process of their acquisition, as well as establish links between the translation competence and the quality and efficacy of translation performance.[39] Therefore, the project relies on the data obtained from both translation process and product, which are then triangulated to maximise the reliability of findings.

PACTE considers translation competence to be a kind of expert knowledge, which is composed of declarative (know-what) and procedural (know-how) knowledge (cf. "organised knowledge" in Wilss 1996). The latter type is believed to be dominant due to the nature of the translation process, in which translation strategies play an important role. According to the researchers, translation competence is a complex entity that includes several interconnected sub-competences, the most important being the "strategic sub-competence".

Of the five sub-competences outlined in the PACTE model (Figure 6, left), only the "instrumental", "strategic" and "knowledge about translation" sub-competences are considered to be translation-specific, whereas the other two ("bilingual" and "extra-linguistic" sub-competences) are regarded as typical of any profession that a bilingual can practise. The "instrumental" sub-competence includes the procedural knowledge of different translation-related resources and their application (computers, the Internet, encyclopaedias, corpora, etc.). The declarative knowledge of the translation profession, the relevant regulations and the functions of the translated texts comprise the

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[39] PACTE is an acronym that stands for the full title of the project (both in Spanish and in English), the Process in the Acquisition of Translation Competence and Evaluation (PACTE 2011: 317).

"knowledge about translation" sub-competence. The "strategic" sub-competence, which the PACTE group considers the most important, is related to the procedural knowledge that consists in monitoring the translation task, the choice of efficient problem-solving methods and the evaluation of decisions. As for the "psycho-physiological component" with its particular relevance to the present thesis, the PACTE group defines it as follows:

> Different types of cognitive and attitudinal components and psycho-motor mechanisms. They include: (1) cognitive components such as memory, perception, attention and emotion; (2) attitudinal aspects such as intellectual curiosity, perseverance, rigour, critical spirit, knowledge of and confidence in one's own abilities, the ability to measure one's own abilities, motivations, etc.; (3) abilities such as creativity, logical reasoning, analysis and synthesis, etc. (PACTE 2003: 58)

The examples of the "attitudinal components" enlisted by the PACTE group, in particular "intellectual curiosity", "perseverance", "rigour", may well be defined as personality traits[40] and fit into the dimensions of Openness to Experience and Conscientiousness in the Big Five and HEXACO inventories. Despite the fact that the PACTE group considers the psycho-physiological component to be universal for all language experts, the list of rather precise useful "attributes" shows that there might be a special "toolkit" of the cognitive and non-cognitive features that might be particularly useful for the development and acquisition of the translation competence.

In their translation competence acquisition model (Figure 6, right), the PACTE researchers emphasised the importance of the integration of the sub-competencies included in the translation competence model, and acknowledged the role of the learning environment. Thus, the acquisition of the translation competence is regarded to be "a dynamic, spiral process that, like all learning processes, evolves from novice knowledge (pre-translation competence) to expert knowledge (translation competence)" (PACTE 2003: 49). The claim was supported by Göpferich (2009: 177), who also related it to the findings in the filed of expertise studies and cognitive psychology.

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[40] See section 1.2 for more details on trait approach in personality psychology.
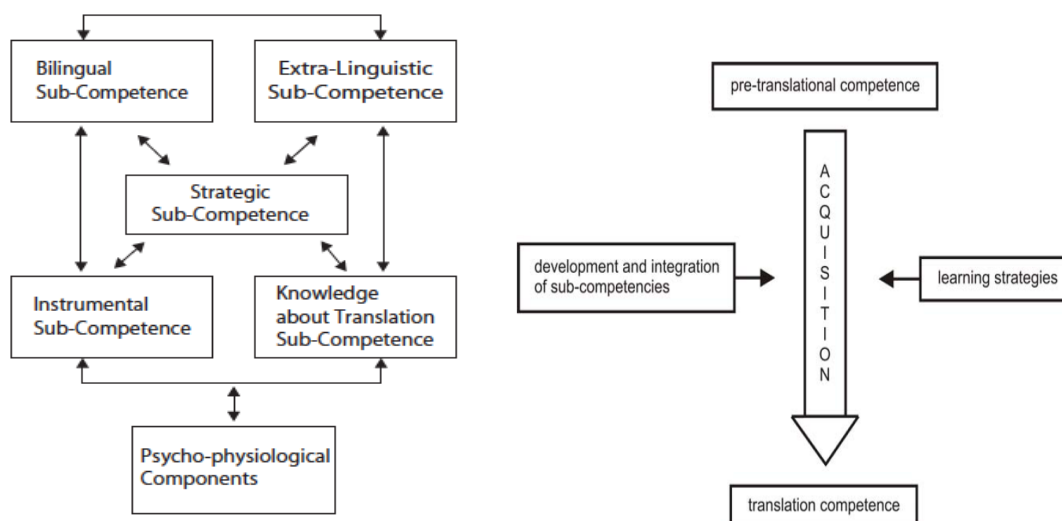
Fig. 6. (left) PACTE translation competence model (PACTE 2003: 59); (right) PACTE translation competence acquisition model (PACTE 2000: 104).

The empirical research initiated by the PACTE group is still in progress[41], but the tentative findings include the following:

(1) Translators display a dynamic approach to translation, i.e. they focus more on the function and message of the source text rather than on the linguistic correspondence (PACTE 2008: 118);[42]

(2) There is a positive correlation between the acceptability of solutions and the total time taken to translate in the direct translation task (PACTE 2008: 124);

(3) Translators rely on "predominantly internal support", i.e. they prefer making decision based on their (internal) cognitive resources, but also consult some additional resources to check their meaning hypothesis; in inverse translation, though, translators rely more on external support (PACTE 2009: 227);

(4) Directionality may affect translation quality (PACTE 2009: 227);

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[41] The first phase (the validation of the translation competence model) has already finished and the results have been compiled into a publication (Hurtado Albir (ed.) 2017), and the second phase is currently on-going with an ambitious plan to recruit 130 translation trainees in a longitudinal study of the translation competence acquisition. The updates are available on the website of the PACTE project at http://grupsderecerca.uab.cat/pacte/en, date of access: 1 Dec. 2017).

[42] At the stage of data analysis, the PACTE group put forward the variable of "Dynamic Translation Index", which is the relationship between "[t]he dynamic concept of translation, a dynamic approach to the translation of a specific text, and a dynamic approach to the translation problems posed in the text, […] and the acceptability of solutions found to these problems" (PACTE 2011: 46).

(5) Directionality may affect the perception of the difficulty of translation problems (inverse translation appears to be more challenging for translators) (PACTE 2011: 339);

(6) The participants' perceived quality of their translations and the acceptability scores do not correlate, which leads to the conclusion that "[t]he difficulty of the translation of a text and their [participants'] perception of the quality of their performance have to do with personality traits such as self-esteem, self-criticism, and so forth – psycho-physiological components in PACTE's theoretical model" (PACTE 2011: 339).

The last finding seems to be particularly relevant for this thesis, as it aims to identify the personality traits that are important for the development of the translation competence, and determine the degree of their impact on the quality of the translation product, and thus contribute to the area which was not empirically investigated in the PACTE project.

2.5.2. The TransComp project: The longitudinal study into translation competence and its acquisition

The development of the translation competence was traced in TransComp, a process- and product-oriented longitudinal study inspired by Hönig's (1995) cognitive model of the translation process, PACTE's (2003) exploratory studies and the findings of expertise research. It was designed as a longitudinal study "[i]n the strictest sense of the term" (Göpferich 2009: 26), understood by the researchers as "[i]nvestigations into the development of translation competence analysing the translation behaviour (1) of the same subjects (2) at regular intervals (3) over a longer period of time" (Göpferich and Jääskeläinen 2009: 183). Such an experimental design was necessary in order to fulfil one of the major goals of the project, which was to investigate "[t]he development of translation competence *in its continuity* [emphasis in the original, OLP]" (Göpferich 2009: 26).

Göpferich (2008) proposed the translation competence model (Figure 7), which shares both similarities and differences with the PACTE model. Both models locate the

"strategic (sub-) competence" in the centre of the diagram, giving it more dominance and emphasising its role in the acquisition of the translation competence.[43] Similarly, both PACTE and TransComp models agree on the importance of the "psycho-physical disposition" (TransComp model, Figure 7) or the "psycho-physiological components" (PACTE model, Figure 6) in acquiring translation competence, namely "[a] critical spirit and perseverance in solving translation problems may accelerate the development of translation competence" (Göpferich 2009: 23). Importantly, both models place the component at the foundation of their diagrams, but the TransComp model adds two other building blocks to this foundation: (1) "translation norms and assignments", and (2) "the translator's self-concept and professional ethos". Among other differential features, the TransComp model contains five as opposed to PACTE's four (sub-) competences, the additional one being "the psycho-motor competence". According to Göpferich (2009: 22), it includes abilities required for reading and writing effectively, such as touch-typing skills. The "tools and research competence" and the "communicative competence in at least 2 languages" in the TransComp model seem to be different from the respective PACTE's "instrumental sub-competence" and "bilingual sub-competence" in a merely terminological sense. The "domain competence" in the TransComp model is similar to the PACTE's "extra-linguistic sub-competence", but it is perhaps more translation-specific in that it integrates both general world knowledge and specialised knowledge required to understand and convey the meaning of the source text. Finally, the "translation routine activation competence" is unique to the TransComp model, and it includes "the knowledge and the abilities to recall and apply certain – mostly language-pair-specific – (standard) transfer operations (or shifts) which frequently lead to acceptable target-language equivalents" (Göpferich 2009: 22).

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[43] One of the differential features is that the PACTE model (Fig. 6) refers to the elements of the translation competence model as "sub-competences", whereas the TransComp model (Fig. 7) features them as separate "competences". On the one hand, this might be merely a terminological issue, but on the other hand, the TransComp model might in such a way give more power to separate elements and emphasise the fact that they might be developing in a non-linear fashion for different individual reasons.
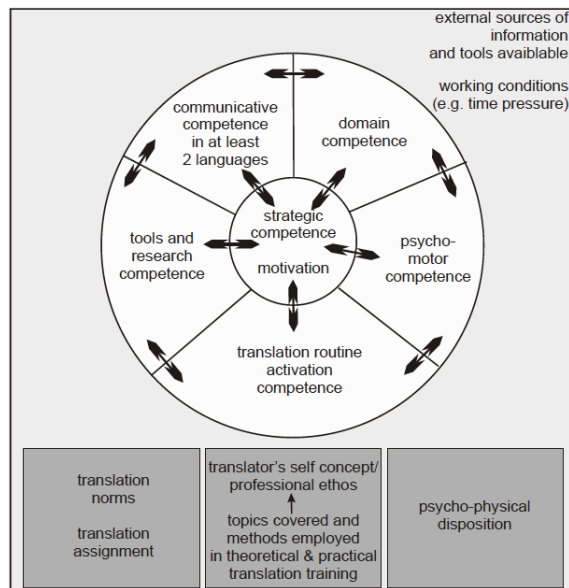
Fig. 7. TransComp translation competence model (Göpferich 2008: 155).

Some of the most notable empirical findings of the TransComp project include:

(1) Throughout the experiment, translation trainees displayed non-strategic behaviour irrespective of the degree of translation training as opposed to professional translators, whose decision-making was highly strategic.

(2) By the fourth semester of translation training, students had less comprehension problems, which might be explained by the increased L2 competence.

(3) As for the variables of creativity and routine, trainees' creativity levels increased only after the fourth semester, which was also connected with the decrease in the routine behaviour. Conversely, professional translators used their "switch competence", i.e. the combination of high creativity levels and high routine levels.

(4) In their decision-making processes, professional translators invested less cognitive effort and managed to produce more satisfactory decisions than the translation trainees. However, the quality of high-effort decisions did not differ considerably in translation students and professional translators, which might indicate that the latter were still in the process of gaining expertise in translation.

To sum up, the results showed that there was certain stagnation in the trainees' translation competence development from the first to the fourth semester of their training, which Göpferich (2013) explained as "[a] shift in the allocation of their cognitive re-

sources that does not yet have an effect on the translation quality of their output"
(Göpferich 2013: 73). This suggests that the development of the translation competence
is a dynamic and non-linear process, which can be due to the fact that "[i]ndividual sub-
competences may not develop at the same pace, nor will they always develop in a linear
manner" (Göpferich 2013: 62). Thus, the longitudinal project of TransComp made a
valuable contribution into the understanding of the intermediate steps in the acquisition
and development of the translation competence. The role of the translator's personality,
though generally acknowledged, was not empirically investigated within the framework
of the project. This creates a gap in research that the present study will try to fill.

2.5.3. Muñoz Martín's situated construct of translation expertise

Placing particular emphasis on the need to study the cognitive behaviour of experts in
translation, Muñoz Martín (2014) proposed a multidimensional construct of a situated
translation and interpreting expertise (STIE). In line with Ericsson and Charness (1994:
731) and the advancements in expertise research in cognitive psychology, Muñoz Mar-
tín (2014b: 3) defined an *expert* as somebody who delivers "[c]onsistently superior per-
formance on a specified set of representative tasks for the domain", and thus *expertise*
as "[t]he bulk of cognitive resources and skills leading to that superior performance"
(ibid.).

In his proposal of the structure of the complex concept of translation expertise
(Figure 8), Muñoz Martín (2014b: 18) outlined five major dimensions or "scopes into a
complex behaviour": (1) knowledge (mainly declarative knowledge that is related to
long-term memory, which can be activated upon request, depending on a given con-
text); (2) adaptive psychophysiological traits (e.g. multitasking in interpreting, touch-
typing in translation; they become "second nature" or "traits" with repeated exposure to
specific tasks); (3) problem-solving skills (both controlled and intuitive processes that
involve the analysis of a given situation, the generation and evaluation of possible solu-
tions); (4) regulatory skills as part of metacognition (described as "[c]onscious, inten-
tional metacognitive monitoring and control activities" (Muñoz Martín 2014b: 26) that
in a sense correspond to the "strategic (sub-) competence" in the PACTE and Trans-

Comp models); (5) self-concept, whose operational definition provisionally includes the interconnected notions of self-awareness, situation awareness and self-efficacy.
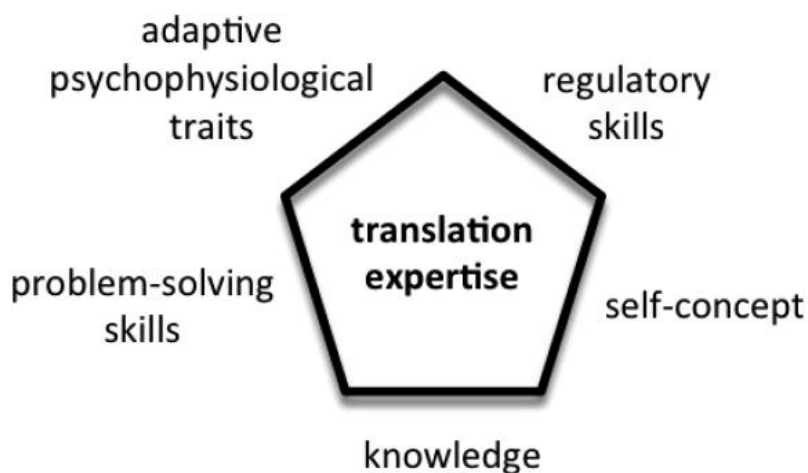
Fig. 8. Muñoz Martín's (2014b: 18) five dimensions of situated translation expertise.

The researcher went on to state that the notion of expertise is only a "research artefact" (Muñoz Martín 2014b: 8), so explaining translation behaviour by means of expertise might appear futile. As a hypothetical construct, though, it may be used to account for some of the differences in the data obtained from subjects with different levels of experience in translation. Following Ericsson and Lehmann (1996: 277), Muñoz Martín (2014b) considers expertise to be "maximal adaptation to task constraints", which only becomes relevant if situated in a domain-specific task. Moreover, expertise is conditioned by the type of behaviour it is related to. The scholar, thus, proposed a tentative research-driven taxonomy of translation behaviours that consists of three "minimal layers" (Muñoz Martín 2014b: 11): (1) translation task models (e.g. sight translation, consecutive interpreting, written translation); (2) component sub-tasks (e.g. drafting, self-revision, post-editing); and (3) cognitive processes involved in the execution of certain translation tasks and sub-tasks (e.g. memory, cognitive load). To get a clearer understanding of each of these layers, it is important to analyse both process and product data, which is the type of experimental design that the fourth generation of TPR is particularly concerned with.

All in all, the suggested taxonomy of translation behaviours may help to fit different research projects in the complicated network of empirical studies within Cogni-

tive Translatology (Muñoz Martín 2010). The relationship between the different types of behaviour and the psychological aspects of the translator's personality is one of the issues that remain to be empirically explored.

Conclusions

Chapter 2 has shown that the translator's personality may be one of the elements involved in the activation of a complex set of meta-cognitive processes in the translator's mind. An overview of the selected models of the translation process has pointed to the prominent role of the "macrostrategic" (Hönig 1995) meta-cognitive operations of *monitoring* and *evaluation* in the translation process, which have also been placed in the centre of both PACTE and TransComp competence models in the form of a "strategic competence". On the one hand, *monitoring* and *evaluation* contribute to the translator's decision making in the translation process. On the other hand, they are directly related to the quality of the final translation output. Referring to Muñoz Martín's (2014b) "minimal layers", it appears that the *component sub-task* that may reflect the interplay of the two operations is *self-revision*, as it incorporates *decision-making* and *evaluation* activities ("cognitive processes", Muñoz Martín's 2014b) that contribute to the shaping of the final translation product. Importantly, almost every empirical investigation into the translation process made particular emphasis on the process of *self-revision*, which was found to be modified by the level of competence and experience in translation (e.g., Jääskeläinen 1996; Jakobsen 2002; Immonen 2006), and subject to considerable individual variations (e.g., Dragsted 2005; Carl and Jakobsen 2009; Carl et al. 2011). It was possible to reveal the extent of the individual variations using the method of key logging, which will also be applied in the present study.

The above discussion suggests that there may be room for the translator's personality characteristics in guiding the translator's process of self-revision. In addition, it may be worthwhile to look into the translator's personality traits as the factors that contribute to the development and acquisition of translation competence and expertise. Such type of research would be an interdisplinary endeavour at the fourth phase of TPR, in which personality psychology and translation process research are combined using multi-method approaches. Thus, chapter 3 will narrow the focus of the thesis to the dis-

cussion of *self-revision* as a product-shaping stage of the translation process that might be potentially influenced by the translator's personality-related features.

Chapter 3: Self-revision as a product-shaping stage of the translation process

3.1. Introduction

The purpose of the chapter is to provide arguments supporting the assumption of the role that the individual personality-related characteristics play in the process of self-revision. As a sub-task and a stage of the translation process, self-revision involves constant *monitoring* and *evaluation* on the part of the translator. Self-revision is, therefore, particularly related to the decision-making processes in translation, as well as contributes to the quality of the final translation output. Thus, the discussion of the process of self-revision will focus on its core cognitive components: *decision-making* and *quality assurance*, and their potential links with the translator's personality. The chapter begins with the presentation of the concept of revision in writing research, which is the point of departure for many empirical studies of self-revision in translation. The chapter then introduces the concept of "self-revision" in the translation process, and provides its working definition for use in the present research. In this context, the relationship between self-revision and decision-making, as well as self-revision and quality assurance is explained. The chapter unfolds with an overview of studies into various aspects of self-revision within the translation process research paradigm. Next, the process of self-revision is discussed in relation to translator's profiling. The chapter ends with a summary of the main findings connected with the translator's self-revision process and their relevance to the present research proposal.

3.2. The concept of revision in writing process research

Similar to the two major orientations or objects of research in Translation Studies, writing research was primarily involved in studying the *products* (i.e. written texts) until the shift of focus in the 1970s towards the *process* of writing (Fitzgerald 1987: 482), in particular its cognitive aspects. The concept of revision as an integral part of the writing process has also been defined with regards to the product and process orientations, the former viewed as any traceable corrections introduced into the text ("external revision", Murray 1978: 91), and the latter as the mental operations involved in the problem-solving activity of revising the text ("internal revision", ibid.). In the most recent studies, however, the researchers seem to have come to the consensus about the importance of combining the two perspectives in order to receive fuller understanding of what revision entails.

While the need for the integration of the product and process perspectives was established on the conceptual level, the writing researchers still struggled for the terminological distinction between the mental and text-based revision-related operations. For instance, Hayes and Flower (1983) introduced the term "reviewing" to address "[t]he act of evaluating either what has been written or what has been planned" (Hayes and Flower 1983: 209), and suggested that revisions appear as a result of the reviewing process which is mediated by reading and editing. Hayes and Flower (1983) suggested that the writing process consists of the dynamic and non-linear stages of planning, translating, i.e. verbalising ideas, and reviewing, all of which are controlled by the *monitor* function that supervises the efficient switch between the stages. Hayes (1996) reinterpreted the earlier writing model and outlined three cognitive processes involved in writing − "text interpretation", "reflection" and "text production", whereby "reflection" largely performed the former "reviewing" function. Adding to the terminological confusion, Scardamalia and Bereiter (1986) referred to "reprocessing" as everything that goes on in the writer's mind, and revision as a special example of reprocessing, implemented in a given text. Regardless of the nature of the relationships between the internal and external revision, the scholars seem to agree on the fact that it is a cognitively complex activity that allows for recursiveness, i.e. writers can activate different sub-processes such as text production or editing on demand, switching smoothly from one to the other.

Another feature shared by different approaches is the *origin* of revisions in writing, which are believed to stem from the discrepancies between the pre-planned and the actually written text. Fitzgerald (1987: 484) identified three major steps in the trajectory of how a writer proceeds from identifying the discrepancies to actually introducing corrections into the text:

(1)   The identification of discrepancies between the intended and instantiated text, whereby the knowledge of what the "good writing" means, the ability to recall and activate relevant knowledge, and the ability to take the reader's perspective are important,

(2)   Diagnosing the problem and determining the type of remedy to be introduced,

(3)   Introducing the necessary changes with a view to improve the quality of the text.

Thus, Firzgerald's (1987) three stages of the process of revision point to the writer's engagement in the decision-making activity (stages 1 and 2), which is largely determined by the individually assumed quality standards (stage 3). Alamargot and Chanquoy (2001) proposed to reinforce the *function* of revision, which consists not only in checking and improving the texts, but also in the writer's need to create certain "[m]ental representation(s) during the writing activity" (Alamargot and Chanquoy 2001: 100). In other words, writers should, on the one hand, decide on their own quality standards, and, on the other hand, develop a critical spirit that is able to ensure that the standards are actually met. Thus, engaging in revision processes may help writers to become more confident in the quality of their outputs.

The observation brings the discussion to consider Scardamalia and Bereiter's (1983) educational view of revision. According to it, revision is a *self-regulatory* process that proceeds in the cycles of the mental procedures of "compare", "diagnose", and "operate" (commonly referred to in writing research with the acronym of C.D.O.), which happen recursively during the writing process. According to the authors, the C.D.O. is activated once there is a conflict between the initially planned and the actually written text (cf. Fitzgerald 1987). Referring to the previously discussed concepts of internal and external revisions, the C.D.O. integrates both, with the first two sub-processes being evaluative ("compare" and "diagnose") and primarily internal, and the "operate" activity consisting in the choice of tactics and its implementation, i.e. external

revision. The advantage of the C.D.O. procedure lies in the fact that there is empirical evidence supporting its effectiveness. Scardamalia and Bereiter (1983) asked a group of school children to apply the C.D.O. technique after each sentence in their writing assignment and the results showed that children revised more systematically, but the quality of their output was not influenced. The C.D.O. technique may thus be considered a valid descriptive and didactic framework for practicing revision systematically as a part of the writing process.

From the perspective of cognitive science, Hayes et al. (1987) proposed the most comprehensive procedural model of revision in writing to date (Figure 9).
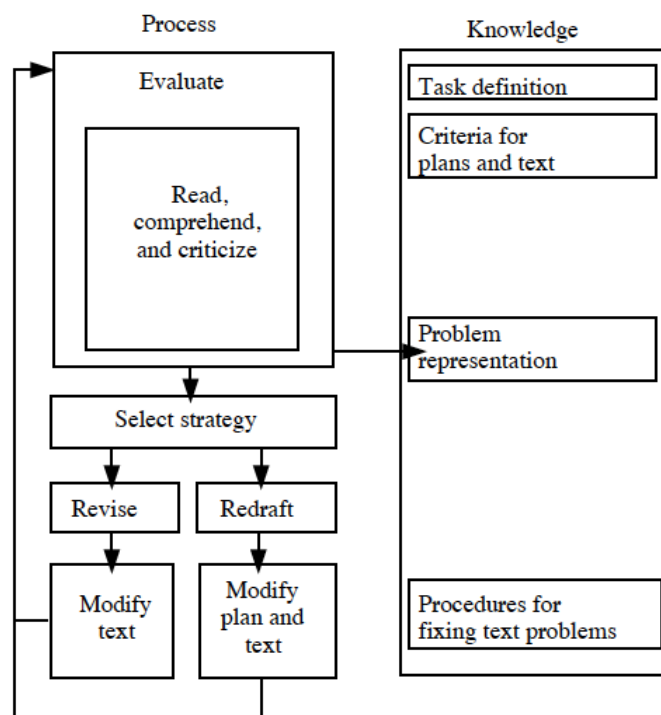
Fig. 9. Hayes et al. (1987) cognitive model of revision, adapted by Alamargot and Chanquoy (2001: 107).

The authors believed that revision appears as a result of the interplay of the highly controlled cognitive processes of "evaluation", "choice of strategy" and "execution" (which roughly correspond to Firzgerald's (1987) revision stages, and Scardamalia and Bereiter's (1983) C.D.O. technique), and knowledge stored in the writer's long-term memory. Importantly, knowledge in the model is both declarative (domain knowledge, familiarity with the text genre, linguistic and pragmatic knowledge) and procedural (knowledge of the possible remedial tactics). Hayes et al. (1987) therefore showed that

revision is a cognitively challenging and complex process realised in a series of interdependent operations. Alamargot and Chanquoy (2001) summarised the model in its relation to the predecessors, and revisited the definition of revision to include the existing theoretical and practical findings:

> The revisions applied to the text are therefore the concrete result of a very complex internal activity, in which many decision-making stages are involved, which possibly result in a written correction. Thus, the revision appears as a largely strategic activity (and therefore conscious, not automatized), necessitating from the reviser to operate some choices through his/her available knowledge, to make use of a certain number of very strategic options, while looking at the mental representations of the task. The revision could then be qualified as "*a decisional activity that is controlled at a metacognitive level*" [emphasis in the original, OLP]. (Piolat 1990: 186, translated by and quoted in Alamargot and Chanquoy 2001: 110)

Alamargot and Chanquoy (2001), however, referred to Hayes (1996), who suggested that personality, motivation and affective factors such as individual differences, emotions, as well as external situational factors might have an influence on the choice of the revision behaviour. Still, more research is needed in order to test the claim.

The internal cognitive processes are difficult to capture, but the external revisions are traceable in the writing process. Several classifications of external revisions have been proposed. Hayes et al. (1987) differentiated between different types of revisions as based on the following criteria: (1) the kind of revision operation (e.g. additional, deletion, substitution); (2) the level of the text where revision takes place (text surface, i.e. mechanical corrections, and text depth, i.e. semantic modifications); (3) the place of revision in the writing process (e.g. planning, drafting); and (4) the position of revision in the text (at the beginning, at the end, in the middle).

Chanquoy (1997) proposed a more general framework for the analysis of revisions by dividing them into "surface revisions" and "deep" or "semantic revisions". The former comprised spelling and other low-level corrections, and the latter referred to the modifications on higher linguistic levels of word, clause, sentence and text. The classic and by far the most detailed taxonomy of revisions can be attributed to Faigley and Witte (1981), who accounted for both micro- and macro-level corrections in their classification (Figure 10).

```
                              Surface revisions

        Formal Changes                   Meaning preserving changes (para-
    (conventional editing revisions)                 phrases)
              Spelling                             Addition
               Tense                               Deletion
        Number and modality                      Substitution
            Abbreviation                         Permutation
            Punctuation                          Distribution
              Format                            Consolidation

                             Semantic revisions

        Microstructural changes             Macrostructural changes
          (minor revisions)                   (major revisions)
              Addition                            Addition
              Deletion                            Deletion
            Substitution                        Substitution
            Permutation                         Permutation
            Distribution                        Distribution
           Consolidation                       Consolidation
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Fig. 10. Faigley and Witte's (1981) taxonomy of revisions, as adapted by and quoted in Alamargot and Chanquoy (2001: 101).

In the model, surface revisions are considered to be superficial modifications that include formal changes (e.g. spelling, morphological corrections) and meaning-preserving changes with six possible revision operations. Semantic revisions are those that modify and change the meaning and eventually the initial function of the text. The model has been adapted and applied to meet the needs of the present study, and it will receive more detailed coverage further in the thesis.

In view of this classification and the above theoretical discussion, Alamargot and Chanquoy (2001: 118) suggested that the surface revisions potentially require less cognitive effort and can therefore appear without interrupting the production flow, whereas semantic revisions activate more cognitive resources and therefore either interfere in the writing process or take place mostly at the final revision stage once the first draft has been finished. In support of the claim, Chanquoy (1997) found that revisions introduced while drafting were mostly surface corrections, and those that appeared at the post-drafting stage were mostly meaning modifications. In the distribution of cognitive resources, writing and translation processes are similar, so the statement might also be relevant for the discussion of the results of the present study.

Although scarce, attempts have been made to empirically investigate the subprocesses of revision in order to determine the behaviours that lead to high quality writing. In particular, revision has been studied in relation to the writer's individual expectations, the quantitative (the number of revisions) and qualitative characteristics (the type

of revisions), and the writer's competence levels. Barlett (1982) found that school children diagnosed problems and corrected the texts written by their peers more considerably than those written by themselves, whereas Bracewell et al. (1979) in a similar study showed that these were mostly spelling mistakes that accounted for the difference between the self- and other-revision.[44]

Several groups of scholars found that the *number of revisions* correlates with the age and the level of competence in writing. In particular, more competent and older writers displayed the tendency to introducing a lot more revisions than the less competent and younger writers (Faigley and Witte 1981; Maynor 1982; Scardamalia and Bereiter 1986), although individual variations were reported.

A series of empirical investigations showed that the age and the level of competence correlate with the *type of changes*, i.e. more competent and older writers concentrated more on semantic, syntactic and content-based corrections, whereas less competent writers focused more on spelling and other lower-level errors (Faigley and Witte 1981; Ash 1983; Levin et al. 1985, etc.). Evidence also suggests that more competent writers produced more revisions while writing the first draft than after it has been completed (Bridwell 1980; Faigley and Witte 1981), although some contradicting findings and high individual variations were reported as well (Faigley and Witte 1981; Fitzgerald and Markham 1987). Another interesting finding was discovered by Butler-Nalin (1984), who claimed that there might be an effect of the text genre on the number of revisions. In the study, a group of advanced students introduced more corrections when writing on the topics that involved analytical processing (e.g. reviews) than those that required mere reporting of facts (e.g. news stories). The finding, however, requires further research.

Probably the most obvious function of revision (in the integrated process and product sense) is to improve the *quality* of the final output. Fitzgerald (1987) found that higher writing quality is positively related to the number of revisions in competent writers, and negatively related or unrelated in incompetent writers. Moreover, skilled writers whose writing outputs scored high for quality tended to have more varied types of revisions (e.g. more semantic and content-based revisions). When both findings are

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[44] In translation process research, a similar observation was made by Hansen (2008) who claimed that translators often seem to "fall in love" with their translations, which might eventually hinder the activation of the self-monitoring activities important for successful translation performance.

considered, it might appear that "[t]he critical aspect of revision with regard to quality is not merely how much is done or how many revisions are made, but what is done and which revisions are made" (Fitzgerald 1987: 497). The conclusion is another proof in favour of combining the quantitative (e.g. the number of corrections) and qualitative (e.g. the type of corrections) aspects of revision behaviours.

Apart from the benefits that revision brings to the quality of the final output of the writing process, it also seems to have valuable pedagogical implications (cf. Alamargot and Chanquoy 2001). In particular, the internal "Socratic-like dialogue" (Vosniadou and Brewer 1987) involved in revision appears to contribute to the writer's self-awareness and knowledge (Fitzgerald 1987: 499), which simultaneously relate to the increased level of writing competence and expertise. All of these findings seem to relate to the views on self-revision expressed in translation process research that will be discussed in the next section, and are particularly relevant to the present research proposal.

3.3. The concept of self-revision in translation process research

Much like the concept of revision in writing process research, its counterpart in translation process research is characterised by terminological confusion and a variety of interpretations (cf. Robert 2008). Unlike in writing process research, though, the confusion does not seem to stem from the multiple labels of conceptually similar phenomena, but from the complex nature of revision behaviours discussed in professional translation settings on the one hand, and academic research on the other.

With regard to professional terminology, the currently binding International Quality Standard for Language Service Providers, ISO 17100,[45] which came into force in November 2015, refers to four different revision-related activities such as "checking", "revision", "review" and "proofreading". Of the four services, only the first one ("checking") is provided by the translator, and is largely similar to the revision activities employed in writing and discussed above. The other two functions, "revision" and "review", differ in terms of the examination procedure and the type of specialist who performs it. In particular, "revision" involves the *bilingual* editing of the target text against

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[45] Official webpage of the Standard: https://www.iso.org/standard/59149.html (date of access: 4 Jan. 2018).

the source text done by the other linguist (not the translator), and "review" consists in the *monolingual* editing of the target text with a special focus on its suitability for the intended purpose, which is usually performed by a domain specialist. "Proofreading" is the final step in the translation service cycle usually made by the specialist whose task is to examine the revised text and ensure that all the necessary corrections have been introduced before printing. All in all, the Standard suggests that in order to optimise work on a particular translation assignment, there should be three other specialists who engage in revision-related activities apart from the translator.

The different roles discussed above allow for the distribution of cognitive load and professional responsibility, whose greatest part rests on the translator at the begging of the translation cycle, i.e. during the "checking" phase. In addition, the above revision roles contribute to *translation quality assurance*, as was also demonstrated in the synonymous use of "revision" and "quality control" by Gouadec (2007) and Mossop (2014) in their books devoted to the practical aspects of the translation profession. Thus, revision in translation practice serves to optimise the decision-making process and improve the final quality of translations.

In his pioneering research into revision practices in translation, Mossop (1982: 6) offered to differentiate between revision-related activities performed by translators themselves and those done by other specialists. The researcher suggested referring to the translators' editing process as "self-revision" ("checking" in ISO 17100), and to that of the other experts as "other-revision" ("revision", "review" and "proofreading" in ISO 17100). As the present thesis aims to identify the role of the translator's personality in the process of translation, further discussion will concentrate on the process of self-revision only.

Mossop (2007: 109) defined "self-revision" as "[t]hat function of professional translators in which they identify features of the draft translation that fall short of what is acceptable and make appropriate corrections and improvements". The issue of "acceptability" in translation is mediated by a number of factors, among which are the translation brief, the formal and stylistic requirements of the source text, the target language material, the translator's own quality standards, etc. Toury (1995b: 216) claimed that translators impose individual norms and quality standards on themselves in their translation practice, and self-revision occurs once "[t]ranslators do not attain a result which they are willing to accept (under the norms they have subjected themselves to)".

Due to the translators' struggle between the external and internal quality standards that guide their decision-making process, Toury (1995b) argued that such a cognitively complex activity could not happen "[i]n one fell swoop, but rather in *a series of shorter moves* [emphasis in the original, OLP]" (Toury 1995b: 216). Similar to the distinction between the internal (happening in the mind) and external (modifications traceable in the text) revisions in writing research, Toury further distinguished between the "moves" made in the mental space and studied through TAPs ("internal negotiation", Toury 1995b: 218), and those that are "*committed to paper* [emphasis in the original, OLP]" (ibid.). In a similar vein, Mossop (1982) differentiated between "mental editing" and corrections traceable in the text. He also noticed that a certain amount of revision, either mental or text-bound, can be done while drafting the translation, and some of the changes may appear at the "post-drafting" stage, after the first version of translation has been finished:

> Changes can be made in a drafted sentence just after it is written down. Indeed, we all probably do a certain amount of mental "editing" before we write down a first draft. And theoretically, I suppose there is no limit to this. That is, it is conceivable that some people might have the mental ability to carry out the whole revision procedure either in their heads before they have written anything down, or else just after they have composed the draft of a sentence. In this case, no distinct revision stage would be required. The translator would sense what the finished text would read like while composing it. But this ability, if it exists, is probably very rare. (Mossop 1982: 6)

In his meta-analysis of the recent research into self-revision in translation, Mossop (2007: 19) again referred to the kind of "ability" mentioned in the quote above and argued that the translator's choice of different revision behaviours may well depend on the translator's own preferences, or "individual psychology". Indeed, the self-revision behaviour has many times been found to form part of the translators' "idiosyncratic regularities" (Muñoz Martín 2014b: 59) or "translation profiles" that are habitually displayed across different translation situations. As the idea is particularly relevant for the present research, it will be referred to in detail later in the chapter.

Toury (1995b) paid particular attention to the role of text-bound revisions introduced while drafting as the "intermediate stops along the way" (Toury 1995b: 216) that might be helpful in reconstructing the act of translation through "archaeological excavations" (ibid.). In the analysis proposal, Toury (1995b: 218) used six alternative terms to refer to those "constitutive layers of the translation act" (ibid.), namely "inter-

im/tentative solutions/versions/alternatives/replacements/outputs". He also observed that translation proceeds in the dominant direction, which is "generally forward-bound", i.e. a translator mostly moves towards the end of the text rather than goes back in translation. Yet, Toury (1995b) argued that it does not follow in the linear progression (cf. Lörscher 1991), but may rather be characterised by the "[l]oops of various sizes: going back part of the way in order to resume the forward movement from another point" (Toury 1995b: 225). This was an important observation, which was taken up in the next generation of empirical insights into the translation process on the whole and self-revision in particular.

While the study of "mental editing" with TAPs did not prove as effective as it was expected (cf. Jakobsen 2003), the investigation of corrections "committed to paper" (Toury 1995b: 218), or rather to the keyboard seemed attainable with the advancement of key-logging. In particular, the Translog programme (Jakobsen and Schou 1999) enabled Jakobsen (2002) to trace the "interim versions" as they took shape in real time, and propose the terms "online revisions" to refer to modifications introduced while preparing the first full draft of the translation, and "end revisions" to those implemented after the first draft has been completed (Jakobsen 2002: 193).[46]

Among the avenues that Mossop (2007: 18) encourages researchers to investigate empirically is the issue of why translators overlook certain types of errors, and suggests that it may be worth the attention to look into the translator's *self-concept* (cf. Kiraly 1995) in its relation to self-revision. In particular, Mossop (ibid.) believes that some translators may be better at identifying micro errors (e.g. typos), and others – macro errors (e.g. semantic incongruences). Based on his experience as a teacher of translation, Mossop (ibid.) stated that some translators make certain type of corrections (e.g. typographical, morphological, and other lower-level modifications) during the drafting stage, and others during the end revision stage (e.g., lexical, syntactic, stylistic, or other higher-level adjustments). He also predicts that correlating the type of revisions done during different stages of the translation process with the quality of the final output may "[b]ring insightful results" (Mossop 2007: 19).

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[46] Jakobsen (2002: 193) divided the transition process into "orientation", "drafting" and "end revision" stages, and Mossop (2014: 167) used the terms of "pre-drafting", "drafting" and "post-drafting" stages. To avoid repetitions of the word "drafting" in the analysis part, the present thesis adopts Jakobsen's (2002) terminology.

The above discussion of different aspects of the concepts of *revision* in writing process research and *self-revision* in translation process research lead to the formulation of the complex working definition of "self-revision" that will be used in the present study:

- Self-revision is a decision-making and quality-assuring activity performed by a translator, and it may be influenced by the translator's personality characteristics.

The definition implies that self-revision functions as a bridge between the translation process (as a decisional activity, cf. Piolat 1990) and product (as a quality-assuring activity). Moreover, the translator's personality features may impact, for instance, the sequences of decisional actions (e.g. some translators prefer revising while drafting, and others during the end revision stage) in the translators' process of self-revision. In addition, personality traits (forming part of the "psycho-physiological components" in the PACTE model) may be related to the individual quality standards that may eventually influence the quality of the final translation outputs (cf. PACTE 2011: 339).

The ways to operationalise text-bound self-revision in empirical research may be presented in the form of answers to the following research questions: (1) Why does self-revision occur? (2) How does self-revision occur (3) When does self-revision occur? (4) What type of self-revision occurs? The section continues with an overview of contributions devoted to these areas, offers possible implications of their findings and relates them to the aims of the present research.

3.3.1. Why does self-revision occur?

While revisions in the writing process are believed to appear as a result of discrepancies between the intended and instantiated text, in the translation process they may stem from the incongruences between the source and the target text, and moderated by a number of other factors, among them being the translator's individual quality standards (Toury 1995b; Mossop 1982, 2007). Shih (2015) used the introspective method in her qualitative case study, in which the end revision processes of two young professional translators were analysed. The participants produced more comments evaluating their

tentative decisions than those related to problem recognition, which prompted Shih (2015: 85) to suggest that the translators have their own internalised "appropriateness thresholds" for decision-making in translation.

Trying to explain the nature of self-revisions from the metacognitive perspective, Tirkkonnen-Condit (2005) in her "monitor model" of the translation process followed Ivir (1981) and Toury (1995b) by arguing that revisions could be the traces of the translator's self-monitoring ability, or the "monitor function", which generates "[c]onscious decision-making to solve the problem" (Tirkkonen-Condit 2005: 408), caused by the interruption of the "default literal translation" procedure. The other empirical insights attempted to explain the nature of self-revision by means of the translator's *cognitive adaptation behaviour* (Buchweitz and Alves 2006), the traces of *uncertainty management* (Angelone 2010), and the *degree of cognitive effort* (Dragsted 2012) involved in translation.

Buchweitz and Alves (2006) conducted a methodologically complex empirical study combining key-logging, retrospective protocols and screen recording in order to investigate the cause of *recursiveness* in the translation process. Buchwietz and Alves (2006) defined *recursiveness* in line with cognitive studies into text production as the translator's tendency to move around the text back and forth as it unfolds and produce "revision keystrokes" (Jakobsen 2003) where necessary (cf. "non-linear translation progression", Toury 1995b). According to Jakobsen (2003), the number of "revision keystrokes" reflects global self-revision patterns displayed both during drafting and end revision stages. In their study, Buchwietz and Alves (2006) measured recursiveness by means of Jakobsen's (2003: 82) formula for the calculation of "revision keystrokes" per 100 keys logged: the total number of revision keys (text elimination statistics in Translog, mouse and cursor movements) divided by the total keystrokes and multiplied by 100. To better illustrate the concept of recursiveness in the translation process, Buchweitz and Alves (2006) compared it to a spindle, or a spinning frame:

> The spindle is used to twist into thread the rough fibres from a mass of wool, and though it is a very repetitive process, after a while, from a mass of fiber, a tightly spun thread of wool is created. Recursiveness can be just that. It may appear that the writer is stuck in one segment of the text or going back several times to different parts of the text, but sometimes it actually represents the writer's concern with (and ability of) putting together a tightly-woven text. (Buchweitz and Alves 2006: 246)

Trying to "untangle" the "tightly-woven" translation process, Buchweitz and Alves (2006) considered the following variables: the number of revision keystrokes, the total number of pauses, and the number of translation units. The translation units were understood in line with Alves et al. (2000) to be the markers of cognitive rhythm in that they reflect the cases of uninterrupted processing between longer pauses (a 5 second threshold was adopted for the study). The experiment was conducted on a sample of ten participants with different levels of experience in freelance translation. The task was to translate 100-150 words long fragments of journalistic articles from English (the participants' L2) into Portuguese (their L1) and vice versa. Retrospective protocols followed the translation task. The findings revealed that the translation into the participants' L2 was more time-consuming and broke down the translation process into more translation units, but higher revision rates were only identified in a group of more experienced informants in L2 translation task. Considering this, Buchweitz and Alves (2006) concluded that recursiveness being a measure of the translator's self-revision process occurs as a result of the translator's degree of *cognitive adaptation* to the increasing difficulty of the translation task.

Angelone (2010: 18) in his study into the translator's uncertainty management strategies argued that translators engage in certain "diagnostic behaviours" such as revisions, cursor movements, deletions, and pauses whenever a translation problem occurs. According to Angelone (2010), a translation problem may be related to *comprehension*, *transfer* or *production* processes, and is associated with a kind of deficiency in the translator's cognitive resources when dealing with a certain textual property at a given level (e.g. a word, a collocation, a syntactic structure). The translator's temporal inability to deal with any of the problems was defined as a state of "cognitive indecision" or "uncertainty" (Angelone 2010: 18), marked by a range of behavioural characteristics that Angelone (2010) sought to investigate. To achieve this, one professional translator and three translation students took part in the study in which the methods of TAPs and screen-recording were used. The participants were asked to verbalise their translation processes while translating a 50-word excerpt from a travel guide. Angelone (2010) examined the variations at the textual (e.g. lexical, syntactical) and behavioural levels (problem recognition, solution proposal and evaluation), and the locus of translation activity (comprehension, transfer and production). The data analysis suggested that the professional's metacognitive activities were more organised with some clearly identifi-

able sequences of *problem recognition*, *solution proposal* and *evaluation*,[47] and a high percentage of problem recognition strategies. Translation students displayed more disrupted bundles of metacognitive behaviours, and a high concern for solution evaluation, even when the problem has not been successfully recognised. In conclusion, Angelone (2010) argued that there was expertise effect on the degree and the kind of metacognitive strategies involved in the translators' uncertainty management. The conclusion, though, needs to be supported by further empirical insights using key logging and eye tracking, as the introspective method might be insufficient to conclude on the issue. Notably, the think-aloud protocols did not reveal any significant findings with regard to the solution proposal strategies, which might be better captured and analysed with the key logging method, which the present thesis aims to undertake.

Similar to the complex triadic concept of "cognitive translation units" discussed by Angelone (2010), Dragsted (2012) referred to self-revisions as the indicators of cognitive effort in translation. Dragsted (2012) focused on the issue of problem-solving in translation, and hoped to correlate the product- (variations in the target text) and process-based (key logging and eye tracking data) indicators of difficulty (i.e. problem-solving) that would reflect the degree of cognitive effort involved. The experiment was conducted on a group of 8 translation students at the Copenhagen Business School with Danish as their L1 and English as their L2. All participants had to translate the same 100-word text from English into Danish. The data were gathered using the key logging and eye tracking methods, and analysed statistically in the R environment. The following variables were considered: (1) target text variation (3 high variation words were selected for the analysis with 5-8 variations per 8 participants); (2) target text modifications (both online and end revisions); (3) gaze time; (4) eye movement regressions and re-fixations; and (5) pause length. Strong correlations were found between the product-based variable (target text variations) and all other process-based variables except for the number of target text modifications. Dragsted (2012) explained the finding by suggesting that the consideration of different intermediate versions might not necessarily be reflected in the translator's typing activity, but take place in his/her mind, "the problem space" (Dragsted 2012: 95). On the other hand, Buchweitz and Alves' (2006) idea of *cognitive adaptation* to the task difficulty, which was reflected in the higher recursive-

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[47] Angelone (2010) referred to *problem recognition*, *solution proposal* and *evaluation* as "cognitive translation units".

ness rates in more experienced translators, indicates that there may be expertise effect together with the individual variations in the patterns of self-revision behaviour (e.g. more experienced translators may be more willing to release their short-term memory capacities by testing different tentative solutions in the written form, cf. Englund-Dimitrova 2005).

To sum up, the selected empirical studies have shown that self-revision may not only occur as a result of the discrepancies between the externally and internally imposed translation norms and quality standards, but also because of the higher rank metacognitive processes such as: cognitive adaptation to the translation task difficulty, uncertainty management, as well as cognitive effort invested in decisional activities when dealing with a translation problem. On identifying the possible causes of self-revision in translation, the chapter proceeds with an overview of studies into how translators revise.

3.3.2. How does self-revision occur?

The issue of how translators revise their own works is primarily a matter of practice and individual working routine, but there have been attempts to arrange the list of self-revision practices into the series of self-administered and self-paced "steps" (Mossop 1982: 6), "quality control checks" (Gouadec 2007: 74), or "tasks" (Mossop 2014: 183). Mossop (1982: 6) summarised the self-revision practices into the following three-step procedure:

(1) Step 1: read a couple of paragraphs of the target text without looking at the source text. According to Mossop (1982), the step is important for the identification of the stylistic and linguistic flaws of the translation, and for making the translation sound more natural to the target reader;

(2) Step 2: read a sentence or so of the target text and compare it to the source text. The step helps to determine whether any omissions or mistranslations have been made and introduce the respective amendments to the target text. At this point it is important to switch between Steps 2 and 1 in order to ensure that all the newly introduced revisions fit smoothly into the flow of the text (in terms of morphology, grammar, punctuation, etc.), and the terminology and language are appro-

priate. The whole of the drafting stage is characterised by the constant switch between Steps 1 and 2.

(3)   Step 3: go back to the unresolved problems, prioritise them and choose the appropriate remedial strategies.

To effectively deal with the unresolved items, Mossop (1982) suggests considering the six basic strategies: (1) do more research (time-consuming, so it should be applied to the higher-priority problems); (2) invent (refers to the cases when no "official" term exists in the target language; sometimes a footnote with detailed explanations can be useful); (3) fudge (in case of hesitations as for the appropriateness of the expression, or if more than one option is possible, it is advisable to choose one and, if necessary, explain the other(s) in a footnote); (4) question mark (only to be resorted to in extreme cases of indecision); (5) correct source text (if the author has made a mistake which may affect the reader's reception of the target text, it is sometimes advisable to amend and explain the mistake in a footnote). Mossop (1982) pointed out that the distribution of steps across the drafting and end revision stages is an individual matter and no rigid sequence of procedures could possibly be imposed upon the translators.

Adopting a more qualitative stance on the self-revision procedures, Gouadec (2007: 74) offered to differentiate between the *types* of "quality control checks" that a translator has to perform:

(1)   Material quality checks (making sure that no omissions have taken place and all formal specifications have been adhered to),

(2)   Language, style and register quality checks (checking for the appropriateness of use and homogeneity of language and style),

(3)   Technical-factual-semantic quality checks (checking for the adequacy of the factual information rendered),

(4)   Transfer quality checks (checking whether all the relevant and significant source text elements have been preserved in the translation in compliance with the professional standards and the client's specifications),

(5)   Homogeneity and consistency checks (harmonisation) (checking for the full homogeneity of phraseology, terminology, style and register of the target text).

Similar to Mossop (1982), Gouadec (2007) left the arrangement of the "quality checks" to the individual translator.

In a recent publication devoted to the practical issues of revising and editing for translators, Mossop (2014) suggested that translators differ in the way they integrate their self-revision practices into the phases of pre-drafting, drafting and post-drafting in their translation processes. Following are the five tasks that the translators interchange-ably engage in while translating (Mossop 2014: 183):

(1)   Interpret the source text,

(2)   Compose the target text,

(3)   Do the research required for the previous two tasks,

(4)   Check the draft translation for mistakes and correct them,

(5)   Review the translation taking into account the implications of the brief and the reception of the intended users.

Mossop (2014: 183) referred to the distribution of tasks over the phases as a *translation strategy*, and believed that translators differ in the strategies they adopt for routine tasks. However, the translators' routine behaviour may be also subject to change depending on the translation task difficulty, the deadlines imposed, the level of the translator's knowledge of the topic, etc. Mossop (2014) distinguished between two types of strate-gies: *source text comprehension strategies* and *translation production strategies*. As regards the former, some translators may prefer reading the source text and conducting the necessary research before drafting the translation, while others may be more willing to take only a quick glance at the source text and immediately start composing the trans-lation, leaving most of the research and major amendments for the post-drafting stage (or "end revision", Jakoben 2002).

To describe the translation production strategies, Mossop (2014: 183) adapted Chandler's (1993) writing styles or "default approaches" metaphorically denoting the Architect, the Steamroller, and the Oil-Painter profiles. According to the typology, Ar-chitects do a lot of mental planning before deciding on the final version of translation. Conversely, Steamrollers tend to write down the translation immediately after reading the source text unit without giving it a second thought, and proceed to the next one. The difference between Steamrollers and Oil-Painters lies in fact that the latter "translate-by-

revising" (Mossop 2014: 184), i.e. they jot down their tentative versions and revise them *before* proceeding to the next unit. Thus, Architects with their mental planning and Oil-Painters with their "translation-by-revising" tend to produce fairly ready translation outputs by the end of the drafting phase, whereas Steamrollers usually have an extended end revision phase following the first draft. Mossop (2014: 185) admits, though, that during the end revision stage the translators (especially Architects and Oil-Painters) may want to introduce a different type of changes, as they "[g]et a more synoptic view of the text, and certain macro-level problems that were not evident when focusing on individual sentences may be identified as needing revision". The role of self-revision strategies in building translator profiles will be discussed later in the chapter due to its relevance to the present study.

The statement brings the discussion to the type of changes that translators make during different stages of the translation process. Mossop (2014) believed that some translators focus on drafting the translation quickly, and only amend the language parameters, spending most of the end revision time on bringing the target text in agreement with the source text. Other translators tend to focus on the transfer elements while drafting the translation, leaving the micro changes for the end revision phase. Mossop (2014) advised translators to try out different self-revision procedures in order to work out the optimal approach.

The characteristic feature of the self-revision strategy employed by Oil-Painters is the "backtracking behaviour", which involves correcting the previously written portion of the target text under the influence of the further reading of the source text. The alternative term referring to the type of behaviour is "recursiveness", which was addressed in the study by Buchweitz and Alves (2006) and discussed in the previous subsection. While Buchweitz and Alves (2006) were interested in providing an explanation for the translator's recursive behaviour, Ferreira (2014) wanted to investigate whether the translation direction and the text type would affect the translator's recursiveness patterns (cf. Mossop 2014: 183). The additional question posed in the study concerned the type of modifications introduced by the translators (lexical and syntactic changes or typographical corrections). The participants were 8 professional translators with Brazilian Portuguese (L1) and English (L2) as their working languages and a minimum of 6 years of experience in translation (both L1 and L2 translation). The experiment was conducted in two sessions (and two conditions, respectively) that differed in the type of

texts that translators were to translate. In Session 1 the two texts were on similar topics, therefore stronger facilitation effect was expected, and in Session 2 the texts were on different topics, which was supposed to trigger stronger directionality effect. The texts were counterbalanced in both conditions. The researcher expected to observe more recursive movements in the texts on the same topics than on the different topics due to facilitation effect. The second hypothesis was sought to corroborate Buchweitz and Alves' (2006) findings in that more recursive movements were supposed to be found in L2 translation in the second condition. As regards the type of modifications, which were traced with both the key logging programme (Translog) and the retrospective protocols, Ferreira (2014) expected that the facilitation effect would have an impact on the number of lexical and syntactic modifications and spontaneous solutions in the second text in Session 1. In the second condition, Ferreira (2014) hypothesised that more lexical and syntactic problems and spontaneous solutions would be found in L2 translation. Recursive movements comprised the backspace and delete keystrokes, as well as navigation (mouse and cursor) movements recorded by Translog. Only the movements that lead to revisions of the target text (either typographical corrections or lexical and syntactic modifications) were included in the statistical analyses, whereas all the other recursive movements classified as "false" were not considered at the analysis stage. The results revealed that the participants indeed made more recursive movements when dealing with the texts on the same topic irrespective of directionality, which may be due to facilitation effect. When the total number of recursive movements was considered, higher rates were found in L1 than in L2 translation, which suggests that the participants may have been more critical towards their L1 (Ferreira 2014: 119). In the second condition (with the texts on different topics), though, more recursiveness movements were found in L2 translation, which supports Buchweitz and Alves' (2006) idea of cognitive adaptation to the task difficulty. Correlation analyses showed that the participants displayed different recursiveness patterns when dealing with the same topics, and similar patterns when translating the texts on different topics, which hints at the idea that "[r]ecursiveness is indeed related to the individual characteristics of the translators" (Ferreira 2014: 118). With regard to the type of modifications, more verbalisations related to the lexical and syntactic changes were articulated in L1 translation in the first condition, and the opposite effect was observed in the second condition, which might support the effect of directionality on the increasing cognitive load in L2 translation. In

conclusion, the empirical study reported by Ferreira's (2014) supported Mossop's (2014) ideas about the potential effect of the level of the translator's familiarity with the text type and the effects of directionality on the self-revision behaviour, with some interesting implications related to the similarities of revision patterns in the condition were different text types were administered. The finding points to the other claim made by Mossop (2007: 19) in that self-revision behaviour may well depend on the translator's "individual psychology".

In an interview study into the end revision practices employed by 26 professional non-literary translators, Shih (2006: 203) discovered that deadlines and continuous time-pressure imposed on translators make them limit their end revision stage to a minimum (or skip it whatsoever), or, in case of longer or more challenging texts, subject their translations to the "drawer time" of one day on average. Shih's (2006) observation shows that the external real-life circumstances and professional demands may also influence the translator's self-revision behaviour. It also raises the issue of when translators revise their translations, which will be addressed in the following subsection.

3.3.3. When does self-revision occur?

Jakobsen's (2002) division of the translation process into the three stages of "orientation", "drafting" and "end revision" gave way to the distinction between corrections introduced at the drafting stage and referred to as "online revisions", and those made at the end revision stage, i.e. "end revisions". Jakobsen (2002) also revealed that the groups of professional translators and students differ in terms of when they revise their translations: the end revision stage was found to take longer in the group of professional translators, but they also appeared to introduce fewer revisions at this stage than the translation students. In his following study comparing the introspective and key logging methods, Jakobsen (2003) discovered that out of the three variables considered (translation speed, segmentation, and the amount of self-revision), only self-revision was left unaffected by the think-aloud method.[48] The finding suggests that translators have their

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[48] In the study, the number of self-revision keystrokes was calculated using the formula discussed previously in the study by Buchweitz and Alves (2006), so it reflects the amount of self-revision done on the whole, without reference to the specific stages in the translation process.

"individual working styles" (Jakobsen 2003: 82), which may be observable in the translators' approach to self-revision. The claim would be then taken up in further empirical research into "translation styles" or "translator profiles", discussed later in the chapter.

The idea of the relationship between the translator's "working styles" and their approach to self-revision inspired Antunović and Pavlović (2011) to design an empirical study to explore the issue. As the researchers were particularly interested in self-revision, they wanted to control all the other variables with the exception of the translator's competence in the source language. Ten graduate students of English (their L2) and Swedish (their L3) were asked to translate two fragments of the same EU text into Croatian (their L1). Since all of the participants acquired Swedish at university level, the source language (further referred to as "SL") competence was expected to influence certain aspects of the translation process, but others were supposed to remain unchanged irrespective of the SL competence. According to Hypothesis 1, the *timing* of revisions and their *distribution over the phases* of the translation process were expected to remain stable and therefore illustrate the "[h]abitual translation behaviour of the individual" (Antunović and Pavlović 2011: 218). As regards Hypothesis 2, the *type* and the *number* of self-revisions were hypothesised to differ due to the different levels of the SL competence. The data were collected using Translog, the key-logging programme. The first hypothesis was supported by the data, whereas the second hypothesis was not. In fact, "remarkable similarities" (Antunović and Pavlović 2011: 231) were found between the types of revisions introduced in both conditions (translation from L2 and L3) when classified according to the linguistic levels (orthographical, morphological, lexical, syntactical and text levels). Interestingly, the lexical and syntactic revisions were the most numerous in both conditions (cf. Englund Dimitrova 2005). To sum up the above, the types of revisions may also be regarded as elements of the translator's individual styles. The next sub-section will therefore present an overview of selected studies into the *types* of self-revisions.

3.3.4. What type of self-revision occurs?

While the knowledge of why, how, and when revisions occur in the translation process allows to sketch the picture of the translator's self-revision behaviour, it seems to be

incomplete without the understanding of the types of revisions made. With the key-logging programmes such as Translog researchers are able to analyse all the interim versions introduced by the translator, but "[o]nly the detailed 'manual' scrutiny of the log files, [however], would make it possible to find out how much text revision was mere correction of typos, and how much was the result of second thought about the translation" (Jakobsen 2003: 82). Although the undertaking may appear challenging, quite a few researchers and research groups have attempted to investigate the issue.

Jakobsen's (2003) statement quoted above implicitly indicates that researchers may prioritise revisions differently: some prefer excluding typographical revisions ("typos") from the analysis (e.g. Englund Dimitrova 2005; Malkiel 2009), others favour their inclusion (e.g. Jakobsen 2003; Muñoz Martín 2009). The proponents of excluding typos argue that correcting these minor errors sheds "[l]ittle or no light on the translation process" (Malkiel 2009: 159), but rather on the translator's computer skills, and can therefore disrupt the analysis. In support of including typos, Jakobsen (2003: 81) pointed to the importance of the translator's metacognitive skills (e.g. self-monitoring abilities) in correcting them. Muñoz Martín (2009: 169) suggested that analysing typographical revisions might reflect the flow of the translator's cognitive processing in a way that "[t]ypos might hint to situations where cognitive resources have been reallocated to support other mental activities, such as evaluating and problem solving". Both types of methodological decisions, though, are primarily dictated by the aims and research hypotheses of a given study. In an attempt to illustrate both approaches, Malkiel's (2009) and Muñoz Martín's (2009) studies are further discussed in detail.

In her study Malkiel (2009) initially adopted a prescriptive approach and tried to predict the type of text modifications that translators would make while translating from Hebrew into English. To achieve this, Malkiel (2009) conducted the contrastive analysis of the two languages, made a list of language-specific problems (e.g. the position of the adjective, tense and aspect, prepositions, etc.) and expected that such textual elements as false cognates, lexicalisable strings and culture-bound expressions would be difficult for translators to deal with in the given language pair. The participants were 16 first-year translation students, 8 of them native speakers of English and the other 8 – native speakers of Hebrew. The task was to translate two journalistic texts of approximately the same length (c. 330 words) from Hebrew into English. Both texts contained the same number of problematic items as revealed by contrastive analysis. The main varia-

ble of "self-corrections" included both online and end revisions, although the minor typographical corrections were excluded from statistical analyses. All revisions were then divided into those that correct (1) grammar, (2) meaning, and (3) the cases were the word of phrase was typed, then deleted and then retyped again verbatim (Malkiel 2009: 153). Once the types of revisions were identified, they were further categorised into those that either serve to correct errors or to "[f]ine-tune (or refine) the target text" (Malkiel 2009: 157). The findings revealed that 20% of all self-corrections were predictable in the translation from Hebrew into English. Although half of the students worked into their L1 and the other half into L2, no significant effects of directionality were found. One of the unexpected and important findings was that the students did not make any corrections to the culture-bound items, despite the fact that the majority of revisions were of the "refining" type. The researcher also observed that a lot of self-corrections consisted in replacing a word or a phrase with a synonym, which, according to Malkiel (2009), shows that the young translators "[s]eem to view the translation as a decision-making process". Malkiel (2009) encourages further research into the concept of self-revision, and anticipates that it might be worthwhile to analyse the relationship between self-corrections and translation quality, as well as determine which types of revisions appear at the different stages of the translation process and lead to better quality.

While Malkiel's (2009) study presented a predominantly typological approach to studying self-revisions in translation, Muñoz Martín (2009) attempted to analyse the functions of typographical corrections in both self- and other-revision from the cognitive perspective. The study reported on the results of a detailed quantitative and qualitative inspection of 44 Translog files of self- and other-corrections in the translations (from English into Spanish) done by four advanced translation students. The analysis focused on *interventions* as "[i]nterruptions of the typing stream followed by any keyboard activity not aimed at adding information to the draft after the rightmost point" (Muñoz Martín 2009: 172), i.e. corrections introduced to the earlier translated piece of text; and *missed phenomena* as those corrections which were supposed to be introduced but were eventually left out by the participant. The major types of *interventions* were then classified according to their function as modifications of the *infralexical* (e.g. uppercase instead of lowercase), *lexical* (e.g. proper names), and *supralexical* (e.g. grammatical adjustments and punctuation) units (Muñoz Martín 2009: 174). The results

showed that the translators had a lot more missed phenomena when revising their own translations than the translations of others. Muñoz Martín (2009: 176) explained the finding by the fact that translators deal with text interpretations that they are supposed to formulate already during the drafting stage, so self-revisions may require "shallower mental processing" than other-revision. The other important observation concerned the fact that all participants showed similar patterns of revision behaviour irrespective of the task type (self- or other-revision). The finding suggests that self-revisions and typos in particular reflect the translator's "desired state of the final text" and her/his individual views on translation quality (Muñoz Martín 2009: 170).

The above overview of studies indicates that the translator's process of self-revision quite often depends on her/his own individual working habits and routines, as well as both self-imposed and prescribed quality standards. Seen this, the knowledge of *why*, *how*, *when* and *what type* of self-revisions are introduced may be particularly important for translator profiling, which the next section will concentrate on.

3.4. The role of self-revision in translator profiling

It is assumed that the frequently reported individual variations in the translation process data constitute certain sets of recurrent "idiosyncratic regularities" (Muñoz Martín 2014: 59) that can be classified so as to form the translator's "individual working styles" (Jakobsen 2003: 82). Following is the chronologically arranged list of the most important contributions devoted to the description of such regularities and "styles" with a special focus on the role of self-revision. [49] In the literature, several general terms have been suggested to refer to the concept of "styles":

- "Process profiles" (Jääskeläinen 1999; Englund Dimitrova 2005),
- "Translator profiles" (Tirkkonen-Condit 2002; Alves and Vale 2011),
- "Production styles" (Asadi and Séguinot 2005),
- "Translation styles" (Carl et al. 2011; Dragsted and Carl 2013) or "individual translation styles" (Hansen 2013).

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[49] The overview is confined to the contributions written in the languages that are available to the author of the thesis, as well as to those that display a process-oriented perspective.

Englund Dimitrova (2005) presented an in-depth analysis of her "explorative, hypothesis-generating" case study into the translation processes of nine participants with different levels of translation expertise, which allowed her to differentiate between five "process profiles".[50] With regard to the methodology applied, Englund Dimitrova (2005) used key logging (ScriptLog) and think-aloud methods in the translation task from Russian (L2) into Swedish (L1). In her analysis part, Englund Dimitrova (2005) concentrated on the three stages of the translation process, which were referred to in line with Hayes et al. (1996) as "pre-writing", "writing" and "post-writing", and the three cognitive processes related to the stages – "initial planning", "text generation", and "revising". The participants' self-revision process was analysed on the basis of the following variables: (1) when the revisions were made (writing or post-writing phase); (2) the type and number of revisions made on average and per each stage of the translation process; (3) the participants' verbalisations related to revisions. In addition to analysing translation process characteristics, the "product perspective" (Englund Dimitrova 2005: 113) allowed classifying revisions into several types according to the respective linguistic levels into *orthographical*, *morphological*, *lexical*, *syntactic*, *content*, and *other* (unspecified) revisions. The variables were correlated with the amount of translation expertise, but no significant expertise effect was found (cf. Jakobsen 2003). The typological analysis of revisions revealed that the *lexical* and *syntactic* corrections were the most numerous at the writing stage, with professional translators outnumbering students in the syntactic type. At the post-writing stage, however, all participants produced the largest number of *lexical* revisions, followed by the categories of *content* revisions in professional translators and *syntactic* revisions in students. Malkiel (2009) made a similar observation about the prevalence of lexical revisions, and suggested that this points to the translator's view of translation as a primarily decision-making process. The idea that the experienced translators produced more *content* and *syntactic* revisions may indicate that they have a more "globally-oriented approach" to translation (cf. Dragsted and Carl 2012) and therefore pay more attention to the higher-order linguistic levels.

The other important observation in Englund Dimitrova's (2005) study referred to the literal renderings that very often served as intermediate steps for professional trans-

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[50] The participants were: 2 senior professional translators, 2 junior professional translators, 2 translation students, and 3 language students.

lators and some of the students in their translation process. Englund Dimitrova (2005) summarised the finding into the "literal translation hypothesis", which is in a way similar to Tirkkonen-Condit's (2005) "monitor model" of the translation process, where literal translation is treated as a default translation strategy. Chesterman (2011: 30) noted that the analysis of the translator's tendencies to produce literal renderings may allow researchers to formulate "individual translation styles" and even optimise revision procedures. Chesterman (2011) believes that some translators in their processes of self-revision tend to "deliteralise", i.e. proceed from literal towards less literal translation variants, while others tend to "reliteralise", i.e. start with a more general version and then bring it closer to the source text. According to Chesterman (2011), the different revision routines may depend on a range of factors such as language pairs, text type, working conditions, and even translator's personality type.

In Englund Dimitrova's (2005) study, the literal translations were subsequently dealt with in one of the following ways, which were earlier identified by Krings ([1995] 2001) in his study of the translator's post-editing strategies: (1) verbalised in the form of "mental notes" and then revised at the post-writing stage, (2) written down and corrected immediately, or (3) written down and then revised at the post-drafting stage. Englund Dimitrova (2005) concluded that "[o]ne important aspect of professional competence and expertise in translation is to be able to handle literal translations in the process: to use them, in order to *minimise cognitive effort*, but also to *apply appropriate procedures for evaluation* and, if necessary, *revision* [emphasis mine, OLP] " (Englund Dimitrova 2005: 234).

As regards the number of revisions during the writing and post-writing stages, the data showed considerable variations with some consistent patterns displayed at the individual level. Interestingly, the same participants who scored the highest number of revisions at the writing stage had similar patterns at the post-writing stage, which lends support to the concept of the largely consistent "process profiles".

Englund Dimitrova (2005: 151) proposed two major approaches to the concept of profiles: participant-driven (the stable sets of individual process features), or data-driven (more general, whereby the individual process features may differ depending on the type of the translation task). The researcher believes that more extensive research involving different text types is necessary to test the data-driven approach. Considering a small number of participants, though, Englund Dimitrova's (2005) profiles reflect the

participant-driven approach. Englund Dimitrova (2005) offered to differentiate between five process profiles based on the characteristics of the three stages of the translation process. The first two profiles are characterised by a relatively short writing stage (less than 40% and about 50% of all time respectively) with many revisions, and an extensive post-writing stage with many revisions, and only differ in the duration of the pre-writing stage (longer in Profile 1). The divergent feature of Profile 3 is a longer writing stage in comparison to Profiles 1 and 2. Englund Dimitrova (2005: 152) affiliates the first three profiles with Krings' category of "correctional planners" (Krings [1995] 2001: 530) identified in the context of analysing the translator's post-editing process and character-ised by writing down many intermediate solutions and revising them (either) immedi-ately, or during the post-writing stage. Profile 4 has a long writing stage with few revi-sions, and a short post-writing stage with very few revisions, so it is comparable with Krings' ([1995] 2001: 530) category of "anticipatory planners", defined by a lot of men-tal planning and evaluation. Profile 5 has an extensive writing stage with a lot of revi-sions and a long post-writing stage with many revisions, so it is somewhere in-between the two categories of Krings' ([1995] 2001) "planners". The characteristics of the five profiles, as well as Krings' ([1995] 2001) distinction between "correctional" and "antic-ipatory planners" correspond to the earlier mentioned observations of Mossop (1982, 2014) and Toury (1995b) regarding different sequences of "mental editing" and text-bound corrections preferred by different translators. All things considered, Englund Dimitrova (2005) made a detailed account of a number of process characteristics that may be worth including in translator profiles, but the number of participants and the variability in the level of translation expertise hardly allow generalising the results.

Controlling for group homogeneity, Asadi and Séguinot (2005) offered an in-sight into the translation strategies of nine professionals dealing with a medical text. The study was conducted in the professional translator's work settings with Camtasia studio, the screen recording programme that traced process data, installed on their com-puters. Both concurrent and retrospective protocol sessions were conducted. The aim of the study was to identify the general patterns and shortcuts that translators use in their everyday practice in order to produce a high quality translation output with the least amount of time and effort invested in it (cf. "minimax strategy" Levý [1967] 2000).

One of the general behavioural patterns revealed at the analysis stage was the translator's tendency to either translate a unit of text mentally and type it afterwards or

translate and revise while translating the text. Asadi and Séguinot (2005) referred to the two patterns as the cognitive production styles of "prospective thinking" and "translating on-screen" (cf. Mossop 1982; Toury 1995b; Krings [1995] 2001; Englund Dimitrova 2005). One of the informative peculiarities of the "prospective thinking" style concerns better handling of the problematic translation segments, which was explained by the translators' ability to "[m]ake text-level decisions and plan ahead" (Asadi and Séguinot 2005: 528). The on-screen translators, on the other hand, managed shorter translation units and displayed a lot of backtracking behaviour, most often revising the translated unit right after typing it. Once the larger segment was translated, the "on-screen" translator would introduce changes on the lexical and syntactic levels "[t]o reflect [their] growing comprehension" of the source text (Asadi and Séguinot 2005: 530). "Prospective thinkers" made mostly spelling and lexical corrections with a smaller total number of revisions while drafting, whereas "on-screen translators" made a lot more lexical and syntactic modifications apart from spelling. The researchers explained that the "on-screen translation" employs online revision "as a shortcut" (ibid.), which allows typing faster and monitoring the writing process as reflected in the translators' numerous text modifications, and probably reducing cognitive load, as suggested by Englund Dimitrova (2005).

The triangulation of the screen-recording and think-loud data allowed Asadi and Séguinot (2005) to conclude that the majority of participants in their study were combining different strategies, and it is therefore more reasonable to place them on *a strategy continuum* rather than assign to a specific translation style. The continuum proposed by the researchers could be most generally described by three strategic patterns: (1) translation drafting strategy; (2) drafting and checking strategy; (3) revisions strategy. The first strategy consists in quickly preparing the first draft with some online revision, and leaving the text to be revised later, which resembles Mossop's (2014) "steamrolling" strategy. The drafting and checking strategy means preparing the draft with a moderate number of revisions, and leaving some of the unresolved problems for the end revision stage. And finally, the translators who adopt the revision strategy have a clear aim to produce a well-revised translation already at the drafting stage, which corresponds to Mossop's (2014) "oil-painting" process profile.

The discussion of results from the standpoint of strategy continuum driven by data analysis allowed Asadi and Séguinot (2005) to claim that "[e]ach translator's pro-

cess is a unique combination of cognitive style, translating experience, technical skills and world knowledge, which cannot be fit into the static categories we had hoped to find" (Asadi and Séguinot 2005: 539). Indeed, the translation process seems to be moderated by a variety of factors and translation situations, but the only consistent pattern that emerged from the data was the translators' tendency to use either the cognitive production style of "prospective thinking" or that of "on-screen translating". Moreover, the pattern corresponds to the above-discussed conclusions of Krings ([1995] 2001), Englund Dimitrova (2005), and Mossop (2007, 2014). The fact that translators characterised by these cognitive styles may still display a combination of different strategic patterns shows that (1) the translators' "individual psychology" (Mossop 2007) might prompt them to activate certain patterns of cognitive behaviour, which (2) may help them adjust to the requirements of a given translation task.

Alves and Vale (2011) aimed to identify the prototypical patterns of professional translators' drafting and revision behaviours. To achieve this, the researchers tracked the change of micro translation units into macro translation units and their distribution over the stages of the translation process. The key logging (Translog) and screen recording (Camtasia) data of 12 professional translators' processes were taken from CORPRAT, the Corpus on Process for the Analysis of Translations (Pagano et al. 2004), whose unique functions consists in storing five types of files (key logging, eye tracking, screen recording, retrospective protocols and questionnaires) for further data triangulation. To automatise the analysis process, LITTERAE, the annotation and search system, was developed. During the experiment, the professional translators were working either from English (6 participants) or German (6 participants) into Brazilian Portuguese (their L1). The participants were allowed to use online resources and did not have time limitations.

According to their earlier study (Alves and Vale 2009), a *translation unit* is an uninterrupted production string separated from the rest by pauses before and following it. Seen this, *a micro translation unit* can be defined as a text production segment that includes all "online" (Jakobsen 2003) additions, deletions and other modifications referring to the same ST segment, whereas *a macro translation unit* is a set of micro translation units all referring to the same ST segment and comprising production and revision operations made both while drafting and at the end revision stage. On the basis of data analysis Alves and Vale (2011: 111-112) identified three types of macro units: (1) P1,

where the cognitive processing patterns are traceable only while drafting, (2) P2, where processing patterns appear only once while drafting and continue at the end revisions stage; (3) P3, where processing patterns occur more than once while drafting and then again at the end revision stage. With a view to discover prototypical behaviours, calculations were made as regards the distribution of the macro translation units over the drafting and end revision stages. Thus, whenever the P1 pattern appeared six times more often than the P2, the translator was assigned the profile of a "Drafter", in case of the reverse situation, the translator was considered to be a "Reviser". Interestingly, only 4 of the 12 professional translators belonged to the "pure" profiles (2 "Drafters" and 2 "Revisers"), while others belonged to the mixed type ("Drafter/Reviser"). The mixed type was divided into two sub-profiles on the basis of the prevailing processing patterns: a "Drafter Recursive Reviser" with the P3 pattern dominating, i.e. the same text segment was revised both online and at the end revision stage; and a "Drafter Non-Recursive Reviser" with no specific processing pattern identified. Thus, Alves and Vale (2011) concluded that the P1 pattern differs from the other two with regard to the attention focus: P1 is concerned with text production *per se*, and P2 and P3 are focused on revising. Alves and Vale's (2011) findings are comparable with those of Asadi and Séguinot (2005) in terms of the idea of a translation strategy continuum that may be characterised by different production styles.

While the world of professional translation is becoming increasingly technological, Carl et al. (2011) believed that designing more advanced translation tools would hardly be possible without understanding the peculiarities of "human translation styles". Therefore, the study involving 12 professional translators and 12 MA translation students was designed to tap into the patterns of translation behaviours and eventually develop the taxonomy of translation styles. The participants translated three texts from English (their L2) into Danish (their L1) without the opportunity to use the Internet resources for additional research. The process data were gathered using Translog and an eye-tracker, and further aligned with the corresponding ST segment in order to track the translator's processing patterns (Carl and Jakobsen 2010). For analysis sake, the translation process was divided into the stages of initial orientation, drafting and revision. The translation style was defined as a combination of behavioural patterns that reflect (1) the translator's approach to initial orientation, (2) the way of planning the drafting of translation, and (3) the translator's preference towards online or end revision. Considering

the aims of the present thesis, only the behavioural patterns related to self-revision be-haviour will be discussed.

The analysis of the data allowed researchers to differentiate between three be-havioural patterns of (1) online revision (all of the text modifications are made while drafting), 2) end revision (20% or more of the total translation time is spent on end revi-sion); and (3) constant revision (a mixture of the first two types). Notably, the patterns are similar to the three process profiles identified by Alves and Vale (2011). Correlating the results with the participants' amount of expertise, Carl et al. (2011) suggested that professional translators generally prefer end revision (although half of the "end revis-ers" in the experiment were in fact found to be "constant revisers"), and translation stu-dents prefer online revision.

Dragsted and Carl (2013) revisited the findings of Carl et al. (2011) in a follow-up study and analysed the variables with regard to the increasing difficulty of the trans-lation task (cf. Buchwietz and Alves 2006). The three texts used for the experiment had different levels of difficulty, from the easiest one (text A) to the most complicated (text C). Dragsted and Carl (2013) hypothesised that the translator profiles would be revealed on the basis of the combinations of individual process characteristics that remain stable irrespective of the text difficulty, and that the translation style might be related to the expertise level.

The analysis of the translators' self-revision processes (measured as the dele-tions of characters) showed that all translators applied online revision to a different ex-tent, and only some of the translators (3 professionals and 5 students) resorted to dele-tions at the end revisions stage. However, (Dragsted and Carl 2013: 148) claimed that end revision could also serve the purpose of reviewing translations and suggested that "[a] more accurate measure of end revision effort is the time after the drafting phase relative to the time spent during drafting".

Having analysed the participants' initial orientation and drafting behaviour on the basis of the eye-tracking data (gaze time, fixations and regressions), and revision patterns on the basis of the key logging data (the quantity of online and end revisions and the duration of the end revision stage), Dragsted and Carl (2013) were able to con-clude that the individual translator profiles remain stable irrespective of the level of text difficulty (cf. Buchweitz and Alves 2006; Ferreira 2014). The process characteristics shared by all translators (both students and translators) allowed Dragsted and Carl

(2013) to differentiate between two general translation styles depending on the type of focus: predominantly *local* or predominantly *global*. The former consists in no or very short initial orientation ("head-start or quick-planning"), word or phrase level locus of attention ("narrow-context planning"), and mostly the preference towards online revision. The global focus is defined by longer initial orientation stage ("systematic planning or scanning"), sentence planning while drafting ("large-context planning"), and the prevailing end revision behaviour (Dragsted and Carl 2013: 149). The data did not show clear support for the hypothesis related to the expertise effect, although some of the professional translators were found to display more extensive end revision behaviour in comparison with translation students. However, Dragsted and Carl (2013) explained that this might be due to the time pressure, which was imposed on the participants, and suggested that translation students might have been forced to skip the end revision stage in some of the cases (Dragsted and Carl 2013: 150). Tellingly, another unexpected finding concerned the fact that most of the professional translators displayed the tendency towards local orientation during drafting, and a more global orientation during end revision stage. Dragsted and Carl (2013: 150) argued that this might be explained in terms of expertise effect, as "[p]rofessional translators are able to produce TT [target text] more quickly, and without referring to more than the immediate context of what they are translating, unless a production problem appears" (cf. Tirkkonen-Condit 2005; Englund Dimitrova 2005).

Trying to reconcile translation process and product orientations, Hansen (2013) poses the following key questions: "How can we identify successful translation processes that lead to *good* translations? What traits, abilities, qualifications and skills characterise a successful translator?" (Hansen 2013: 49). In order to address these questions, Hansen (2013) designed a longitudinal study, for which the first experiment (Hansen 1997) was conducted on a sample of more than 40 graduate translation students at the Copenhagen Business School. The data for the study were gathered with the combination of the methods of key-logging, retrospective protocols, and individual discussions after the translation task. The participants were translating from Danish (their L1) into German (L2), and vice versa. The quality of the translated text was then evaluated. The data analysis revealed that translation students each have their own "[i]ndividual competence patterns (ICP), a combination of individual conditions, which shape both their style of translation during the translation process and the translation product itself"

(Hansen 1997: 207, as quoted in Hansen 2013: 50). Hansen (1997) illustrated ICPs by the translator's tendencies to either start translating quickly and introducing a lot of changes, or first thinking over the variants and then writing down with only a few changes afterwards. Having observed such individual patterns among translation students, Hansen (1997) sought to determine whether the same participants would demonstrate such patterns later in their professional life. In 2007, another experiment with 28 professionals of the previous group of 47 students was conducted. The texts were different from those used in 1997, but the directionality, as well as other conditions were preserved. As the researcher was interested in the processes that lead to high quality translations (Hansen 2013), the detailed analysis was conducted on a sample of 4 participants (as students and later as professionals). The translation process was divided into the stages of "preparation", "writing" and "revision" in line with Krings' terminology (1986). Hansen (2013: 53) classified self-revisions according to the text unit and the amount of attention invested: (1) changes and corrections at word level; (2) revisions in sentences and context during the writing phase and the revision phase ("pragmatic, lexical, idiomatic, stylistic, syntactic or orthographic revisions beyond the level of individual words), and (3) reformulations during the writing and revision phases (some particularly complicated text segments that involve higher-rank modifications).

The analysis revealed that the individual translation process habits remained almost the same in the course of 10 years. In fact, the participants were found to show similar process patterns as in the first experiment, which enabled Hansen (2013) to conclude about the existence of translation styles independent of the level of translation expertise. In view of her findings, Hansen (2013) believed that it is essential that the students' individual styles of translation be respected during translation training, because certain "[c]ognitive processes, as required for translating, were perhaps already present in the participants' personality from the outset" (Hansen 2013: 62). One of Hansen's (2013) suggestions for future research concerns the linguistic and stylistic analysis of the types of revisions, which may add some interesting characteristics to the description of the translation styles.

As evident from the above overview of selected contributions into the translation styles, the researchers seem to agree on the idea that translators display certain recurrent patterns of self-revision irrespective of language pair, directionality, and even, unexpectedly so, the level of expertise. In particular, some translators tend to focus more on

the text production process and produce most of the corrections at the drafting stage, while others tend to concentrate on refining the text after the first draft and produce more revisions during the end revision stage. It is therefore important to understand the possible origin of such different self-revision patterns, which might be well rooted in the translator's "individual psychology" (Mossop 2007: 19) and personality (Chesterman 2011; Hansen 2013).

3.5. Conclusions

The overview of literature on the translator's self-revision process has indicated that it is a source of decisional action whose aim is to ensure the desired translation quality. A number of researchers (Mossop 1982; Toury 1995b; Malkiel 2009; Carl et al. 2011; Dragsted and Carl 2013, etc.) observed that translators differ with regard to their preferred cognitive processing patterns while making decisions during self-revision. The patterns may be identified on the basis of the duration of the drafting and end revision stages, as well as the number and the type of corrections introduced at the two stages. It has been suggested that the translator's personality may account for the individual working habits displayed in self-revision. The research into the relationship between the translator's personality and the decisional activity in the translation process, i.e. self-revision, is, however, scarce. In addition, such type of research would benefit from the assessment of the translation quality, as it is related to self-revision and the translator's self-imposed quality standards.

Summarising the findings of research into self-revision in translation, the following questions may be worthy of further investigation within the framework of the combined process- and product approach the translator's self-revision process:

- What is the role of the translator's personality in the process of self-revision?
- Do the individual self-revision patterns remain the same in different text types?
- What is the relationship between the translator's personality, individual self-revision patterns and translation quality?

These and other questions will be addressed in the experiment designed to establish the possible links between the translator's personality, the translation process and translation product with the translator's self-revision process under scrutiny.

Chapter 4: Relationship between the translator's personality, translation process and product

4.1. Introduction

Toury (1995b) argued that in order to avoid the "dubious statements" about translation strategies and procedures, "[w]ays should be sought to break down both fictitious constructs, "the translator" and the "translation process", into their components and start relating them to each other" (Toury 1995b: 216). Thus, the experiment has been designed so as to break down (1) the concept of the *translator's personality* into traits and psychological functions, (2) the *translation process* into the relevant characteristics of self-revision, and (3) the *translation product* into the quality assessment scores. The findings of the study will contribute to the understanding of the potential role of the psychological features of the translator's personality in the translation process and product.

Chapter 4 begins with the description of the aims of the study and its methodological basis, and continues with the introduction of the hypotheses and the variables selected to operationalise the core concepts. It then presents the experimental procedure and the participants, as well as the tools and materials used in the study. The chapter culminates with the analysis of the data and the discussion of results. It ends with a general discussion, an overview of the limitations of the study, potential areas of future research, and the didactic considerations.

4.2. The aims of the study

The present study aims to investigate the role of the translators' *personality traits* and *psychological functions* related to decision-making (discussed in detail in chapter 1) in the translator's self-revision behaviour during the translation process, and the quality of the translation product. To this end, the following aims have been set:

(1)   Firstly, the study seeks to identify whether translators differ from the representatives of other professions in the distribution of their *personality traits*. The aim has been inspired by the "person-organisation fit" assumption (Pervin 1989),[51] and serves to build a psychological profile of the translator's personality.

(2)   Secondly, the study intends to analyse the impact of the translators' preferred *psychological functions* on the self-revision process in translation.

(3)   Finally, the purpose of the study is to explore the role of the *translator's personality* (traits and functions) in the selected characteristics of the *translation process* (i.e. self-revision) and the quality of the translation product. As a secondary focus, the study seeks to contribute to the answer to the intriguing question of whether translators with certain personality characteristics are more predisposed to translating certain text types.

To sum up, the study presents an attempt to investigate the relationship between the personality-related characteristics of the translator's "self-concept" (Kiraly 1995; Muñoz Martín 2010) or the "psycho-physiological components" (PACTE 2003), the translator's "individual working styles" (Jakobsen 2003) reflected in the decisional self-revision activity, and the translation product quality.

4.3. Methodological basis

The present study is an interdisciplinary endeavour that combines the methodology from the fields of personality psychology and translation process research. Psychomet-

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[51] See section 1.6.2. for details.

ric testing has been used to measure the translator's personality traits and identify the preferred psychological functions. To track the translator's self-revision process, the key-logging method has been applied. The method of self-report questionnaires has served to collect the relevant background information about the informants, as well as their views on the role of personality in one's professional life, their approach to the translation process and the self-evaluation of their performance in the experimental tasks. Translation quality assessment has been introduced with a view to tap into the relationship between the translator's personality features and the quality of her/his translation performance.

All in all, the *multi-method approach* has been adopted to reach the aims of the study. The approach combines participant-, process- and product-based methods (Saldanha and O'Brien 2014) into a complex methodological framework that allows looking into the role of the translator's personality in self-revision as a key product-shaping stage of the translation process.

4.4. Research design

The study adopts *a multi-factorial design* with the following between-subject factors: (1) experimental group membership (translators and non-translators in Hypothesis 1, translation trainees and practising translators in Hypotheses 2-4), (2) the psychological function (Thinking or Feeling) in Hypotheses 2-4. The within-subject factor used for Hypotheses 2-4 was the text type (expressive and informative), as all of the participants had to translate both texts during the experiment. Importantly, the nature of the study is exploratory, as it taps into the area, which has received little attention from the scholars so far.

4.5. Variables

In the study, three independent variables (*inputs*) and nine dependent variables (*outputs*) have been considered in different combinations with reference to the five hypotheses. Each of the variables is presented in detail below.

4.5.1. Independent variables

The independent variables selected for the experiment have been the following: (1) *experimental group membership*, (2) *psychological functions*, and (3) *text type*.

Overall, three *experimental groups* took part in the study: translation students, practising translators and other professionals. To test Hypothesis 1, the groups of students and practising translators were first merged into one and juxtaposed with the group of the other professionals, thus forming one independent variable (factor) with two levels (translators and non-translators). This was ensured in order to tap into the differences between translators and the representatives of the other professions in terms of the distribution of personality traits, irrespective of their expertise level (cf. Hansen 2013). In such a case, between-group analysis was performed. To explore the issue further, two other types of between-group comparisons were performed: (1) the group of translation students was compared with the group of non-translation students in terms of their personality traits, and (2) the groups of practising translators and non-translators were compared with regard to the same variables. The two comparisons were made in order to check for any age and expertise effects, and tap into the possible interactions between personality and occupation.

The other hypotheses refer to translators only, so the variable of experimental group membership was again treated as a factor with two levels (translation students and practising translators). Such a design was necessary in order to explore whether self-revision behaviour is predominantly personality-based, as suggested in the previous studies (e.g. Jakobsen 2003; Mossop 2007; Hansen 2013), and therefore certain tendencies can be observed irrespective of the level of expertise in translation, or vice versa – the effect of expertise dominates that of the personality characteristics.

The variable of the *psychological functions* was selected with regard to Jung's ([1921] 1971) *personality typology* theory and the study of the four dichotomous psychological functions that influence people's behaviour. As the present experiment concentrates on the translator's self-revision behaviour and its *decisional* properties (e.g. Piolat 1990; Mossop 2014; Shih 2015), only the dichotomy related to *decision-making* was considered. The functions within the dichotomy are referred to as "Thinking" and "Feeling", whereby the former involves analytical and logical handling of information in order to reach the desired outcomes, and the latter means arriving at decisions on the

basis of the analysis of values they represent in a given context (cf. 1.3). The translation students and practising translators were divided into the *Thinking* and *Feeling* types depending on their preferred decision-making function received from the MBTI (Myers-Briggs Type Indicator) psychometric test. Thus, the variable of the *psychological functions* is an independent variable with two levels (Thinking and Feeling).

The third independent variable of the *text type* was included in order to understand (1) whether there is any correlation between the dominant personality trait(s) and higher quality of the translation of certain text types, and (2) whether the translators display the same or different self-revision patterns depending on the text type. The independent variable (factor) of the *text type* comprised two levels: the expressive and the informative text types (cf. Reiss [1971] 2000). Further information about each of the texts is provided in the *Tools and materials* section below.

4.5.2. Dependent variables

The following dependent variables were included in the analyses:

(1)   Personality traits (domains and facets),

(2)   The duration of the end revision stage,

(3)   The number of deletions introduced during the drafting stage,

(4)   The number of deletions introduced at the end revision stages,

(5)   The number of "surface" corrections introduced during the drafting stage ("surface online"),

(6)   The number of "deep" corrections introduced during the drafting stage ("deep online"),

(7)   The number of "surface" corrections introduced at the end revision stage ("surface end"),

(8)   The number of "deep" corrections introduced at the end revision stage ("deep end"),

(9)   The translation product quality scores.

The *traits* (cf. 1.6) as stable personality characteristics were chosen in order to investigate the "person-organisation fit" assumption (cf. 1.6.2). According to it, the representatives of certain professional fields differ from the other types of professionals in their distribution of personality characteristics, which attract them to and assist them in their area of expertise. Out of a number of different personality characteristics such as motivation, aptitudes, skills, etc., *traits* were selected as those that reflect the psychological part of one's personality and can be retrieved on the basis of the psychometric tests. HEXACO Personality Inventory (Ashton and Lee 2007) was used to measure six major domains (higher-level traits) of personality traits, each containing 4 facets (lower-level traits).[52] Both the domains and facets were the dependent variables in the study. The reason for including both higher- and lower-rank personality descriptors is the psychologists' claim about the importance of considering the facets for a more comprehensive interpretation of the traits distribution, especially in the context of the HEXACO inventory (Ashton and Lee 2005).[53]

The dependent variables from (3) to (8) refer to the different characteristics of self-revision, which were previously reported to constitute the translators' individual working patterns in the *translation process*.[54] As all of these characteristics are *behavioural* in their nature and reflect the *decisional* processes, it is assumed that they may be the outcomes of the different *decision-making psychological functions* (Thinking or Feeling), described above. Previous empirical and observational studies showed that two major types of self-revision behaviour can be distinguished: the translators either introduce most of the revisions while drafting the translation and spend little time on the end revision stage, or prepare the first draft rather quickly and then introduce most of the changes at the time-consuming end revision stage. The two types of revision behaviours address the questions of *when* and *how much* self-revision is performed, and the present study supplements these with *the type* of corrections introduced at the two stages. Thus, the potential effects of the preferred decision-related psychological function, *Thinking* or *Feeling* (independent variable), are analysed with reference to the distinction between the two major revision styles, operationalised with the help of the dependent variables from (3) to (8).

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[52] See the *Tools and materials* section (4.8) for further details about HEXACO Personality Inventory.
[53] See section 1.2.5 for more details about personality domains and facets.
[54] See sections 3.3.1-3.3.4 for more details about the possible ways to operationalise self-revision.

Prior to introducing the *process-related* dependent variables, it is important to note that the present study relies on Jakobsen's (2002) division of the translation process into three consecutive stages: *orientation* (preparation before starting to type in the first draft), *drafting* (the actual writing of the first draft), and *end revision* (after the draft translation of the source text has been finished). With regard to the temporal characteristics of self-revision, the variable of the *duration of the end revision* stage was selected. As the drafting phase consists not only of decisional activities, but also of information search and analysis ("mental editing", Mossop 1982), the present study chose to concentrate solely on the duration of the end revision stage, which may be more indicative of decision-making in the translation process. To understand *how much revision* is performed at the drafting and end revision stages, the variable of *the number of deletions* (i.e. deleted characters recorded by *Translog*) introduced at the two stages was included in the analysis.

With a view to supplement the quantitative behavioural characteristics with the qualitative ones, the dependent variable of the *type of corrections ("surface"* and *"deep")* made during the drafting and end revision stages was introduced. The term "correction" as applied in the present study can be roughly defined as a combination of deletions and insertions (received from *Translog*) that serves to modify a translation decision. The type of corrections is identified on the basis of Flower and Hayes' (1971) typology of revisions, which is widely accepted and used in writing process research.[55] All corrections introduced in the process of translation and during the end revision stage were analysed with regard to the two major types of revisions – "*surface*" and "*deep*" revisions. The former type refers to the corrections of spelling, morphology and grammar, as well as punctuation and text layout, leaving the semantic and syntactic levels unchanged. The latter type involves the modifications of meaning and the change or adjustment of the syntactic structures. The distinction between "*surface*" and "*deep*" corrections (cf. Chanquoy 1997) allows classifying each of the introduced changes and providing the counts of each of the two types per participant, per translation process stage and per text. The analysis of the process-based variables (from (3) to (8)) is possible with the help of the *Translog* key-logging programme (Jakobsen and Schou 1999), whose functions are discussed in detail in the *Tools and materials* section.

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[55] See *Data analysis* section (4.10) for further details.

Driven by the assumption that the dominant personality traits may influence the outcomes of the academic and professional performance, the dependent variable of the *translation product quality* was included in the analysis. Each of the translation outputs was evaluated against a specifically designed assessment scale adapted from Williams (2009) and presented in detail in the *Data analysis* section below. Two teachers of translation and two potential readers performed the assessment. Such a scheme was designed with the intention of providing a more objective measure of translation quality, in which the evaluation carried out by a potential user of translation is also considered. The feature of double assessment is innovative in this type of research, and may therefore be an additional merit of the present study. Moreover, the consideration of the translation product quality allows generalising about the possible relationship between the translator's personality (traits and psychological functions), translation process (the preferred self-revision behaviour) and translation product (quality). Having presented all the independent and dependent variables, the chapter proceeds with the formulation of the research hypotheses.

4.6. Hypotheses

Bearing in mind the aims of the present study, 5 hypotheses have been formulated. Hypothesis 1 seeks to explore whether translators differ from the representatives of the other professional fields in terms of the distribution of their personality traits. To the best of the author's knowledge, the present study is the first to compare translator's personality with that of other experts, whose professional fields are not related to translation or linguistics. The hypothesis and Figure 11 illustrating it are provided below.

Hypothesis 1: *In their distribution of personality traits, translators differ from the representatives of other professions.*
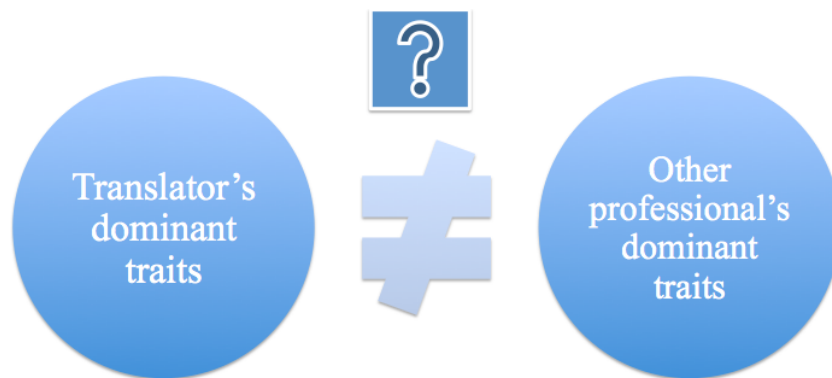
Fig. 11. The illustration of Hypothesis 1.

As it has already been mentioned, the "person-organisation fit" (Pervin 1989) assumption holds that people with a certain distribution of personality traits are more attracted to certain professions. Moreover, traits are considered to be useful in predicting the quality of performance in academic and occupational settings. Thus, it seems reasonable to hypothesise that translators possess a certain set of personality characteristics that (a) attract them to the profession, and (b) help them survive and progress in their professional lives. In other words, it is hypothesised that the set of the translators' dominant personality traits will be different from that of the other experts.

While Hypothesis 1 aims at describing the translator's personality in *quantitative* terms and constructing a general psychological profile of a translator, Hypotheses 2-4 hypotheses look into the role of the translator's preferred psychological function in her/his performance during self-revision. In particular, Hypothesis 2 addresses the issue of the role of Jung's ([1921] 1971) decision-related psychological functions in the duration of the end revision stage in the process of translation:

Hypothesis 2: *The translator's preferred decision-related psychological function influences the duration of the end revision stage.*

As it has been pointed out in chapter 1, Jung's ([1921] 1971) four dichotomous functions (Sensing-Intuition, Thinking-Feeling) are the *qualitative* personality characteristics that are believed to guide people's behaviour in terms of *information gathering* (Sensing-Intuition), and *decision-making* (Thinking-Feeling) across different situations. Jung ([1921] 1971) also suggested that each person tends to prefer one of the two dichotomous functions. As the present study is particularly concerned with the translator's

decisional behaviour displayed in self-revision, only the second dichotomy of *Thinking-Feeling* is considered in the study. The behavioural characteristics of the two functions differ: people with the *Thinking* preference tend to base their decisions on rules, the logical and analytical approach, and those with the *Feeling* preference rely on the analysis of the values and the consequences of decisions in a given context. Moreover, the *Thinking* types are often described as task-oriented, and the *Feeling* types as process-oriented. In view of this, it is hypothesised that the *Thinking* types will go through the drafting stage rather quickly, conveying the denotative meaning first, and then spend more time on the end revision stage, modifying their decisions. The *Feeling* types, on the other hand, are expected to spend more time on the drafting stage and consider each of the intermediate versions very carefully before arriving at a decision, and then spend little time on the end revision stage. As Hypothesis 2 refers to the temporal characteristics, Hypothesis 3 concerns the translator's approach to dealing with intermediate versions at the drafting and end revision stages before arriving at the final decisions.

Hypothesis 3: *The translator's preferred decision-related psychological function influences the number of eliminations introduced at the drafting and end revision stages.*

Hypothesis 3 attempts to predict that the translators with the *Thinking* preference will not only spend less time on the drafting stage, but also introduce fewer deletions at this stage. At the end revision stage, though, it is hypothesised that the *Thinking* types will reconsider their earlier choices and have more deletions at this stage. Due to their process orientation, the *Feeling* types are hypothesised to type in more intermediate versions and therefore have more deletions at the drafting stage and fewer at the end revision stage. The next hypothesis seeks to classify the types of corrections introduced at the drafting and end revision stages in relation to the translator's preferred psychological functions.

Hypothesis 4: *The translator's preferred decision-related psychological function influences the type of corrections introduced at the drafting and end revision stages.*

Since the *Thinking* type translators are expected to spend less time and introduce fewer deletions at the drafting stage, it is also hypothesised that they will focus mostly on fixing the lower-level problems, i.e. making orthographical, morphological, grammatical,

punctuation and layout corrections ("surface"), at this stage. The meaning-related and text-based (higher-level, "deep") problems will be resolved at the end revision stage by the *Thinking* types. The *Feeling* type translators, on the contrary, are expected to be more concerned with the semantic and syntactic levels while drafting the translation, which will result in more "deep" corrections at this stage. The end revision stage, which is expected to be rather short (Hypothesis 2) and with only few deletions (Hypothesis 3), will be mostly devoted to introducing the lower-level "surface" corrections by the *Feeling* types.

As one of the *independent* variables is also the *text type*, the differences outlined in Hypotheses 2, 3 and 4 will be examined not only between the preferred *psychological functions* (*Thinking* and *Feeling*), but also between the two *text types* (*expressive* and *informative*).[56] The nature of influence of the *text type* variable remains to be an exploratory part of the hypotheses, as, to the best of the author's knowledge, the issue of the relationship between the text type, psychological functions and self-revision patterns has so far been underresearched. Figure 12 illustrates Hypotheses 2, 3 and 4 that all refer to two independent variables (abbreviated as "IV"), each of them with two levels, and nine dependent variables (abbreviated as "DV").[57]
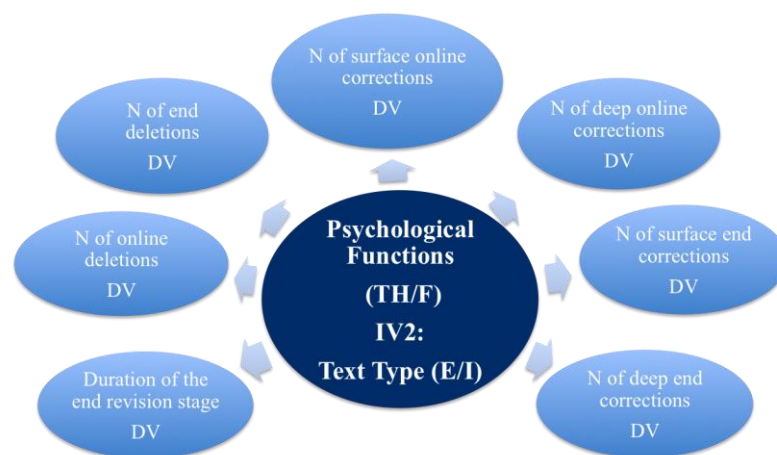
Fig. 12. The illustration of Hypotheses 2, 3 and 4.

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[56] See *Tools and materials* (4.8.1) section for further details about the extracts representing the two text types.
[57] The other abbreviations in the figure stand for the following: "TH" for the Thinking function, "F" for the Feeling function, "E" for the expressive text type, "I" for the informative text type.

Finally, Hypothesis 5 seeks to look into the relationship between the translator's *psychological profile* (personality traits and psychological functions) as part of her/his translation competence and expertise and the *quality* of the translator's outputs. Hypothesis 5 reads as follows:

Hypothesis 5: *The translator's dominant personality traits and psychological functions form part of their translation competence and expertise, and altogether contribute to high translation quality.*

As pointed out in chapter 1, previous psychological research has shown that a person's dominant personality traits may predict the outcomes of her/his academic and occupational performance. Chapter 2 has shown that the psychological characteristics of the translator's personality contribute to the development of their translation competence and expertise. Thus, Hypothesis 5 attempts to qualitatively analyse the psychological profiles (the dominant traits and psychological functions) of the translation trainees and practising translators whose translations of the two texts have been highly evaluated. Additionally, Hypothesis 5 looks into the potential impact of the preferred decision-related psychological function (Thinking or Feeling) on the quality of the translations of the two texts. This will help to establish whether different decision-making functions, whose influence on the self-revision process is tested for in Hypotheses 2-4, may also account for the differences in the final quality of translations. This is in line with the view of self-revision as a quality-assuring process presented in chapter 3.

The five hypotheses altogether aim to tap into the psychological profile of a translator. In order to verify the hypotheses and conduct statistical analyses of the data, an important step was to recruit participants into each of the experimental groups. The sampling methods and the composition of each group are provided in the following section.

4.7. Participants

The study recruited participants with the help of two types of participant sampling methods: *convenience* (Saldanha and O'Brien 2014: 24) and *snowball* sampling

(Mellinger and Hanson 2017: 13).[58] The former method was applied to invite student informants, and the latter worked for all the others. In total, 30 translation students, 17 practising translators and 94 representatives of other professions took part in the study. The group of novices consisted of 30 1 MA students of the translation-training programme at the Faculty of English at Adam Mickiewicz University in Poznan. All of the participants had Polish (L1) and English (L2) as their major working languages. The target of collecting the data from 30 trainees was set in order to ensure that inferential statistics could be performed. The experiment was conducted in three rounds during three consecutive academic years: (1) 10 students took part in 2014/2015, (2) 8 students in 2015/2016, and (3) 12 students in 2015/2016. All novices took part in the experiment at the end of the second semester of their translation-training programme (May – June). There were 23 female and 7 male participants in the group of translation students, whose age ranged from 22 to 31 years old (*M=23; SD=1.7*).

Additionally, the group of 17 professionals took part in the experiment. The following inclusion criteria were observed: (1) the participants had been engaged in translation practice for at least 3 years prior to the experiment, (2) irrespective of the employment type (full-time or part-time), they were actively engaged in the translation profession, i.e. they regularly (on average weekly) received translation commissions. With regard to the employment type criterion, 9 translators reported that they were engaged part-time, and 8 – full-time. Their areas of expertise were diverse, from specialised medical texts to technical instructions, and 3 participants indicated that they had some experience in translating literary texts. To reach the targeted sample size, the experiment was conducted in two sessions: (1) 7 practising translators took part in May 2015, and (2) 10 translators participated in May-June 2017. All of the practising translators had Polish (L1) and English (L2) as their major working languages. There were 11 female and 6 male participants in the group. Their age ranged from 27 to 54 years old at the time of the experiment (*M=36; SD=8.1*), and their experience in translation – from 5 to 30 years (*M=14; SD=7.7*).

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[58] According to Saldanha and O'Brien (2014: 24), the method of *convenience sampling* is probably the most popular in Translation Studies, as it consists in recruiting participants who are available to the researcher. As a result, the majority of studies rely on data collected from a sample of translation students. On the other hand, the method of *snowball sampling* involves inviting participants who then invite their colleagues or friend (in a "snowball" fashion), which works well among practising translators.

With a view to test the "person-organisation fit" assumption, 94 representatives of the other professions took part in the study. The main inclusion criterion was the absence of the translation and linguistic factors in their areas of expertise, and the group was mixed comprising both students and employed professionals in order to resemble the composition of the joint group of translation trainees and practising translators. The occupational fields included architecture, engineering, finance and business administration, building and construction, archaeology, teaching (other than foreign languages), political science, etc. All participants had Polish as their native language, and their age ranged from 19 to 51 years old (*M*=28.1; *SD*=9.6).

4.8. Tools and materials

All tools and materials used in the study can be roughly classified into two groups with regard to their relation to the (1) translation task, or (2) personality measurement. The first group consists of the *two extracts of different text types* (materials) and *Translog-II*, the key-logging programme (tool). The second group comprises two psychometric tests (tools), *HEXACO Personality Inventory* (Ashton and Lee 2009) and *Myers-Briggs Type Indicator (MBTI)*, measuring *traits* and *psychological functions* respectively. A *self-report questionnaire*, which was administered at the end of the experiment, is a tool that incorporates the characteristics of both groups, since it included questions about the participants' approach to the translation process, the evaluation of their performance during the experimental tasks, as well as questions regarding their views about the role of personality in translation profession.

4.8.1. Tools and materials related to the translation task

Two text types were selected for the study: an *expressive* text that aims to "[c]ommunicate an artistically organised content", and an *informative* text that seeks to "[c]ommunicate content" in line with Reiss's ([1971] 2000: 163) functional approach to text typology. The choice of the two text types was dictated by the scarcity of research

into the relationship between the translator's personality characteristics and her/his approach to translating different text types.

An extract from Maugham's (1988) short story *Gigollo and Gigolette* represented the *expressive text type* in the study (Appendix B). It was a description of the upper class international group of guests at the extravagant Riviera party, where a stuntwoman was supposed to dive into a shallow tank filled with blazing petrol. The extract was a 246-words long paragraph that contained 12 sentences and 20.5 words per sentence on average. According to the Flesch-Kincaid readability test that uses the measures of word and sentence length, the extract obtained the *reading ease score* of 71.2 points, which can be interpreted as "[p]lain English, easily understood by 13- to 15-year old students".[59] From the viewpoint of stylistic analysis, though, the text contained a number of devices:

(1)   *Anaphora*, a literary device that consists in the repetition of the first words of the sentence further in the text in order to achieve an artistic effect. In the extract, the phrase *it was* appeared at the beginning and then at the end of the paragraph, and *there was/were* was repeated four times throughout the whole extract. The use of *there* as a type of an indefinite subject at the beginning of the clause allows foregrounding the actual subject and placing more emphasis on it. Also, the anaphoric repetition of syntactic structures adds to the ease of reading and perception.

(2)   *Epithet,* a stylistic device that modifies the subject. Simpson (2004: 162) distinguishes between three types of epithets: *qualitative*, *colours*, and *classifying*. Two of the three types of epithets appear in the chosen extract: (a) <u>*qualitative*</u>: *long and lean* (Lord and Lady), *gaunt* (woman), *bluff, military and hearty* (man), *beautiful* (game), *scornful* (look), *calm and silent* (sea), *majestic* (gait), and (b) <u>*classifying*</u>: *short upper* (lip), *dining* (table).

(3)   *Oxymoron*, a stylistic device that consists in combining words that have (or seem to have) opposite meanings in order to produce an artistic effect, and make the reader think in an innovative way. To describe the character of one of the guests, a broker by profession, Maugham (1988) used a combination of qualitative epi-

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[59] See https://readable.io (date of access: 7 Nov. 2017).

thets *bluff, military and hearty*, whereby the first two have neutral or even negative connotations, and the third element introduced a contrast that showed the unexpected positive feature of the man.

(4)   *Simile, a* stylistic device based on the direct comparison of objects in order to illustrate their features, and usually expressed with the help of the "is like" (or "as…as") formula (Simpson 2004: 163). There are two examples of a simile in the extract: (a) *to be as tight as drums*, and (b) *a face like a Peruvian mask that has been battered by the storms of ten centuries*. Simile (a) refers to the fact that two of the guests were ready to eat dinner with anyone who would offer them a free meal, and would be therefore so full by the end of the day that their clothes would become very tight and close-fitting.[60] Simile (b) invites the reader to compare the face of one of the guests with an age-old Peruvian mask that used to be beautiful and colourful, but its beauty faded as the time went by.

Thus, despite the high score and "plain English" evaluation obtained in the readability test, the extract is stylistically challenging, and may therefore require a more creative approach in translation.

The informative text type was represented by an extract from Article 3 of the Treaty on European Union (Appendix B).[61] The extract was 269 words long and contained 16 sentences, each with 16.8 words on average. The Flesch-Kincaid reading ease score was 36.9, which means "difficult to read". The score can be explained by the dominance of the words that contain more than two syllables in comparison with those used in the expressive text. The text can be particularly challenging due to: (1) its formulaic nature, e.g. the use of typical cliché expressions connected with economy and politics (*internal market, sustainable development, balanced economic growth, price stability, full employment, social justice, equality between women and men,* etc.*),* (2) the use of *shall* as a modal verb that states one's determination to achieve certain aims and implement tasks, and (3) complex syntax, e.g. long and complex sentences with a lot of subordinate clauses. Thus, unlike the expressive extract, the informative one can pose translation problems connected with vocabulary and syntax.

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[60] See https://idioms.thefreedictionary.com/tight+as+a+drum for additional explanation (date of access: 7 Nov. 2017).

[61] See http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A12012M%2FTXT (date of access: 7 Nov. 2017).

As regards the tools related to recording the translation task, *Translog-II* (Carl 2012)*,* the key-logging programme, was used in the study. *Translog-II* is one of the most recently updated versions of the programme created by Jakobsen and Schou (1999). It consists of two interrelated components, *Translog User* and *Translog Supervisor*. The former serves to record the writing process in real time without interrupting the workflow, and the latter supports the project creation, replay and analysis functions. While creating a project file, it is possible to adjust the arrangement of the source and target text windows to the needs of a given study (top-bottom, left-right layouts), insert the source text, and configure the experiment and connect with an eye-tracker if needed. Once the data has been recorded with *Translog User*, it is possible to replay it in *Translog Supervisor* that generates four types of data (Carl 2012: 4109):

(1)   *Statistics* concerning the user activity data (UAD), which includes total task duration, the number of eliminated characters, the number of text production characters (inserted + deleted characters), navigation and mouse movements, text production and all user events per minute;

(2)   *User view*, the replay of the translation session as it progressed in real time. The replay can be switched on at different speeds;

(3)   *Linear view*, a plot of all user activity data including pauses;

(4)   *Pause plot*, which provides detailed information about the length and the distribution of pauses in a given session.

To sum up, *Translog-II* provides a detailed record of the keyboard and mouse activities during the translation process. In the present experiment, the top-bottom arrangement of the source and target text windows was used. Statistical data, user and linear views have been found to be particularly valuable at the data analysis stage.[62] As the tools and materials used during the translation task have been presented, following is the description of those related to personality measurement.

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[62] In order to facilitate the analysis of the types of revisions, *TranslogDecoder* was used. The main function of the programme is to convert the *Linear view* data into the editable sreadsheet format. The programme was created within the framework of the ParaTrans project, which was carried out at the Faculty of English at Adam Mickiewicz University in Poznan and funded by the Polish National Science Centre (UMO – 2012/07/E/HS2/00661) (cf. Whyatt et al. 2016).

4.8.2. Tools and materials related to personality measurement

The list of the psychometric tests and their sources are provided in Appendix A. The HEXACO Personality Inventory (Ashton and Lee 2009) was selected to measure personality *traits* in the study for several important reasons: (1) it is the most up-to-date extension of the Big Five psychological dimensions, (2) despite being comparatively new, it has already won international acclaim among psychologists, (3) it is being currently cross-validated in different studies and in different languages, (4) it has already been translated into 24 languages, and Polish (the participants' L1) was one of the first 7 languages that the test was officially translated into (Ashton et al. 2004a),[63] (5) unlike many other psychometric tests, it is publicly available for use.[64] The test measures six higher-rank psychological domains, each of them containing four lower-rank facets presented below:

(1)   *Honesty-Humility* domain, represented by the facets of *Sincerity*, *Fairness*, *Greed-Avoidance* and *Modesty*;

(2)   *Emotionality* domain, represented by the facets of *Fearfulness*, *Anxiety*, *Dependence* and *Sentimentality*;

(3)   *Extraversion* domain, represented by the facets of *Social Self-Esteem*, *Social Boldness*, *Sociability* and *Liveliness*;

(4)   *Agreeableness* domain, represented by the facets of *Forgiveness*, *Gentleness*, *Flexibility* and *Patience*;

(5)   *Conscientiousness* domain, represented by the facets of *Organisation*, *Diligence*, *Perfectionism* and *Prudence;*

(6)   *Openness to Experience* domain, represented by the facets of *Aesthetic Appreciation*, *Inquisitiveness*, *Creativity* and *Unconventionality.*

The test was administered in Polish and contained 60 statements that the participants were supposed to evaluate depending on whether they "completely disagree" ("1") or

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[63] The Polish translation of the HEXACO PI was done by Professor Piotr Szarota from the Polish Institute of Psychology.
[64] See www.hexaco.org (date of access: 30 Oct. 2017).

"strongly agree" with them ("5") on a Likert scale. The average amount of time spent on completing the test was 10 minutes as observed by the experimenter.

The Myers-Briggs Type Indicator (further referred to as "MBTI") was the second psychometric test used in the study. It was the online adapted version of the original MBTI test designed by Myers (1962) and based on Jung's ([1921] 1971) personality typology.[65] The version is publically available for free at www.humanmetrics.com, and it has already been used for research purposes (cf. Hubscher Davidson 2009). The test measures Jung's ([1921] 1971) four qualitative personality dimensions, each containing a pair of dichotomous functions. The present study focuses specifically on the third dimension comprising two *decision-making* functions, *Thinking* and *Feeling*. The test contains 64 statements in English (participants' L2), with five available evaluations that range from "YES" to "NO" on a Likert scale. As observed by the experimenter, the participants spent an average of 10 minutes on completing the test.

4.8.3. Self-report questionnaires

The questionnaires were designed so as to collect (1) some background information about the participants (e.g. age, duration of translation training/practice), (2) their approach to the translation process, and (3) the self-assessment of their performance in the experimental tasks, and (4) their views on the role of personality in translation. All in all, the questionnaire was prepared in English and consisted of three main parts related to points (2), (3) and (4) above, each of them containing 3, 2 and 4 questions respectively. Most of the questions were of the multiple-choice type with an option "other" that enabled participants to add their own answers. The question related to the students' professional choice was open. The average amount of time that the participants spent on the self-report questionnaire was 7 minutes, as observed by the experimenter. The application of each of the tools and materials described so far is presented in the next section.

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[65] See section 1.3 for more details on Jung's approach to personality and the history of MBTI.

4.9. Experimental procedure

The experiment was conducted in one of the available language laboratories at the Faculty of English at Adam Mickiewicz University in Poznan. The following experimental procedure was established:

(1)   Before the experiment started each participant received a code name so as to avoid the potential experimenter's bias.

(2)   A participant was given detailed instructions (Appendix C) concerning the use of *Translog User* for the translation task. The instructions were also printed out and placed on the desk next to the computer that the participant was working on.

(3)   A participant received the two texts for translation. S/he was asked to translate in a way that meets her/his individual translation quality standards. The extracts with some immediate background information were printed out and placed on the desk next to the computer that the participant was working on. The participants would also see the source text in Translog.

(4)   A participant was asked to start translating whenever s/he felt ready. The participants were not pressed for time and could proceed at the pace they found the most comfortable. The order of the texts was counterbalanced so as to avoid the effect of the task order.

(5)   Once a participant has finished translating the first text, s/he was supposed to press the "Stop logging" button in the *Translog User* interface and ask for the researcher's assistance in saving the translation and opening the next translation task in *Translog*.

(6)   On finishing the translation task, a participant was invited to fill out the paper version of the HEXACO Personality Inventory in Polish.

(7)   The next step consisted in completing the online version of the MBTI test in English. Upon completing the test, the participants were asked to copy the permanent link and save it into the respective document on the computer they were working on.

(8)   A participant was then asked to complete a self-report questionnaire in English (cf. 4.8.3).[66]

With a view to gather the necessary number of data points, the experiment ran in three sessions, from May 2015 to June 2017. The same experimental procedure was adhered to in all the sessions. For the sake of convenience, translation trainees were recorded in groups, and practising translators were recorded invidually. The experimenter was present during each of the sessions in order to provide guidance to the participants and ensure that the procedure is consistently followed. No problems with the equipment, the tasks and materials were reported, and all the data were collected accordingly. The process of data analyses is described in the next section.

4.10. Data analysis

Once the data were collected, the process of analysis was divided into four main parts: (1) the analysis of data related to the translation process, (2) translation quality assessment, (3) the calculation of results of the two psychometric tests, and (4) statistical analyses of the data with regards to the five hypotheses. The section describes the activities involved in each of the main parts of data analysis.

4.10.1. Translation process data analysis

The *Statistics* function of the *Translog-Supervisor* programme was used to generate data for the process-related dependent variables of (1) *the duration of the end revision stage*, and (2) *the number of online and end deletions*. The *Linear view* function served to collect data about the *types of revisions* performed during drafting and end revision stages.

In order to further classify revisions, Faigley and Witte's (1981) taxonomy of revisions originally designed for the writing process research (cf. 3.2), was adapted to the needs of the present study. Faigley and Witte (1981) offered to view revision as a

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[66] The self-report questionnaires for students and practising translators are provided in Appendices D and E respectively.

complex process, and identify the types of revisions depending on both their causes and effects. In their complex approach, the scholars start with the distinction between revision changes that affect the meaning of the text ("text-base changes", Figure 13) and those that do not ("surface changes", Figure 13). Such a classification is particularly relevant for the analysis of the writing process, because sometimes writers may come under the influence of new ideas and resort to the modifications of content that meaningfully change the first draft. Referring to the translation process, translators are subordinated to the primacy of the source text and cannot take liberties to change the original meaning. Consequently, Faigley and Witte's (1981) understanding of the distinction between meaning-affecting and meaning-not-affecting revisions does not seem to apply to the description of those performed in the translation process. However, it does seem reasonable to consider the broad category of "surface changes" (meaning-not-affecting revisions) in the translation-based taxonomy of revisions.

Faigley and Witte (1981) further divided "surface revisions" into (1) "formal changes" that include lower-level (esp. phonetic and morphosyntactic) modifications of spelling, grammar, punctuation and text layout, and (2) "meaning-preserving" or higher-level (lexical, semantic and syntactic) changes that incorporate synonymic substitutions, word order changes, etc. Bearing in mind the peculiarities of the translation process, the distinction is conceptually suitable, but requires some terminological adjustments. In particular, there seems to be no point in referring to the higher-level changes as "meaning-preserving" in translation, as the task of the translator primarily consists in *preserving* the meaning of the source text, irrespective of the *cause* of revisions that need to be introduced. Seen this, the present study offers to refer to the original class of "formal changes" as "surface changes", and to the class of "meaning-preserving changes" as "deep changes". Figure 13 presents the adaptation of Faigley and Wittes's (1981) classical taxonomy of revisions to the needs of the analysis of revisions in the translation process.
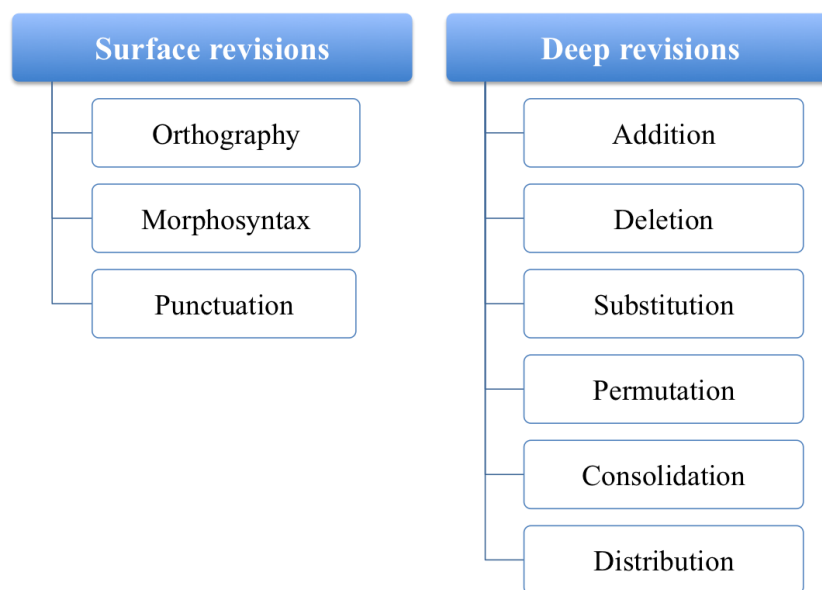
Fig. 13. Translation process-based taxonomy of revisions adapted from Faigley and Witte (1981).

To explain each of the sub-categories, Table 2 below provides a brief definition of each of the revision types and examples from the translations analysed in the present study. Notably, the revisions were analysed as chunks of insertions and deletions depending on their cause and function in the translation process.

Table 2. Translation process-based taxonomy of revisions with definitions and Translog-generated examples.[67]

Term	Definition	Example
Surface revisions		
Orthography	correction of spelling mistakes, typos, font size	wychudz◄ła, nadr◄szar[◄pniętą•zębem
Morphosyntax	adjustment of inflections, prefixes and suffixes, morphosyntactic alignment	To••••było•••◄◄a•[•32.557][▼][▲]•reprezentacu◄yjna••••impreza•
Punctuation	correction of punctuation	Szkotka•••••[▼][▲]◄s[▼][▲]••o•t◄◄◄◄,•o•twarzy•••
Deep revisions		
Addition	explicitation of meaning by add-	w•pr◄◄ramach•us◄◄przysl◄••ługi••[▼][▲][▼][▲][▼][▲][▼][▲]••••••••••specjalnehj◄◄j•

	ing more words to the first translation variant	
Deletion	eliminating words or parts of the phrase due to the change in the translation strategy or other meaning adjustments	stołowanie•◄ ◄a•się••••• ◄ ◄ ◄ ◄ze••••• ◄ ◄•kimkolwiek
Substitution	synonymic replacements	gotów•uczyć◄nić•Pa••◄ ◄•◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄zrobić•z•
Permutation	word order rearrangement	yli•pewni,•że•do•północy•będą•[•01:03.243]napięci•jak•struna[•14.19 6][▼][▲]•◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄ ◄•→→→→→→→→→→→→ →→→→→→→→→→→→••do•półm•◄nocy
Consolidation	combining two simple sentences into a complex one	Obecny•bylk◄ ◄ł•na•mi◄ ◄nim•angielski•Lord•••ze•zwoją•◄ ◄ ◄ ◄ ◄ ◄swoją•[•14.571]damą•••• ◄.•••Obo•je•◄ ◄ ◄ ◄ ◄••◄ ◄•,•ob o••j••◄ ◄ ◄ ◄•••••••••o••••• ◄•ob[•26.364]◄ ◄••••••wysocu◄y•i•sz czupli
Distribution	dividing a complex sentence into simple ones	Przestali•grać•••••••i•••◄ ◄.•Kelner•••••z•przyjaznym•uśmieczhem•••za◄ ◄ odproadził•ja•do•stolika

In general, all 47 participants in the two texts introduced 10,357 revisions that were classified into the above sub-categories at the analysis stage. As the translation process data analysis has been presented, the next section dwells upon the issue of translation product quality assessment.

4.10.2. Translation quality assessment

To assess the quality of translations, Williams' (2009) argumentation-centred approach to Translation Quality Assessment (further referred to as "TQA") has been adapted to the needs of the present study. Williams' (2004, 2009) TQA approach is *holistic, qualitative-centred* and *top-down* (Waddington 2001) in comparison to the *error-based*, *quantitatve-centred* and *bottom-up* TQA models such as SICAL and LISA (Martínez Mateo 2014: 76). In other words, the approach consists in first defining the main idea of the text as a unit, i.e. its *macrostructure*, and then seeks to identify its core elements that "[s]upport it and are subordinate to it" (Liu and Zhao 2016: 558). The approach is originally based on philosopher Toulmin's (1964) theory of argument structure, according to which "[a]ll texts present an argument macrostructure comprising up to six key ele-

ments" (Williams 2009: 11). An argument is a message that the author aims to convey to the potential reader, and its elements are the means by which the author presents the message, i.e. the use of grammar, vocabulary, style and register, etc. In translation, conveying the main message ("argument") of the source text along with its components should be the translator's primary aim, which shows that the argumentation-centred approach may provide a viable solution in trying to evaluate both the pragmatic (text-based) and linguistic (unit-based) features of the target text.

The practical advantage of Williams' (2009) approach consists in the fact that it allows its users to provide the quantitative assessment of translation quality. The multicriteria model applied to Williams' assessment scheme enables assigning values (or "weights") to the different elements of the argument depending on the peculiarities of a given text. Such a "weighting procedure" enables not only to adjust the assessment scheme to the needs of a certain study and/or a given text type, but also to avoid the situations when the final quality score is affected by the less relevant grading parameters (e.g. when the "layout" parameter receives the maximum number of points and overrides the "style and register" parameter in an expressive text). Moreover, it allows establishing a "minimum weighted score" as a borderline indicating that a translation has reached acceptable quality level. According Williams (2009: 19), the term "acceptable" may be extended to "acceptable for publication", and refers to the type of quality that reflects professional standards in the industry. Considering this, the application of Williams' (2009) TQA model for research purposes requires setting additional benchmarks that would allow distinguishing between different types of translation quality (high, good, satisfactory, fair and poor). This seems to be particularly relevant to the studies that involve the evaluation of translations done by participants with different levels of expertise (students and practising translators) such as the present one.

The first step in implementing Williams' (2009) approach involves analysing the source text in order to define the argument and its pragmatic function, and the underlying elements that constitute the argument (Drugan 2013: 61). The situation where the choice of the argument, its elements ("parameters"), and the "weights" assigned to them, depends on the user of the method (in this case, the researcher) has both advantages and disadvantages. On the one hand, it makes the assessment scheme adjustable to different texts and task requirements. On the other hand, it adds a certain degree of subjectivity to the analysis, which is probably unavoidable in research involving

Translation Quality Assessment. Thus, two assessment schemes have been specifically designed for each of the two typologically different texts used in the experiment. The weights have been assigned in accordance with the importance and the relevance of the chosen parameters to the main argument in a given text, and are explained further in the section. The weighted assessment scheme for the expressive text is provided in Table 3 below.

Table 3. Weighted assessment scheme for the expressive text.

Parameter	Weight (/10)	Quality Score (/10)	Minimum weighted score (/100)	Final score
Argument (pragmatic effect)	3		30	
Vocabulary use	2		16	
Grammar	1		8	
Stylistic devices	3		24	
Coherence / Cohesion	1		8	
Total	10	/10	86	/100

According to Williams (2009: 18), the total weight of all parameters is 10, and it needs to be reallocated to each of the parameters by the researcher. The most important parameter is the "argument" in line with the argumentation-centred approach, so it has been assigned the weight of "3". In the text, the "argument" reflects the author's intention to introduce to the readers the upper-class audience at the Riviera party by placing particular emphasis on the creative description of the guests' personalities. For the sake of clarity, the "argument" parameter was explained to the markers in terms of the "pragmatic effect" that the target text produces.

On the basis of the analysis of the source text, the following elements of the argument have been identified: (1) vocabulary use, (2) grammar, (3) stylistic devices, and (4) coherence and cohesion. As the stylistic devices such as anaphora, simile, oxymoron, etc. (cf. 4.8.1) are particularly important in conveying the "artistically organised content" (Reiss's [1971] 2000: 163) of the expressive text, they have been assigned the weight of "3". The weight of "2" has been given to "vocabulary use", because one of the essential elements in the description of the elegant guests was the sophisticated vocabulary used by the author (e.g. "the impression of integrity", "majestic gait"). The parameters of "grammar" and "coherence and cohesion" have received the weight of

"1", as both of them were probably the least decisive in conveying the main argument in the text.

To calculate the "minimum weighted score" (Williams 2009: 18), the weight of the "argument" is multiplied by 10 (the maximum number of points it can receive in the assessment), and the weights of the other parameters are multiplied by 8, which is the minimum "acceptable" number of points per parameter for the translation to be considered of "high" quality. The minimum "acceptable" score that allows identifying "high" quality translations is 86 points for the expressive text. Thus, the quality benchmarks used for assessing translations in the study are the following:

- ≥ 86 points – high quality
- 76-85 points – good quality
- 66-75 points – satisfactory quality
- 56-65 points – fair quality
- ≤ 55 points – poor quality (not acceptable)

The benchmarks are related to the scores (max. 10) that could be assigned by the markers for each of the parameters according to the following assessment scale:

- 9-10 – excellent
- 7-8 – good
- 5-6 – satisfactory
- 3-4 – fair
- 1-2 – poor

To obtain the final score for a given parameter in the scheme, the weight has been multiplied by the quality score assigned by the marker (e.g. "stylistic devices": 3 ("weight") x 9 ("quality score" given by the marker) = 27 points). The "total" mark for the translation was calculated as a total sum of all the scores obtained per each parameter.

A similar assessment scheme was designed for the informative text. Table 4 gives the details of the weighted scheme.

Table 4. Weighted assessment scheme for the informative text.

Parameter	Weight (/10)	Quality Score (/10)	Minimum weighted score (/100)	Final score
Argument (pragmatic effect)	3		30	
Vocabulary use	2		16	
Grammar	2		16	
Style and register	2		16	
Coherence / Cohesion	1		8	
Total	10	/10	86	/100

In the informative text, the "argument" consisted in outlining the main aims of the European Union. As the main element in the scheme in line with the approach, the "argument" parameter has been given the weight of "3". The following elements of the "argument" have been selected as based on the analysis of the source text: (1) vocabulary use, (2) grammar, (3) style and register, and (4) coherence and cohesion. The parameters of "vocabulary use", "grammar" and "style and register" have obtained the weight of "2", as the communication of informative content requires the equally successful use of relevant vocabulary, grammatical structures and the style of an official document. Due to the fact that the extract was composed of five different thematically organised objectives presented in the form of a numbered list, the parameter of "coherence and cohesion" was probably less important for the macrostructure, so it has received the weight of "1". All in all, the "minimum weighted score" for the informative text was 86 points. The rest of the assessment procedure, including the quality benchmarks and the individual scores, is the same as for the expressive text.

The markers were provided with the assessment scheme (in English) for each translation (Appendix F). Before the assessment began, the experimenter conducted a meeting during which the source texts were presented to the markers and analysed. The assessment schemes were supplemented with the detailed instructions of how to assess each of the parameters. The written instructions enclosed in the assessment sheets were formulated as questions, e.g. "Argument (pragmatic effect)" (expressive text): "Does the translation convey the message encoded by the author?" The students' and practising translators' translation outputs were all coded and mixed so that the markers could not be biased by the translator's level of expertise.

Similar assessment schemes with simplified instructions were translated into Polish and delivered to the potential readers (Appendix G). In contrast to the markers'

assessment procedure, potential readers did not have access to the source texts and were only asked to read the translated texts as originals.

As a result of the assessment process, each text was assessed four times – two scores were given by the professional markers, and the other two scores were assigned by the potential readers (47 participants x 2 texts x 4 markers = 376 assessment schemes).

4.10.3. Personality data analysis

The results of the participants' HEXACO Personality Inventories were calculated manually on the basis of the authors' instructions provided in the scoring keys available at www.hexaco.com. For each of the domains and facets, a participant could receive a maximum of 5 points. Facets were calculated as mean scores for the two or three sentences representing certain facets in the questionnaire, and domains were calculated as grand means of the facets that constitute a given domain. As regards the MBTI psychometric test, the results were automatically calculated by www.humanmetrics.com, and then saved by the researcher into each of the participant's coded folders.

4.10.4. Statistical data analyses

Once entered into the spread sheets, the data underwent statistical analyses using "R Studio" software environment and "R" programming language, as well as JAMOVI, the new integrated statistical package built on R statistical language and freely available at www.jamovi.org.

4.11. Results of the experiment

The section starts with the presentation of results obtained from the statistical testing of the data as related to each of the five hypotheses, and continues with an overview of the participants' answers to the self-report questionnaire.

4.11.1. Hypothesis 1

Hypothesis 1 aimed to test whether translators differ from non-translators in their distribution of personality traits. The potential differences were tested according to the hierarchical structure of personality that includes the higher- and lower-level traits (or "domains" and "facets") as proposed by the authors of the HEXACO Personality Inventory (Ashton and Lee 2009). First, a mixed group composed of translation trainees and practising translators (in total referred to as "translators") was compared with a group of non-translators that also included both students and experienced professionals. This was done in order to test for the potential differences between the distribution of the personality traits in translators and the representatives of other professional fields regardless of their expertise level. Next, the group of translation students was compared with a group of non-translation students so as to reveal the initial personality-related predispositions that might prompt students to choose translation as their major. Finally, the group of practising translators was compared with a group of non-translators with regard to their personality traits in order to account for the possible impact of the translators' professional life on their personalities.

To start with, the groups of translators (*N=47*) and non-translators (*N=95*) were balanced in terms of the number of participants to ensure that the effect is not influenced by unequal sample size. The *set.seed* command in the "R" statistical environment was used to generate random 53 numbers out of 95 (*set.seed (1:95, 53)*). The new randomly compiled group of non-translators (*N=53, M age=28.7, SD age=10.05*) was further compared with a group of translators comprising both translation trainees and practising translators (*N=47, M age=27.7, SD age=7.9*) in terms of (1) higher-order traits or "domains", and (2) lower-order traits or "facets". The results of Shapiro-Wilk normality test per each of the six higher-rank personality traits indicated that except for the Conscientiousness domain ("Conscien", $W = .966$, $p = .011$), all the other data were normally distributed.[68]

Analyses of variance conducted for each of the domains showed that there was the main effect of the experimental group (translators vs. non-translators) only on the distribution of the Conscientiousness trait, $F (1, 98) = 5.98$, $p = .016$, $\eta p^2 = .058$. Post-

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[68] If the normality test returns significant results, the assumption of normality is violated and nonparametric statistics should be used.

hoc comparisons showed that the group of translators (*Mdn* = 3.8) had significantly higher scores on the Conscientiousness domain than the group of non-translators with a medium effect size (*Mdn* = 3.6), $U = 887$, $p = .013$, $r = -0.49$.

The next step was to compare the groups of translators and non-translators with regard to the scores on the lower-level traits or "facets" obtained from the HEXACO Personality Inventory. The analyses of variance were performed with experimental group as a between-subject factor. The main effect of the group on the distribution of the lower-level facets of Fearfulness, $F(1, 98) = 5.51$, $p = .021$, $\eta p^2 = .053$, Patience, $F(1, 98) = 4.60$, $p = .034$, $\eta p^2 = .045$, Perfectionism, $F(1, 98) = 3.85$, $p = .053$, $\eta p^2 = .038$, and Creativity, $F(1, 98) = 4.68$, $p = .033$, $\eta p^2 = .046$, was found. The mean values of each of the above facets illustrating the differences between the groups of translators and non-translators are provided in Table 5.

Table 5. Mean values and standard deviations (SD): Personality facets of Fearfulness, Patience, Perfectionism, Creativity in the groups of translators and non-translators.

	Group	N	Mean	SD
Fearfulness	Non-translators	53	2.85	0.668
	Translators	47	3.20	0.842
Patience	Non-translators	53	3.29	0.779
	Translators	47	3.65	0.908
Perfectionism	Non-translators	53	3.56	0.740
	Translators	47	3.86	0.816
Creativity	Non-translators	53	2.96	1.020
	Translators	47	3.42	1.118

As post-hoc comparisons, nonparametric Mann-Whitney U tests were conducted, because the data were not normally distributed (Shapiro-Wilk normality test was significant for each of the above facets). The results of the Mann-Whitney U tests showed translators are significantly more Fearful (*Mdn translators* = 3.3, *Mdn non-translators* = 3.0), $U = 942$, $p = .035$, $r = -0.47$), more Patient (*Mdn translators* = 3.5, *Mdn non-translators* = 3.5), $U = 911$, $p = .019$, $r = -0.43$), more Perfectionist (*Mdn translators* = 4.0, *Mdn non-translators* = 3.7), $U = 962$, $p = .048$, $r = -0.39$, and more Creative (*Mdn translators*= 3.3, *Mdn non-translators* = 2.7), $U = 919$, $p = .024$, $r = -0.43$, than non-

translators. The facets represent the higher-level domains of Emotionality (Fearfulness), Agreeableness (Patience), Conscientiousness (Perfectionism) and Openness to Experience (Creativity).

As the groups of translators and non-translators were both mixed in terms of the participants' age, it was suggested that the group of student translators should be further compared with a similar group of student non-translators, and the group of practising translators should be compared with a group of practising non-translators. Such analyses would account for the potential personality-related reasons for students' choice of the translation profession, and the possible influence of the translation profession on the translators' personality traits.

To achieve this, 30 student non-translators were selected from the general group of 95 non-translators based on their age and student status, and 17 practising non-translators were selected from the same sample based on similar criteria (age, status: "employed") for the group to be comparable with that of practising translators. Again, similar analyses were performed with regard to the same hierarchy of higher-level traits and lower-level facets obtained from the HEXACO Personality Inventory.

First, the group of student translators ($N = 30$, $M\ age = 23.4$, $SD\ age = 1.7$) was compared with the group of student non-translators ($N = 30$, $M\ age = 22.4$, $SD\ age = 1.04$) as for the distribution of the higher-level personality domains. Analyses of variance were conducted on each of the domains, and the main effect of the experimental group was found on the distribution of the Emotionality trait, $F\ (1, 59) = 8.92$, $p = .004$, $\eta p^2 = 0.131$. The post-hoc comparisons revealed that the scores on the Emotionality scale were significantly higher in the group of student translators ($M = 3.52$, $SD = 0.56$) than in the group of student non-translators with a large effect size ($M = 3.12$, $SD = 0.5$), $t\ (60)=2.81$, $p = .007$, $d = 0.72$.

Next, the same groups were compared with regard to the distribution of facets. The analyses of variance identified the main effect of the experimental group on the distribution of the facets of Fearfulness, $F\ (1, 58) = 10.4$, $p = .002$, $\eta p^2 = 0.131$, Anxiety, $F\ (1, 59) = 8.92$, $p = .004$, $\eta p^2 = 0.131$, and Patience, $F\ (1, 59) = 8.92$, $p = .004$, $\eta p^2 = 0.152$. The relevant mean values are provided in Table 6.

Table 6. Mean values and standard deviations (SD): Personality facets of Fearfulness, Anxiety and Patience in the groups of student translators and student non-translators.

	Group	N	Mean	SD
Fearfulness	Non-translators	30	2.74	0.650
	Student translators	30	3.36	0.827
Anxiety	Non-translators	30	3.45	0.855
	Student translators	30	4.02	0.978
Patience	Non-translators	30	3.30	0.761
	Student translators	30	3.78	0.827

The Shapiro-Wilk normality test for the three facets was then conducted, and it revealed that the data were not normally distributed. The non-parametric Mann-Whitney U test was used as post-hoc group comparisons. The translators significantly outscore non-translators on the scale of Fearfulness (student translators, *Mdn* = 3.5, student non-translators, *Mdn* = 2.7*), U* = 244*, p* = .002*, r* = -0.83 (large effect size), and Anxiety (student translators, *Mdn = 4.25*, student non-translators, *Mdn* = 3.5), *U* = 293*, p* = .019*, r* = -0.62 (large effect size) facets, which represent the higher-level Emotionality domain. Student translators were also found to be significantly more Patient (student translators, *Mdn* = 3.5, student non-translators, *Mdn* = 3.5) than student non-translators, *U* = 302*, p* = .026*, r* = -0.6 (large effect size), which is the facet that belongs to the Agreeableness domain.

The next step was to compare the group of practising translators (*N* = 17*, M age* = 35.8*, SD age* = 8.1) with the group of non-translators (*N = 17*, M age* = 38.8*, SD age* = 7.32) in the distribution of both higher-level personality domains and lower-level facets. As regards the personality domains, the main effect of the experimental group was on the Agreeableness, *F* (1, 32) = 5.77, *p* = .023, ηp^2 = 0.157, and Openness to Experience, *F* (1, 32) = 18.1, *p* < .001, ηp^2 = 0.368, domains. Table 7 shows the mean values of the two traits in the groups of practising translators and non-translators.

Table 7. Mean values and standard deviations: Personality domains of Agreeableness and Openness to Experience in the groups of practising translators and non-translators.

	Group	N	Mean	SD
Agreeableness	Non-translators	17	3.35	0.543
	Practising translators	17	2.83	0.699
Openness to Experience	Non-translators	17	3.22	0.591
	Practising translators	17	3.95	0.354

Student's t-tests (the data followed normal distribution according to the Shapiro-Wilk test) were then conducted as post-hoc tests to compare the two groups on the two domains. The group of practising translators (M = 3.95, SD = 0.35) scored significantly higher on the Openness to Experience domain than the group of non-translators (M = 3.22, SD = 0.59), $t(34)$ = 4.2, $p < .001$, d = 1.48 (very large effect size), whereas the group of practising non-translators (M = 3.35, SD = 0.54) outscored the group of translators (M = 2.83, SD = 0.7) on the Agreeableness domain, $t(34)$ = 2.4, p = .023, d = 0.84 (large effect size).

The verification of Hypothesis 1 proceeded with the comparison of the groups of practising translators and non-translators in terms of the distribution of facets as the lower-level personality descriptors. The analyses of variance revealed the main effect of the experimental group on the facets of Gentleness, $F (1, 32)$ = 10.1, p = .003, ηp^2 = 0.246, Flexibility, $F (1, 32)$ = 10.0, p = .003, ηp^2 = 0.244, Perfectionism, $F (1, 32)$ = 5.57, p = .025, ηp^2 = 0.152, Aesthetic Appreciation, $F (1, 32)$ = 10.3, p = .003, ηp^2 = 0.250, and Inquisitiveness, $F (1, 32)$ = 13.9, $p < .001$, ηp^2 = 0.310. The relevant mean values are provided in Table 8.

Table 8. Mean values and standard deviations (SD): Personality facets of Gentleness, Flexibility, Perfectionism, Aesthetic Appreciation and Inquisitiveness in the groups of practising translators and non-translators.

	Group	N	Mean	SD
Gentleness	Non-translators	17	3.35	0.730
	Practising translators	17	2.43	0.917
Flexibility	Non-translators	17	3.32	0.460
	Practising translators	17	2.72	0.630
Perfectionism	Non-translators	17	3.44	0.436
	Practising translators	17	3.92	0.729
Aesthetic Appreciation	Non-translators	17	3.47	0.960
	Practising translators	17	4.44	0.750
Inquisitiveness	Non-translators	17	3.59	0.690
	Practising translators	17	4.38	0.500

The Shapiro-Wilk normality test revealed that with the exception of the facets of Aesthetic Appreciation ($W = 0.935$, $p < .001$) and Inquisitiveness ($W = 0.936$, $p < .001$), all the other data were normally distributed. Therefore, both parametric (Student's t-tests) and non-parametric (Mann-Whitney U tests) statistics were used as post-hoc comparisons. The group of translators scored significantly higher on the facets of Perfectionism, $t(34) = 2.4$, $p = .003$, $d = .82$ (large effect size), Aesthetic Appreciation (*Mdn translators* = 4.75, *Mdn non-translators* = 3.5), $U = 58.5$, $p = .005$, $r = 1.1$ (very large effect size), and Inquisitiveness (*Mdn translator*s = 4.25, *Mdn non-translators* = 3.5), $U = 49$, $p = .001$, $r = 1.3$ (very large effect size). The results show that non-translators are significantly more Gentle, $t(34) = 3.18$, $p = .003$, $d = 1.1$ (very large effect size), and Flexible, $t(34) = 3.16$, $p = .003$, $d = 1.1$ (large effect size). The dominant facets among the practising translators belong to the Conscientiousness (Perfectionism) and Openness to Experience (Aesthetic Appreciation and Inquisitiveness) domains, and those prevailing in the group of non-translators come from the domain of Agreeableness (Gentleness and Flexibility).

Thus, the results of testing Hypothesis 1 showed some intriguing personality differences between the representatives of the translation profession and those of other professional fields. In particular, the translators were found to be more Conscientious than non-translators. Moreover, some telling personality differences in terms of the Emotionality trait were found between the students whose carrier choice had already

been made in favour of translation and those who had chosen a different career path. Also, it was established that the practising translators are more Open to Experience and less Agreeable than the experts in the other professional fields, which might point to the interaction between personality and professional life. The next section presents the results of testing Hypothesis 2 related to the self-revision process.

4.11.2. Hypothesis 2

Hypothesis 2 marked the shift from describing the translator's personality in general to investigating the specific role of the translator's psychological functions in the process of self-revision. In particular, Hypothesis 2 tapped into the possible influence of the decision-related personality functions (Thinking or Feeling) identified by the MBTI test on the duration of the end revision stage. Based on the descriptions of the functions, it was assumed that the Thinking type translators would spend more time on the end revision stage than the Feeling type translators.

Following the approach adopted to test Hypothesis 1, novice and practising translators were first combined and treated as one group representing the translation profession. Next, the role of personality functions in the duration of end revision was considered separately in the groups of translation students and practising translators. The first independent variable was the *psychological function* (between-subject factor with two levels, Thinking and Feeling). The second input variable was the *text type* (within-subject factor with two levels, expressive and informative), which was introduced in order to verify whether personality functions play a role regardless of the source text type. In the mixed group, another dependent variable was the *experimental group membership* (translation students, practising translators), which was introduced in order to test for expertise effect. The dependent variable was the *duration of the end revision stage*.

In the mixed group composed of translation trainees and practising translators, 30 Feeling and 17 Thinking participants were identified on the basis of the results of the psychometric test (MBTI). The mean values of the duration of the end revision stage in the translations of the two texts types produced by all translators are provided in Table

9. The group is divided according to the participants' preferred psychological function (Feeling or Thinking). The duration of the end revision stage is provided in seconds.

Table 9. Mean values and standard deviations (SD): The duration of the end revision stage (s) in the two texts in the mixed group per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive End Revision Stage	F	30	233	241
	TH	17	516	588
Informative End Revision Stage	F	30	245	307
	TH	17	453	397

The mixed effect (within- and between) analysis of variance returned the main effect of the between-subject factor of the preferred psychological function (Thinking or Feeling) on the end revision time in both text types, $F(1, 45) = 7.18$, $p = .01$, $\eta p^2 = 0.143$. The expertise effect, $F(1, 45) = 3.7$, $p = .061$, $\eta p^2 = 0.079$, and the text type effect, $F(1, 45) = 0.242$, $p = .626$, $\eta p^2 = 0.006$, were not found.

According to the Shapiro-Wilk normality tests, the data were not normally distributed (Expressive text, $W = 0.667$, $p < .001$, Informative text, $W = 0.783$, $p < .001$), and nonparametric post-hoc tests (Mann-Whitney U test) were performed to test for the differences between the Thinking types and the Feeling types in terms of the duration of the end revision stage. The results showed that the groups of the Feeling type (*Mdn expressive* = 172, *Mdn informative* = 143) and Thinking type translators (*Mdn expressive* = 405, *Mdn informative* = 359) significantly differed in the duration of the end revision stage in both the expressive text, $U = 154$, $p = .026$, $r = -0.71$ (medium effect size), and in the informative text, $U = 154$, $p = .053$, $r = -0.609$ (medium effect size). All in all, Thinking type translators spent significantly more time on the end revision stage in both text types.

Similar analyses were then performed in the group of novices and practising translators separately in order to verify whether the personality-related differences remain independent of the level of expertise. There were 19 Feeling types and 11 Thinking type participants in the group of translation trainees. Table 10 provides the mean values of the distribution of the given output variable in the group of translation stu-

dents divided per their preferred psychological function. The values refer to both text types, expressive and informative.

Table 10. Mean values and standard deviations (SD): The duration of the end revision stage (s) in the two texts in the group of translation students per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive End Revision Time	F	19	181	212
	TH	11	418	299
Informative End Revision Time	F	19	190	186
	TH	11	391	301

The mixed-effect analysis of variance showed the main effect of the psychological function on the variable of the duration of end revision stage in both text types, $F(1, 28) = 7.12$, $p = .013$, $\eta p^2 = 0.203$. The post-hoc comparisons were nonparametric, as the data were not-normally distributed. The group of the Feeling type ($Mdn = 126$) novices differed from the Thinking type ($Mdn = 405$) novices in the amount of end revision time spent during the translation of the expressive text, $U = 40$, $p = .006$, $r = -0.96$. The differences in the duration of end revision stage in the informative text were not significant, $U = 62$, $p = .071$, $r = -0.86$.

The final step in the verification of Hypothesis 2 consisted in comparing the group of Feeling type practising translators and Thinking type practising translators with regard to the end revision time in both texts. On the basis of the MBTI test, all practising translators were divided into two groups of 11 Feeling types and 5 Thinking types. Due to a very small sample size and not normal distribution, the results of the tests should be treated with extra caution. Both mean and median values of the duration of end revision stage (s) in the group of practising translators in the two texts are given in Table 11.

Table 11. Mean, median values and standard deviations (SD): The duration of the end revision stage (s) in the two texts in the group of practising translators per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	Median	SD
Expressive	F	11	324	206	270
	TH	6	694	407	932
Informative	F	11	340	135	441
	TH	6	566	410	548

The mixed effect analysis of variance showed no significant effect of the psychological function on the dependent measure, $F (1, 15) = 1.93$, $p = .185$, $\eta p^2 = 0.114$, and no within-subject effects of the text type, $F (1, 15) = 0.117$, $p = .737$, $\eta p^2 = 0.008$. Thus, despite the telling differences between the Thinking and the Feeling-type practising translators in terms of the end revision time observed in the mean and median values, there is not enough evidence to suggest that the differences are significant.

Figure 14 summarises the results obtained from testing Hypothesis 2. As the data were not normally distributed and nonparametric statistics were used to test for the differences between groups, the *median* values of the duration of end revision stage are provided in the Figure. The participants in all three groups (mixed, translation students, practising translators) are divided according to their preferred psychological function into the Feeling ("F") and Thinking ("TH") types. The durations of end revision stage in the two text types (expressive and informative) are given in the Figure.
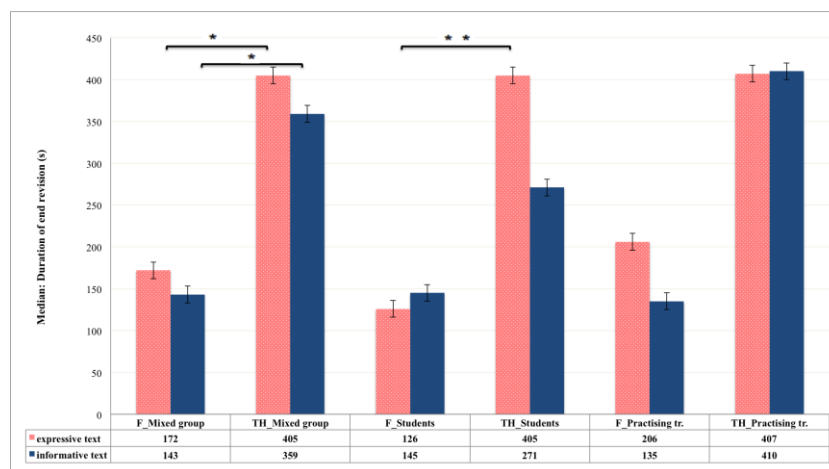
Fig. 14. Hypothesis 2: Illustration of results in the mixed group, translation students and practising translators (F = Feeling, TH = Thinking).

All in all, Hypothesis 2 has been partially supported by the data. In particular, the predicted significant differences in the duration of the end revision stage between the Feeling and the Thinking type participants were found in the mixed group composed of novices and practicing translators in both text types, and in the group of translation trainees only in the expressive text. Notably, the effect of the preferred psychological function was found to be significant in the mixed group, whereas the effect of the expertise level was not. The finding indicates that the decision-related psychological function may probably account for the differences in the duration of the end revision stage more than the translators' level of expertise. It may also be inferred on that basis that the absence of significant results of Hypothesis testing in the group of practising translators might have been due to a small sample size. The next section continues to explore the role of the translators' preferred psychological functions in the process of self-revision.

4.11.3. Hypothesis 3

Hypothesis 3 stated that Thinking type translators would introduce more deletions at the end revision stage in comparison to the Feeling types. The translators with the dominant Feeling function, on the other hand, were expected to delete more during the drafting stage than their Thinking counterparts. Similar to Hypothesis 2, the between-subject independent variable was the *psychological function* (Feeling or Thinking), and the within-subject independent variable was the *text type*. In case of the mixed group (translation students and practising translators), the input variable of *experimental group membership* was considered.

The dependent variables were the following: (1) *the number of online deletions in the expressive text*, (2) *the number of online deletions in the informative text*, (3) *the number of end deletions in the expressive text*, and (4) *the number of end deletions in the informative text*.[69] Online deletions are those produced at the drafting stage, and end deletions are those made at the end revision stage, after the first draft has been finished.

First, the data from the mixed group composed of translation trainees and practising translators were analysed. The mean values of online and end deletions made in

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[69] As mentioned earlier in the *Data analysis* section, one deletion represents one eliminated character as identified by Translog.

the two texts by all participants grouped per their preferred psychological function (Thinking, Feeling) are given in Table 12.

Table 12. Mean values and standard deviations (SD): Online and end deletions made in the two texts by all participants per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Online Deletions	F	30	345.0	199.6
	TH	17	220.1	101.7
Expressive End Deletions	F	30	39.0	41.4
	TH	17	95.2	86.4
Informative Online Deletions	F	30	269.1	133.2
	TH	17	239.7	99.3
Informative End Deletions	F	30	32.2	41.4
	TH	17	62.9	71.7

The repeated measures analysis of variance was conducted for the within-subject variables of the text type represented by the *online deletions* in the expressive text and *online deletions* in the informative text, and the between-subject variables of: (1) the *psychological function* (Thinking, Feeling), (2) the *experimental group membership* (translation students and practising translators).

No within-subject effects on the given variable were found, $F(1, 45) = 1.33$, $p = .255$, $\eta p^2 = 0.030$. As for between-subject effects, they were not significant either for the preferred psychological function, $F(1, 45) = 2.42$, $p = .127$, $\eta p^2 = 0.053$, or for the experimental group membership, $F(1, 45) = 0.402$, $p = .529$, $\eta p^2 = 0.009$.

The mixed-effects analysis of variance was further performed for the variables of *end deletions* in the expressive text and *end deletions* in the informative text, and the between-subject factors of: (1) the *psychological function* (Thinking, Feeling), (2) *experimental group membership* (translation students, practising translators). The within-subject effect of the text type indicates that the translators introduced a different number of end deletions depending on the text type, $F (1, 45) = 4.54$, $p = .039$, $\eta p^2 = 0.095$. To illustrate the difference, the mean values of end deletions in both texts introduced by all participants *regardless of their preferred psychological function* are provided in Table 13. It is possible to observe that all participants made more end deletions in the expres-

sive text than in the informative text, which was also supported in the post-hoc comparisons, $t(47) = 2.13$, $p_{bonferroni} = .039$, $d = 0.308$ (small effect size).

Table 13. Mean values and standard deviations (SD): End deletions made by all participants in the two texts.

	Expressive End Deletions	Informative End Deletions
N	47	47
Mean	59.4	43.3
SD	66.5	55.6

Also, the main between-subject effect of the *psychological function* was revealed, $F(1, 45) = 10.28$, $p = .003$, $\eta p^2 = 0.193$. Further post-hoc comparisons showed that the Thinking types introduced significantly more end deletions ($M = 158.2$, $SD = 147.9$) than the Feeling types ($M = 71.2$, $SD = 68.2$) in both texts, $t(47) = -3.21$, $p_{bonferroni} = .003$, $d = -0.908$ (large effect size). When the differences in the number of end deletions were tested for separately in the two texts due to the within-subject effect of the text type, it was revealed that the Thinking types introduced significantly more deletions in the expressive text ($Mdn = 66$), than the Feeling types ($Mdn = 20.5$), $U = 149$, $p = .019$, $r = -0.916$.

In addition, there was the effect of experimental group membership on the number of end deletions in both texts, $F(1, 45) = 6.35$, $p = .016$, $\eta p^2 = 0.129$. Post-hoc comparisons showed that practising translators ($M = 72.1$, $SD = 79.6$) introduced significantly more deletions at the end revision stage than translation students ($M = 39.5$, $SD = 45.01$), $t(47) = -2.52$, $p_{bonferroni} = .016$, $d = -0.748$ (large effect size).

To sum up, in the mixed group of student translators and practising translators the main effect of the preferred psychological function, Thinking or Feeling, was found to be significant only for the number end deletions. The effect of experimental group membership, which represents the level of expertise in translation, was revealed for the variable of end deletions as well. The two types of effects show that the translators' deletion activities during the end revision stage may be influenced by both their cognitive functions and expertise level. In particular, the Thinking type participants deleted signif-

icantly more at the end revision stage in both texts than the Feeling types, and the prac-
tising translators introduced more deletions at this stage than translation students. The
Thinking type participants made considerably more deletions during the end revision of
the expressive text than the Feeling types, which reflects the influence of the text type.
Next, similar analyses were conducted in the groups of translation students and prac-
tising translators separately.

The mean values of online and end deletions introduced by the translation stu-
dents in both texts are provided in Table 14.

Table 14. Mean values and standard deviations (SD): Online and end deletions made in the two texts by
translation students per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Online Deletions	F	19	380.8	220.5
	TH	11	200.3	97.3
Expressive End Deletions	F	19	34.5	36.8
	TH	11	77.0	68.1
Informative Online Deletions	F	19	294.3	148.3
	TH	11	235.8	116.0
Informative End Deletions	F	19	23.8	24.8
	TH	11	38.1	41.2

As regards online deletions in the two texts, no within-subject effects of the text type
were revealed, $F(1, 28) = 0.630$, $p = .434$, $\eta p^2 = 0.022$. The mixed-effects analysis of
variance showed the main effect of the between-subject factor of the psychological
function on the number of online deletions in both texts, $F(1, 28) = 5.07$, $p = .032$, ηp^2
$= 0.153$. The post-hoc comparisons indicated that the Feeling type students introduced
more online deletions than the Thinking type in general, $t(30) = 2.25$, $p_{boneffoni} = .032$, d
$= 0.97$. Further analyses showed that the Feeling type participants (Mdn = 345) intro-
duced significantly more online deletions than the Thinking types (Mdn=209) in the
expressive text, $U = 167$, $p = .016$, $r = 0.97$, but not in the informative text, $U = 128$, $p =$
$.33$, $r = 0.425$.

When the end deletions introduced by the students were analysed, the main with-
in-subject effect of the text type indicated that student translators introduced a different

number of end deletions depending on the text type, $F(1, 28) = 9.59$, $p = .004$, $\eta p^2 = 0.255$. According to the post-hoc comparisons, all participants made significantly more end deletions in the expressive text, $M = 50.1$, $SD = 53.1$, than in the informative text, $M = 29.0$, $SD = 31.9$, $t(30) = 3.1$, $p_{bonferroni} = .004$, $d = -0.84$.

It was also found that student translators differed with regard to the number of end deletions in both texts due to the main effect of the between-subject factor of the preferred psychological function, $F(1, 28)$, $p = .048$, $\eta p^2 = 0.132$. Post-hoc comparisons revealed that the Feeling types made significantly fewer end deletions than the Thinking types in both text types, $t(30) = -2.06$, $df = 28$, $p_{bonferroni} = .048$. Moreover, the Thinking types ($Mdn = 57$) outnumbered the Feeling types ($Mdn = 27$) in terms of end deletions made in the expressive text, $U = 58.5$, $p = .05$, $r = -0.845$, but not in the informative text, $U = 84.5$, $p = .4$, $r = -0.452$.

Thus, the group of novices showed the expected personality-related self-revision patterns in terms of the measured variables analysed in Hypothesis 3. However, all novices introduced significantly more deletions at the end revision stage in the expressive text regardless of their decision-making psychological function.

Finally, the impact of the dominant psychological function on the given input variables was tested for in the group of practising translators. The mean values of online and end deletions made by the practising translators in the two texts are given in Table 15.

Table 15. Mean values and standard deviations (SD): Online and end deletions made in the two texts by practising translators per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Online Deletions	F	11	283.0	146.2
	TH	6	256	108.2
Expressive End Deletions	F	11	46.9	49.3
	TH	6	129	112.0
Informative Online Deletions	F	11	225.5	92.4
	TH	6	247	67.3
Informative End Deletions	F	11	46.7	59.1
	TH	6	109	96.1

It is worthy of note that the mean values of end deletions made in the group of practising translators are greater than in the group of translation students, as shown in Tables 14 and 15. This suggests that the practising translators may have developed the skill of systematically revising their drafts during the end revision stage.

When the mixed effects analysis of variance was performed for the number of online deletions in the expressive and informative texts, no within, $F(1, 15) = 0.828$, $p = .377$, $\eta p^2 = 0.052$, and between-subject effects, $F(1, 15) = 0.004$, $p = .952$, $\eta p^2 = 0.0$, were found. The results, though, may have been different had the sample size been larger.

With regard to the number of end deletions introduced by the practising translators, no within-subject effects of the text type were revealed, $F(1, 15) = 0.368$, $p = .553$, $\eta p^2 = 0.024$, but the main effect of the psychological function was found, $F(1, 15) = 4.43$, $p = .053$, $\eta p^2 = 0.228$. Post-hoc comparisons showed that the Feeling type translators made significantly fewer end deletions in both text types than the Thinking types, $t(17) = -2.10$, $p_{bonferroni} = .053$, $d = -1.07$. The Thinking type practising translators made significantly more end deletions ($Mdn = 119$) in the expressive text, $U = 18.5$, $p = .052$, $r = -1.07$, than the Feeling types ($Mdn = 18$).

All in all, Hypothesis 3 was partially corroborated by the analysis of data. The summary of results is provided in Figure 15.
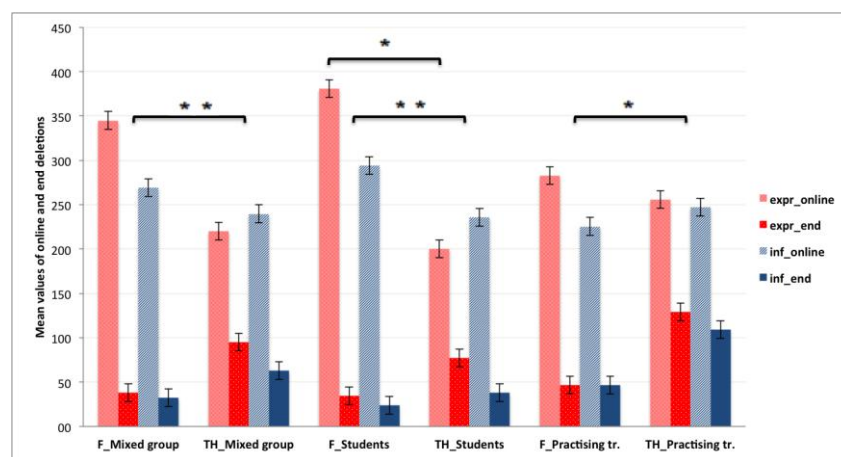

Fig. 15. Hypothesis 3: Illustration of results in the mixed group, translation students and practising translators (F = Feeling, TH = Thinking, expr = expressive text, inf = informative text).

The influence of the preferred decision-related psychological function on the variable of online deletions introduced in both texts was significant only in the group of translation

trainees. Notably, the shared feature of the results of analyses across all the three samples (mixed group, translation students and practising translators) is the main effect of the psychological function on the number of deletions introduced at the end revision stage in the translation of both texts, where the Thinking types made more deletions than the Feeling types. An interesting finding was that practising translators made significantly more end deletions than translation students in both texts, which shows that the level of expertise may have an impact on the number of deletions at the stage of end revision. The effect of the text type was found to account for the variance in the end deletions in the group of students, whereby more deletions were introduced during the translation of the expressive text. The results of testing Hypothesis 3 complement those of the Hypothesis 2, as they support the expectations that the Thinking type translators spend more time on the end revision stage and introduce more deletions at this stage.

4.11.4. Hypothesis 4

Hypothesis 4 sought to identify the differences in the types of corrections that the Feeling and Thinking types introduce during the drafting and end revision stages. It was expected that the Feeling types would make more meaning-related changes during the drafting stage, and less during the end revision stage than the Thinking type translators.

The analyses started with tapping into the differences between the Feeling and Thinking type participants in the mixed group of novices and practising translators, and then continued with separate analyses in the two groups. The between-subject factors remained to be the *psychological function* (Thinking and Feeling) and the *experimental group membership* (translators and practising translators, only in the mixed group), and within-subject factor was the *text type* (expressive and informative). The following dependent variables were considered in the analysis of Hypothesis 4: (1) *surface online corrections in the expressive text*, (2) *surface online corrections in the informative text*, (3) *deep online corrections in the expressive text*, (4) *deep online corrections in the informative text*, (5) *surface end corrections in the expressive text*, (6) *surface end corrections in the informative text*, (7) *deep end corrections in the expressive text*, and (8) *deep end corrections in the informative text*. The mixed effects analyses of variance were conducted four times per each sample (mixed group, translation students, practising

translators), each time considering a different set of dependent variables (1 and 2, 3 and 4, 5 and 6, 7 and 8).

First, the mixed group composed of students and practising translators was analysed. Table 16 presents the mean values of each of the above variables in the mixed group of translation students and practising translators divided according to their preferred psychological function (Feeling or Thinking). The values for both text types are given.

Table 16. Mean values and standard deviations (SD): Types of corrections made in the two texts by all participants per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Surface Online	F	30	66.37	40.54
	TH	17	47.8	20.6
Informative Surface Online	F	30	66.57	33.35
	TH	17	57.2	23.2
Expressive Deep Online	F	30	37.67	19.47
	TH	17	26.6	12.9
Informative Deep Online	F	30	26.90	15.27
	TH	17	26.4	15.1
Expressive Surface End	F	30	5.07	4.86
	TH	17	12.8	10.8
Informative Surface End	F	30	7.87	10.06
	TH	17	14.6	13.1
Expressive Deep End	F	30	6.57	5.69
	TH	17	18.0	12.9
Informative Deep End	F	30	5.77	6.89
	TH	17	12.7	13.8

As already mentioned, the mixed effects analysis of variance was conducted over the four sets of dependent variables. The results are as follows:

(1) No within-subject effects of the text type, $F(1, 45) = 2.66$, $p = .11$, $\eta p^2 = 0.058$, or between-subject effects for either the psychological function, $F(1, 45) = 1.7$, $p = .198$, $\eta p^2 = 0.038$, or the experimental group membership, $F(1, 45) = 0.37$, $p =$

.547, $\eta p^2 = 0.009$, were found for the variable of surface online corrections in the two texts;

(2) The within-subject effect of the text type was revealed for the deep online revisions, $F(1, 45) = 4.83$, $p = .033$, $\eta p^2 = 0.101$. Post-hoc comparisons indicated that significantly more deep online corrections were introduced in the expressive text, $M = 33.7$, $SD = 18.1$, than in the informative text, $M = 26.7$, $SD = 15.1$, by all participants, t(47) = 2.2, $p_{bonferroni} = .033$, $d = 0.63$. There were no between-subject effects of the psychological function, $F(1, 45) = 1.08$, $p = .305$, $\eta p^2 = 0.024$, or the experimental group membership, $F(1, 45) = 2.88$, $p = .097$, $\eta p^2 = 0.063$, on the number of deep online corrections in the two texts.

(3) There was the main between-subject effect of the preferred psychological functions on the number of surface end corrections in both text types, $F(1, 45) = 7.2$, $p = .01$, $\eta p^2 = 0.143$. According to the post-hoc comparisons, the Feeling type translators made significantly fewer surface end corrections in both texts, $M = 6.47$, $SD = 7.48$, than the Thinking types, $M = 13.7$, $SD = 11.95$, $t(45) = -2.68$, $p_{bonferroni} = .01$, $d = -1.02$. Neither between-subject effects of the experimental group membership, $F(1, 45) = 1.22$, $p = .275$, $\eta p^2 = 0.028$, nor within-subject effects of the text type on the number of surface end corrections were revealed, $F(1, 45) = 3.86$, $p = .056$, $\eta p^2 = 0.082$.

(4) No within-subject effect of the text type on the number of deep end corrections was found, $F(1, 45) = 3.46$, $p = .07$, $\eta p^2 = 0.075$.

(5) There was the between-subject effect of the psychological function on the number of deep end corrections in both texts, $F(1, 45) = 13.9$, $p < .001$, $\eta p^2 = 0.244$, with post-hoc comparisons showing that the Feeling types introduced significantly fewer deep end corrections, $M = 6.17$, $SD = 6.29$, in both texts than the Thinking types, $M = 15.35$, $SD = 13.35$, $t(45) = -3.73$, $p_{bonferroni} < .001$, $d = -0.7$ (large effect size). No between-subject effect of the experimental group membership on the number of deep end corrections was found, $F(1, 45) = 2.57$, $p = .115$, $\eta p^2 = 0.057$.

Thus, Hypothesis 4 was partially supported in the mixed group of translation trainees and practising translators. This especially refers to the expectations concerning the type of corrections introduced at the end revision stage. It is worthy of note that the expertise

level was not found to have an impact on the types of corrections considered in the analysis.

Next, the Hypothesis was tested in the sample of novices. The mean values of all types of corrections introduced by translation trainees in both text types are presented in Table 17.

Table 17. Mean values and standard deviations (SD): Types of corrections made in the two texts by translation students per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Surface Online	F	19	64.26	29.29
	TH	11	45.3	17.0
Informative Surface Online	F	19	66.00	28.51
	TH	11	53.6	17.9
Expressive Deep Online	F	19	41.63	20.34
	TH	11	26.4	13.5
Informative Deep Online	F	19	32.16	15.79
	TH	11	27.8	17.3
Expressive Surface End	F	19	4.26	3.84
	TH	11	12.7	12.1
Informative Surface End	F	19	6.26	8.73
	TH	11	12.8	12.6
Expressive Deep End	F	19	5.42	4.97
	TH	11	16.7	12.9
Informative Deep End	F	19	4.79	5.66
	TH	11	10.2	11.4

The results of the mixed-effects repeated measures analyses of variance were the following:

(1)   No within-, $F(1, 28) = 3.07$, $p = .091$, $\eta p^2 = 0.099$, or between-subject effects, $F(1, 28) = 2.91$, $p = .099$, $\eta p^2 = 0.094$, were found for the surface online corrections in the two texts;

(2)   No within-, $F(1, 28) = 1.63$, $p = .213$, $\eta p^2 = 0.055$, or between-subject effects, $F(1, 28) = 2.91$, $p = .099$, $\eta p^2 = 0.094$, were found for the deep online corrections in the two texts;

(3)   The main between-subject effect of the psychological function on the number of surface end corrections in both text types was found, $F(1, 28) = 5.62$, $p = .025$, $\eta p^2 = 0.167$. Post-hoc comparisons indicated that the Feeling type students made significantly fewer surface end corrections, $M = 5.26$, $SD = 12.57$, than the Thinking types, $M = 12.75$, $SD = 12.35$, in both texts, $t(30) = -2.37$, $p_{bonferroni} = .025$, $d = -1.07$. The Thinking types ($Mdn = 9$) introduced significantly more of such corrections in the expressive text than the Feeling types ($Mdn = 4$), $U = 46$, $p = .012$, $r = -1.07$. There was no within-subject effect of the text type on the given variable, $F(1, 28) = 0.54$, $p = .469$, $\eta p^2 = 0.019$.

(4)   There was the within-subject effect of the text type on the number of deep end corrections regardless of the participants' psychological function, $F(1, 28) = 4.23$, $p = .049$, $\eta p^2 = 0.131$. According to the post-hoc comparisons, all students made more meaning-related corrections at the end revision stage in the expressive text, $M = 9.57$, $SD = 10.17$, than in the informative text, $M = 6.77$, $SD = 8.45$, $t(30) = 2.06$, $p_{bonferroni} = .049$, $d = 1.3$.

(5)   Moreover, the main between-subject effect of the psychological function on the number of deep end corrections was found, $F(1, 28) = 9.75$, $p = .004$, $\eta p^2 = 0.288$. The Thinking type students made significantly more of such corrections in both texts, $M = 13.45$, $SD = 12.2$, than the Feeling type students, $M = 7.8$, $SD = 5.3$, $t(30) = -3.12$, $p_{bonferroni} = .004$, $d = -0.66$. Also, the Thinking types ($Mdn = 13$) made more deep end corrections than the Feeling types ($Mdn = 4$) in the expressive text, $U = 37.5$, $p = .004$, $r = -1.3$.

Similar to the results obtained in the mixed group, the analyses into the types of revisions introduced by translation trainees showed that the role of the dominant psychological function reveals itself the most at the end revision stage.

The last step in the verification of Hypothesis 4 consisted in analysing the types of revisions in the group of practising translators. The mean values of all types of corrections introduced by practising translators in both text types are presented in Table 18.

Table 18. Mean values and standard deviations (SD): Types of corrections made in the two texts by practising translators per psychological function (F = Feeling, TH = Thinking).

	Group	N	Mean	SD
Expressive Surface Online	F	11	70.00	56.56
	TH	6	52.5	27.27
Informative Surface Online	F	11	67.55	41.97
	TH	6	63.7	31.59
Expressive Deep Online	F	11	30.82	16.53
	TH	6	27.2	13.14
Informative Deep Online	F	11	17.82	9.16
	TH	6	23.7	11.11
Expressive Surface End	F	11	6.45	6.22
	TH	6	12.8	9.00
Informative Surface End	F	11	10.64	11.96
	TH	6	18.0	14.46
Expressive Deep End	F	11	8.55	6.53
	TH	6	20.3	13.81
Informative Deep End	F	11	7.45	8.65
	TH	6	17.3	17.53

The results of the mixed-effects repeated measures analyses are as follows:

(1)   No within-, $F(1, 15) = 0.57$, $p = .462$, $\eta p^2 = 0.037$, or between-subject effects, $F(1, 15) = 0.24$, $p = .628$, $\eta p^2 = 0.016$, were found for the surface online corrections in the two texts;

(2)   No within-, $F(1, 15) = 2.81$, $p = .114$, $\eta p^2 = 0.158$, or between-subject effects, $F(1, 15) = 0.06$, $p = .805$, $\eta p^2 = 0.004$, were found for the surface deep corrections in the two texts;

(3)   No within-, $F(1, 15) = 2.48$, $p = .136$, $\eta p^2 = 0.142$, or between-subject effects, $F(1, 15) = 2.45$, $p = .138$, $\eta p^2 = 0.140$, were found for the surface end corrections in the two texts;

(4)   The main effect of the psychological function on the number of deep end corrections was discovered, $F(1, 15) = 4.73$, $p = .046$, $\eta p^2 = 0.240$. Post-hoc comparisons showed that the Feeling type practising translators introduced significantly fewer deep end corrections, $M = 8$, $SD = 7.59$, in both texts than the Thinking

type translators, $M = 18.8$, $SD = 15.65$, $t(17) = -2.18$, $p_{bonferroni} = .046$, $d = -1.23$. In particular, the Thinking types ($Mdn = 119$) made more deep end corrections in the expressive text than the Feeling types ($Mdn = 18$), $U = 18.5$, $p = .052$, $r = -1.07$.

To sum up, Hypothesis 4 was partially supported by the data. The effects of the preferred psychological functions were only significant for corrections introduced at the end revision stage. In view of this, Figure 16 present a summary of results obtained from testing Hypothesis 4 in the three groups of participants.
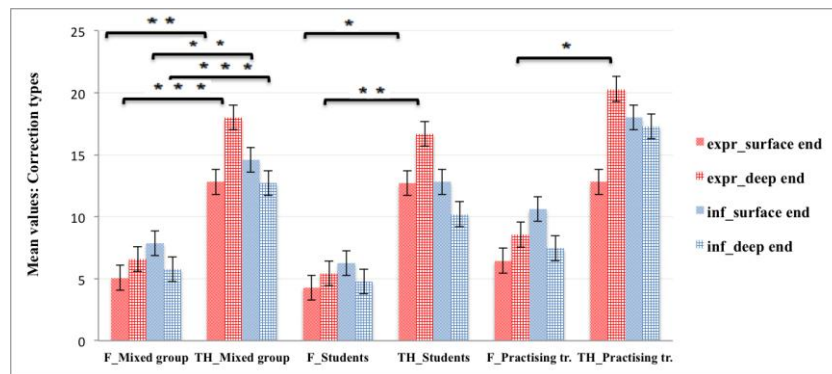
Fig. 16. Hypothesis 4: Illustration of results in the mixed group, translation students and practising translators (F = Feeling, TH = Thinking, expr = expressive text, inf = informative text).

The only consistent effect of the psychological function that occurred in all groups (mixed group, translation trainees, practising translators) referred to the number of the meaning-related corrections introduced at the end revision stage. In particular, the Thinking type participants introduced more deep end corrections in the expressive text than the Feeling type participants. In the mixed group and in the group of translation trainees, the psychological function also had an effect on the number of surface corrections introduced at the end revision stage. The effect of the text type was found in the same groups for the number of deep end revisions. Relating the findings obtained as a result of testing Hypothesis 4 with those of Hypotheses 2 and 3, it appears that the preferred decision-related function has a particularly strong influence on the duration of the end revision stage, the number of deletions and the type of corrections (especially those

connected with semantic and syntactic changes) introduced at this stage. What remains to be identified is whether the dominance of either of the two psychological functions may also account for the quality of the final translation outputs, which will be tested in Hypothesis 5.

4.11.5. Hypothesis 5

Hypothesis 5 aimed to investigate the role that the translator's dominant personality traits and psychological functions play in producing high quality translations, considering that the traits and functions form part of the translator's competence and expertise. Due to the fact that "sustained quality" of performance should be one of the essential elements of translation expertise (Muńoz Martín 2014b), it was assumed that the practising translators would produce higher quality translations of both texts than trainees. It was also expected that high levels of the translator's dominant personality traits in both of the experimental groups (as revealed by testing Hypothesis 1) would be found in the psychological profiles of the authors of the "high" and "good" quality translations (cf. 4.10.2). The expectation was shaped by evidence from psychological research showing that certain dominant personality traits are related to the quality of academic and occupational performance of individuals.[70]

Hypothesis 5 also sought to explore whether the preferred decision-related psychological functions, apart from behavioural differences tested for in Hypotheses 2-4, may also account for the differences in the quality of the translators' performance in the two texts. This was suggested due to the quality-assuring function of the self-revision process treated as a decisional activity in translation and discussed in chapter 3. Finally, Hypothesis 5 aimed to qualitatively describe the psychological profiles of the authors of the highly evaluated translations in both groups of participants (practising translators and translation trainees) as based on their dominant personality traits and psychological functions.

The first step in testing the Hypothesis was to analyse the translation quality scores given by the markers and the potential readers. As already mentioned, each of the

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[70] See section 1.6 for the discussion of research into the issue.

two translated texts received 4 scores: 2 scores by 2 markers, and the other 2 scores by 2 potential readers. Table 19 provides the mean translation quality scores given by 4 raters (markers and potential readers) for the translations of the two texts done by the students and practising translators.

Table 19. Mean translation quality scores: 2 texts, 4 raters, translation students and practising translators.

Group/Text Type	Marker1	SD	Marker2	SD	Reader1	SD	Reader2	SD
			TQA scores					
Students/Expressive	65.3	12.5	68.8	14.5	75.6	8.9	76.3	10.3
Students/Informative	70.2	10.1	66.3	14.5	78.6	6.5	78.4	9.8
Pr.translators/Expressive	75	9.9	71.8	10.2	80.9	10.5	86.5	8.1
Pr.translators/Informative	79.1	11.2	80.5	12	75.2	7.9	80.3	11

In order to identify whether the raters agreed in their assessment of the translations, the interclass correlation coefficient was calculated. The data did not follow normal distribution, so Spearman's rank-order correlation was used to test for interrater agreement. There was a significant positive correlation between the scores given by the two markers in their assessment of the expressive text translated by students, $r_s(28)=.466$, $p = .009$, and of the informative text translated by students, $r_s(28) = .651$, $p< .001$. Similarly, both readers agreed in their assessment of the expressive text translated by the same group, $r_s(28) = .381$, $p = .038$, and of the informative text in the translation of students, $r_s(28) = .513$, $p = .004$. Significant positive correlations were also found between the markers' scores for the expressive text translated by the practising translators, $r_s(15) = .461$, $p = .045$, and for the informative text translated by the same group, $r_s(15) = .929$, $p < .001$. The two readers agreed on the quality scores given to the practising translators for their translations of the expressive text, $r_s(15) = .392$, $p = .047$, and of the informative text, $r_s(15) = .840$, $p < .001$.

Importantly, no correlations were found between each of the markers' and the potential readers' quality scores given for the two texts translated by the trainees and practising translators. The primary aim of having the quality assessment done by markers and potential readers was to make the evaluation more objective by involving readers as the potential users of translations. The absence of the correlation confirms that translation teachers and potential readers perceive translations differently due to their different levels of awareness of the translation quality standards. In addition, the translation teachers had access to the source text, so they were able to evaluate the translations

more adequately and critically than the potential readers, whose evaluations were based on their reception of the text. Although the absence of agreement could have been expected, it was important to support the assumption by means of evidence from the data. For the sake of clarity of Hypothesis testing, further analysis will only consider the scores given by the two markers. As there was a strong positive correlation between the scores given by the two markers, the quality scores were averaged to obtain one quality score per each translated text (further referred to as "TQA score"). Table 20 presents the number of translations in each category as based on the quality benchmarks that were set to meet the needs of the present study (cf. 4.10.2).

Table 20. The number of translations done by translation students and practising translators as based on the quality benchmarks.

Quality Benchmark/Text Type	Translation Students	Practising Translators
High/Expressive	2	1
Good/Expressive	5	6
Satisfactory/Expressive	6	7
Fair/Expressive	13	2
Poor/Expressive	4	0
High/Informative	1	4
Good/Informative	7	7
Satisfactory/Informative	13	4
Fair/Informative	6	2
Poor/Informative	3	0

Table 20 shows that an equal number of 7 participants in both groups produced "high" (students – 2, practising translators – 1) and "good" (students – 5, practising translators – 6) quality translations of the expressive text. It should be noted that among translation students the number stands for 23% of the total number of student participants, and among practising translators – for 41%. The greatest number of students (13, 43% of the total) produced "fair" quality translations of the expressive text, whereas the translations of the other 41% (7) of the practising translators were rated as "satisfactory". As for the quality of the translations of the informative text, 8 students (27% of the total) and 11 practising translators (65% of the total) produced "high" (students – 1, practising translators – 4) and "good" (students – 7, practising translators – 7) quality outputs. As in the translation of the expressive text, 13 students (43% of the total) produced the translations of the informative text that were rated as "satisfactory". The practising translators

did not produce any "poor" quality translations in the markers' assessment, while there were 4 (13% of the total) and 3 (10% of the total) students whose translations of the expressive text and the informative text respectively were rated as "poor".

The next step was to test whether there is an effect of *expertise level* and the *dominant psychological functions* (between-subject factors) on the *quality scores for the two texts* (within-subject factors). The repeated measures analysis of variance showed the following results:

(1) There was the main between-subject effect of *expertise level* on the translation quality scores for the translations of both texts, $F(1, 45) = 8.017$, $p = .007$, $\eta_p^2 = 0.160$, with practising translators receiving higher scores than translation students. The mean values and standard deviations are given in Table 19 above.

(2) There was no between subject effect of the *preferred psychological function* on the quality assessment scores for both texts, $F(1, 45) = 0.308$, $p > .05$, $\eta_p^2 = 0.007$.

(3) The within-subject effect of the *text type* was found, $F(1, 45) = 4.188$, $p = .047$, $\eta_p^2 = 0.091$. Post-hoc tests showed that all participants translated the informative text ($M = 71.9$, $SD = 11.9$) better than the expressive text ($M = 69.4$, $SD = 10.6$), $t(46) = -2.05$, $p_{bonferroni} = .047$, $d = 6.05$.

The final stage in testing Hypothesis 5 consisted in analysing the psychological profiles of the authors of "high" and "good" quality translations of the two texts in both groups of participants. The category of "high" quality translations includes those outputs that comply with professional standards and are acceptable for publication with only minor changes. As the participants of the study differed in their level of translation competence and expertise, it was important to consider also the "good" quality translations, i.e. those that are quite successful, but have not yet met the rigorous quality standards in the industry and according to Williams' (2009) assessment scheme (cf. 4.10.2).

In the group of translation students, the trait of Emotionality and the facets of Fearfulness, Patience and Anxiety were found to be dominant as a result of testing Hypothesis 1. Tables 21 and 22 provide the values for the above trait and facets (measured by HEXACO on a Likert scale from "1" to "5"), and the preferred decision-related psychological function (measured by MBTI) of the translation students who produced

"high" (≥86 points) and "good" (76-85 points) quality translations of the expressive text (Table 21) and the informative text (Table 22). The data in the tables are arranged according to the rating of translations, starting from those with the highest to those with the lowest scores in the chosen quality categories.

Table 21. The psychological profiles of the authors of the "high" and "good" quality translations of the expressive text among translation students.

Participant Code	Psychological Function	Emotionality	Fearfulness	Patience	Anxiety	TQA score
PS30	Feeling	4.5	4.3	3.5	5	89
PS9	Feeling	3.5	3.7	3.5	3	86
PS26	Feeling	4.2	2.7	3.5	5	85.5
PS29	Feeling	3.6	3.7	4	3.5	83
PS25	Feeling	4.2	4	4.5	4.5	82
PS28	Thinking	3.6	3.7	4.5	2.5	80
PS17	Feeling	4.2	4	4.5	4	79

Table 22. The psychological profiles of the authors of the "high" and "good" quality translations of the informative text among translation students.

Participant Code	Psychological Function	Emotionality	Fearfulness	Patience	Anxiety	TQA score
PS9	Feeling	3.5	3.7	3.5	3	86.5
PS28	Thinking	3.6	3.7	4.5	2.5	81
PS7	Thinking	3.2	3	4.5	5	80
PS25	Feeling	4.2	4	4.5	4.5	80
PS26	Feeling	4.2	2.7	3.5	5	79
PS30	Feeling	4.5	4.3	3.5	5	78
PS10	Thinking	2.8	2.3	5	4.5	77
PS24	Feeling	4.3	4.3	3.5	5	76.5

Five out of 7 students who produced "high" and "good" quality translations of the expressive text also translated the informative text well, which points to the level of their translation competence development in comparison to the other fellow students. When the data on the preferred psychological functions in the two Tables are compared, it is possible to observe that the Feeling function prevales among the authors of the "high" and "good" quality translations of the expressive text (6 out of 7 students). As regards the successful translators of the informative text, 5 out of 8 also had Feeling as their

dominant psychological function for decision-making.[71] The authors of the "high" and "good" quality translations of the expressive text (Table 21) also had higher mean scores on the scales of the Emotionality trait ($M = 4$, $SD = 0.4$) and the facet of Fearfulness ($M = 3.7$, $SD = 0.5$) than the mean values in the whole group of translation students (Emotionality, $M = 3.4$, $SD = 0.6$, Fearfulness, $M = 3.4$, $SD = 0.8$). The mean levels of the facets of Patience ($M = 4$, $SD = 0.5$) and Anxiety ($M = 3.8$, $SD = 1$) among the successful translators of the expressive text differed only slightly from the group means (Patience, $M = 3.8$, $SD = 0.8$, Anxiety, $M = 4$, $SD = 1$). The authors of the "high" and "good" quality translations of the informative text had higher mean values (Emotionality, M = 3.8, SD = 0.6, Fearfulness, M = 3.6, SD = 0.7, Patience, M = 4.1, SD = 0.6, Anxiety, M = 4.4, SD = 1) for all of the above traits and facets than the respective group means. To sum up, the translation students who produced "high" and "good" quality translations of the two texts mostly had the dominant Feeling function for decision-making, and scored high on the scales of the personality traits and facets that were found to be dominant among the translation students. Next, a similar qualitative analysis of the psychological profiles of the authors of the high and good quality translations produced by the practising translators is conducted.

As a result of testing Hypothesis 1, the trait of Openness to Experience and the facets of Perfectionism and Aesthetic Appreciation were found to be dominant among the practising translators. Tables 23 and 24 show the values for the above trait and facets (measured by HEXACO on a Likert scale from "1" to "5"), and the preferred decision-related psychological function (measured by MBTI) of the practising translators who produced "high" (≥86 points) and "good" (76-85 points) quality translations of the expressive text (Table 23) and the informative text (Table 24). As in the Tables 21 and 22, the data below are arranged according to the rating of the translations.

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[71] Notably, there were more Feeling type (19) than Thinking type (11) trainees in the sample.

Table 23. The psychological profiles of the authors of the "high" and "good" quality translations of the expressive text among practising translators.

Participant Code	Psychological Function	Openness to Experience	Perfectionism	Aesthetic Appreciation	TQA score
PT9	Thinking	3.6	4.3	4	90
PT16	Feeling	4.3	3	3.7	85
PT8	Thinking	4.3	4.3	3.4	81
PT6	Feeling	3.6	3.3	3.6	79.5
PT7	Feeling	3.7	3.3	3.9	79.5
PT3	Feeling	4.2	3	3.5	78.5
PT1	Feeling	4.5	4.7	4.9	76.5

Table 24. The psychological profiles of the authors of the "high" and "good" quality translations of the informative text among practising translators.

Participant Code	Psychological Function	Openness to Experience	Perfectionism	Aesthetic Appreciation	TQA score
PT12	Thinking	3.9	3.7	4.1	97.5
PT6	Feeling	3.6	3.3	3.6	91.5
PT4	Feeling	4.1	4.3	4.1	89
PT16	Feeling	4.3	3	3.7	88
PT13	Feeling	4.3	4.7	4.6	85.5
PT2	Feeling	4	4.3	3.8	83.5
PT8	Thinking	4.3	4.3	3.4	81
PT1	Feeling	4.5	4.7	4.9	80
PT9	Thinking	3.6	4.3	4	79
PT17	Thinking	3.9	4.7	4.4	78.5
PT5	Feeling	3.3	2.3	3.6	77

Out of 7 practising translators who produced "high" and "good" quality translations of the expressive text, 5 also did well with the informative text. The observation hints at the conclusion that these translators have reached the level of translation expertise that involves "sustained quality" of their performance regardless of the text and task type. The majority of the successful translators of the expressive text had Feeling as their preferred decision-related psychological function (5), and only 2 were classified as the Thinking types. Among the authors of the "high" and "good" quality translations of the informative text (11 practicing translators in total), 7 participants had Feeling and 4 had Thinking as their dominant psychological function. Importantly, there were 6 Thinking type participants in the group of practicing translators in general. This shows that the decision-related Thinking function may be more characteristic of the translator of the texts that convey appelative or other functional (informative texts) rather than creative

(expressive texts) type of content, which may be more suitable for the translator with the preference for the Feeling function. However, it should be noted that among those translators who managed to deliver "sustained quality" in their translation of both texts, 2 were Thinking and 3 were Feeling types, which probably indicates that being an expert involves being able to adjust one's psychological profile to the demands of a given task. This conclusion may be supported by the fact that the practising translators who produced "high" and "good" quality translations of the expressive text did not score higher on the scales of the translator's dominant trait and facets (Openness to Experience, $M = 4$, $SD = 0.4$, Perfectionism, $M = 3.7$, $SD = 0.7$, Aesthetic Appreciation, $M = 3.9$, $SD = 0.5$) than the group in general (Openness to Experience, $M = 3.9$, $SD = 0.4$, Perfectionism, $M = 3.9$, $SD = 0.7$, Aesthetic Appreciation, $M = 3.9$, $SD = 0.4$). A similar situation was observed among the successful translators of the informative text (Openness to Experience, $M = 4$, $SD = 0.4$, Perfectionism, $M = 4$, $SD = 0.8$, Aesthetic Appreciation, $M = 4$, $SD = 0.5$; mean values in the sample are the same as above). This is an interesting observation, which indicates that the psychological characteristics of an individual may be related to the quality of one' performance at the stage when her/his professional competences are still developing, but further "person-situation" interaction in one's professional life may lead to the construction of a certain psychological profile, which is related more to the demands of the profession in general rather than the quality of performance in particular. Thus, the relationship between personality and translation quality in the group of practising translators might be mediated by other factors such as exposure to different text types, domain knowledge, etc.

All in all, Hypothesis 5 was partially corroborated by data analysis. The quality of the practising translators' outputs of both text types was assessed significantly higher than the quality of the students' translations. Thus, expertise effect on the quality of translations was significant. The absence of the statistically significant effect of the preferred decision-related psychological function (Thinking or Feeling) on the quality of translations of the two text types in the two groups of participants indicates that translators (regardless of their expertise level) may activate different cognitive processing patterns in the process of translation, but there is no evidence to claim that either of the patterns is more effective in producing a high quality translation. However, most of the students and practising translators who produced "high" and "good" quality translations of the expressive text had Feeling as their preferred psychological function, which sug-

gests that the Feeling type translators may be better psychologically equipped for the translation of the texts that require creative approach. Thus, the results of statistical testing might have been different had the sample sizes been more balanced. The qualitative analysis of the psychological profiles (traits/facets and decision-related functions) of the successful translators of both texts in both samples allowed offering a possible conclusion that the dominant personality traits may contribute more to translation quality at the beginning of one's translation competence development than at the stage when a certain level of translation expertise has already been developed. In particular, the translation students who produced "high" and "good" quality translations of the two texts scored on average higher on the personality trait and facets (Emotionality, Fearfulness, Patience and Anxiety) that were found to be dominant among translation trainees (cf. 4.11.1) than the group of translation students overall. To supplement the discussion of the findings revealed as a results of testing Hypotheses 1-5, the chapter continues with the report on the participants' answers to the self-report questionnaire.

4.12. Results of the self-report questionnaires

The self-report questionnaires, distributed at the end of the experiment, may provide supportive evidence for the role of the translator's personality in translation. The questionnaires prepared for novices and practising translators differed only in the *Background information* section, whereby the students were asked about the duration of their translation training and the reasons why they had chosen to become translators, and the practising translators received questions about the duration of their translation practice, the type of their employment (full- or part-time), and the text types they were usually translating.[72] Following is an overview of the students' and practising translators' responses arranged according to their relevance to the five hypotheses presented above.

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[72] See section 4.7 on *Participants* for more details about the translators' duration of experience, employment type, and the texts they specialise in.

4.12.1. Questions related to Hypothesis 1

In order to understand the factors that attracted the students to the translation profession, one of the first questions in their self-report questionnaire was "Why have you chosen to become a translator?" The question was open, and some of the students responded in similar ways, which allowed deducing key words according to which the answers were analysed. Figure 17 presents an account of the students' responses to the question generalised by the key words.
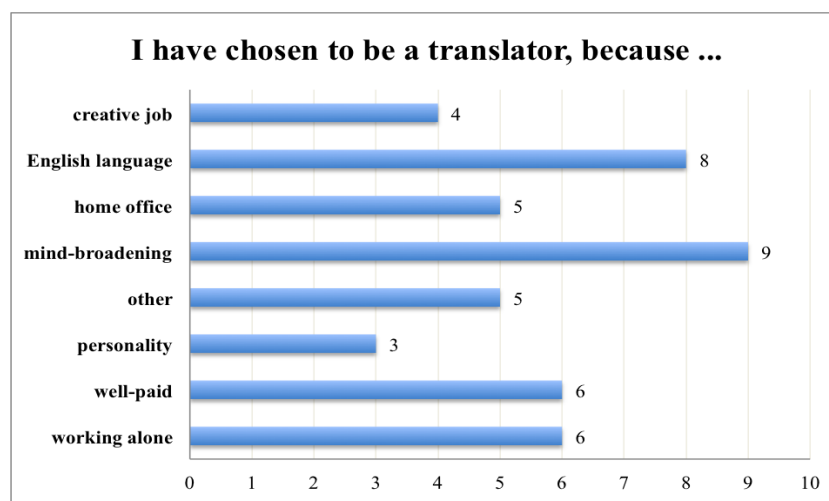
Fig. 17. A summary of the students' answers to the question "Why have you chosen to become a translator?"

Out of 30 novices, 9 stated that their career choice was driven by the fact that translation is primarily a *mind-broadening* occupation, and 8 of them admitted that they had a knack for English and foreign languages on the whole (*English language*). Interestingly, one of the students even came up with a formula that combined the first two reasons: "[a] knack for languages + very broad interests = translation".

The opportunity to *work alone* and "avoid people" (6), as well the level of remuneration (6, *well-paid*) shared the next position in the students' list of reasons for their professional choice. Some of the students (5) also mentioned that they would be happy to work from home (*home office*), and that they enjoyed translation because it is a *creative job* (4). Finally, 3 informants pointed to the role of *personality* in their career choice, some of the students referring to it explicitly, and others explaining that they

were "shy" and wanted to "[w]ork at their own pace". Some *other* reasons indicated by the students were: "Translation enables communication between cultures", "My dream has always been to become a literary translator" or "I want to feel like the second author of a given text", "I enjoy creative writing, but I often lack ideas", "I have good memory, and the job is challenging", "Translation involves the pragmatic use of language and it is better than teaching".

The next question related to Hypothesis 1 meant to collect the informants' views on the role of personality in the translation profession. Again, it was open and general, and read as follows: "Is personality important in professional life?" Figure 18 presents the summary of responses.
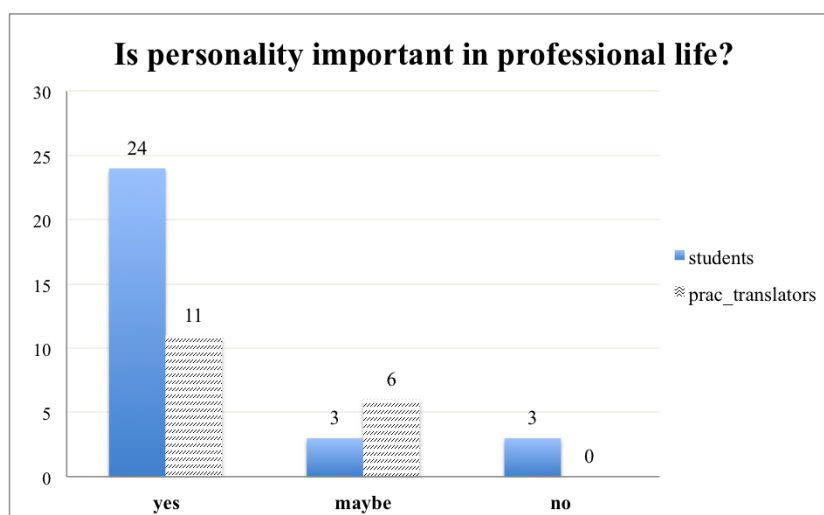
Fig. 18. Participants' answers to the question "Is personality important in professional life?"

A substantial majority of students (24) agreed that personality is an important element in one's professional life with comments such as "[u]ltimately, whatever we do all boils down to our personality", "[s]ome traits are highly welcome", "[i]n certain professions, personality does help to a great extent", and "[i]t is essential for people to feel comfortable at work and personality has a big influence on that". Three students reported that either personality did not play a role in one's professional life and "[p]ersonality features can be modified so as to suit a given profession", and the other three were unsure about their opinion on the issue.

In a similar vein, most of the practising translators (11) claimed that personality does play a role in one's profession, and 6 of them stated that they were not completely

sure about it, providing comments such as "50/50". However, none of the practising translators denied the importance of personality.

In order to better understand the participants' image of the translator's personality, they were provided with a list of 24 facets from HEXACO Personality Inventory (which they were not aware of) in the next question. The task was to choose 2 that would best represent the translator's dominant traits. Figure 19 summarises the participants' choices.
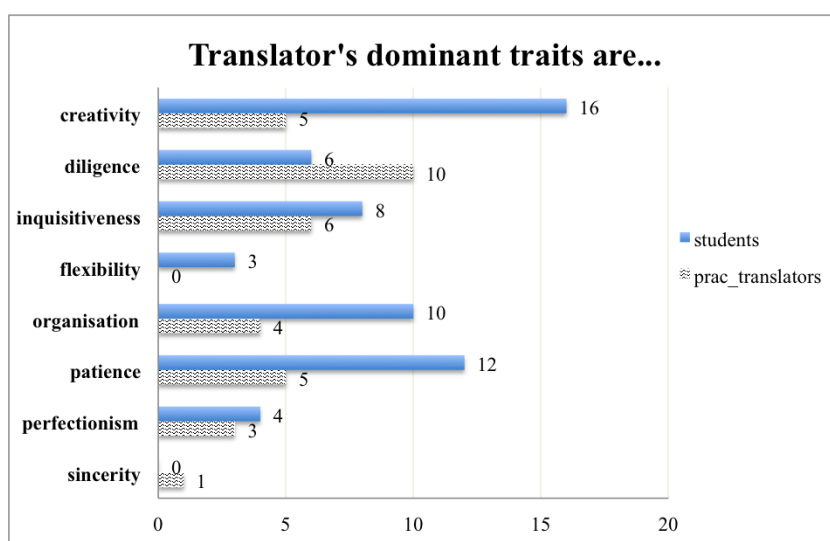
Fig. 19. Participants' selection of the translator's dominant personality traits.

In case of students, prominence was given to the *creativity* facet (16), and *patience* received the second position (12). *Organisation* was mentioned by a slightly smaller number of participants (10), followed by *inquisitiveness* (8), *diligence* (6), *perfectionism* (4) and *flexibility* (3).

In the group of practising translators, *diligence* was the leading facet (10), with *inquisitiveness* (6), *creativity* (5), and *patience* (5) coming next. The facet of *organisation* was mentioned 4 times, *perfectionism* 3 times and *sincerity* once.

To sum up, the students' choice to pursue the career of a translator appears to be driven primarily by their wish for self-development and improvement of their language skills. It was, however, an intriguing finding that some of the students particularly appreciate the opportunity of working alone and avoiding contact with other people in the translator's professional life.

Another key finding was that a decisive majority of both translation students and practising translators agreed on the importance of personality in one's profession. When asked to describe the translator's personality, however, the students' and practising translators' versions differed. The novices seem to have a more romantic view of the translator's personality and prioritised the traits of creativity (Openness to Experience domain) and patience (Agreeableness domain). According to the practising translators, it is diligence in the Conscientiousness domain that a translator needs most, followed by the facets in the domain of Openness to Experience (inquisitiveness and creativity). Thus, the practising translators with their experience in the field are more pragmatic in their description of the translator's personality from the psychological perspective.

The second part of the questionnaire is more specifically related to the informants' views on the role of personality in the translation process. The answers to the questions relevant to Hypotheses 2-4 are analysed in the next section.

4.12.2. Questions related to Hypotheses 2-4

The first question in a series of those related to the translation process (and implicitly to self-revision) was an introductory one and meant to prepare the participants for the other questions. It read as follows: "Which adjective best describes the translation process?" Participants' answers are summarised in Figure 20.

Translation is a ... process.
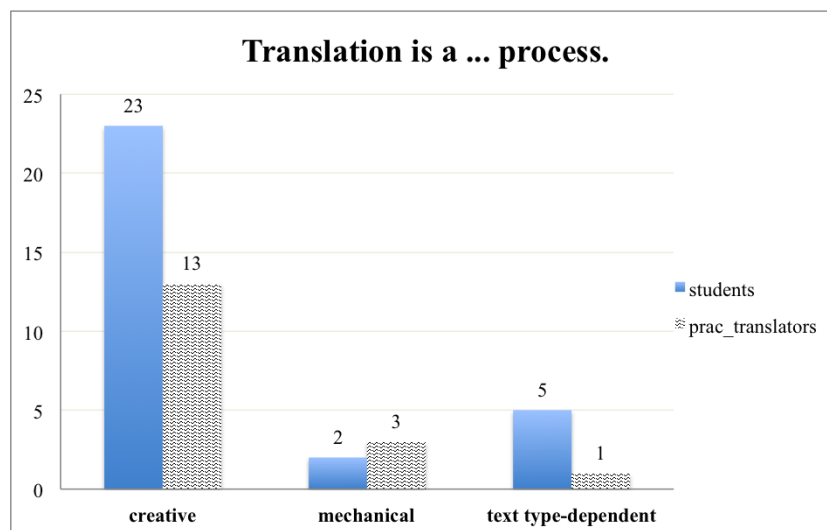
Fig. 20. Participants' answers to the question "Which adjective best describes the translation process?"

When asked to choose one of the three options − "creative", "mechanical", and "other" − the majority of students (23) stated that translation is a creative process, and only 2 of them referred to translation as a mechanical process. Similarly, practising translators mostly described translation as a creative task (13), and as few as 3 of them opted to label it "mechanical". Notably, 5 novices and 1 practising translator chose the option "other" and all claimed that the description of the translation process depends on the source text type.

The next question intended to ask more specifically about the participants' favourite part of the translation process in order to understand how they prioritise the activities they are involved in while translating. The optional answers either implicitly referred to the stages of the translation process ("preparatory reading" to orientation stage, "writing" to "drafting", and "final editing and proofreading" to "end revision"), or to the particular (mental) processes involved in translation (making decisions, solving problems, looking up new words, looking for information). The students were not limited in the number of options they could select. Figure 21 presents the distribution of the informants' answers to the question.
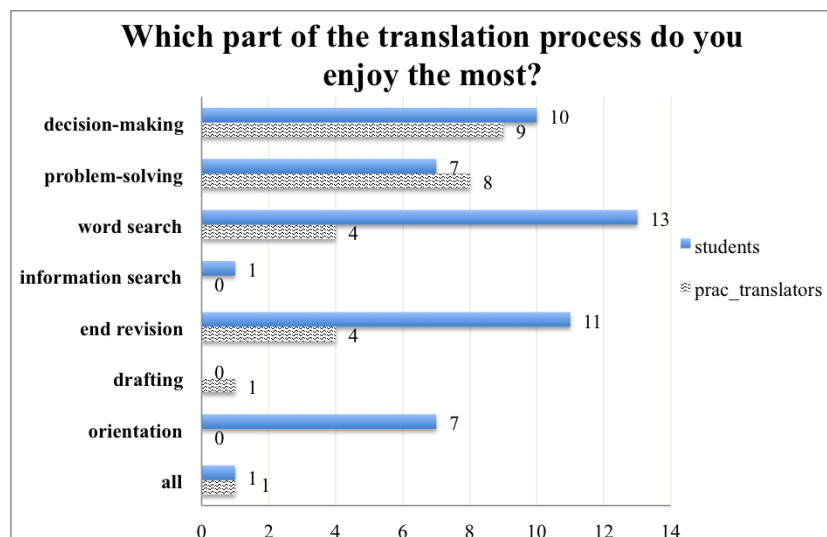
Fig. 21. Participants' answers to the question "Which part of the translation process do you enjoy the most?"

Most of the students mentioned that they enjoyed *looking up new words* (13), and *revising* (11), "[b]ecause it enables to improve the translation" (a comment by one of the students). Some of the students liked *making decisions* (10) "[t]hat we [translators] are responsible for", *solving problems* (7), and preparing for the translation at the *orientation* stage (7). Only one student admitted to enjoying the *whole* of the translation process, and only one stated that s/he preferred *information search* to the other activities.

In the case of practising translators, they appeared to be more involved in the mental processes of *decision-making* (9) and *problem solving* (8), followed by *word search* (4) and *end revision stage* (4). One of the translators found the *drafting* process to be enjoyable, and the other one stated that the *whole* of the translation process was interesting for him/her.

Looking more precisely into the participants' decision-making processes related to self-revision, the next question was implicitly based on Jung's ([1921] 1971) dichotomy of decision-related psychological functions of Thinking and Feeling. The question aimed to identify whether the participants preferred to base their decisions on *proof*, which is more characteristic of those with the dominant Thinking function, or *feel*, which is typical of the Feeling function dominant personalities. A *dictionary entry* was provided as an example of *proof*, and the *feeling of correctness* as that of *feel*. The informants also had the option *other*, where they could provide their own alternative response. The answers are presented in Figure 22.
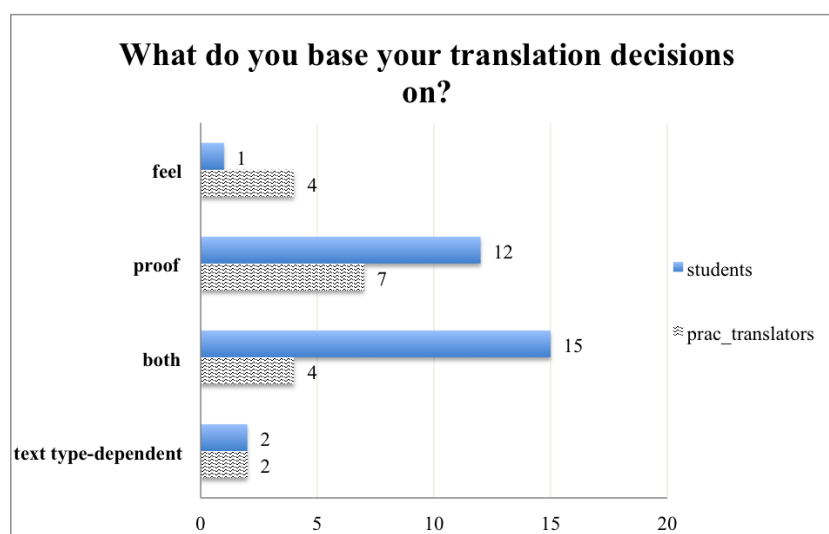
Fig. 22. Participants' answers to the question "What do you base your translation decisions on?"

Half of the students (15) chose the option "other" and indicated that they needed both *feel* and *proof* to base their translation decisions on. Twelve of the students stated that they relied on *proof*, and 2 students mentioned that the basis for their decisions differed depending on the text type (e.g. "[i]n case of literary translation, I go for feel, but in specialised texts I need proof"). One of the 30 novices admitted to relying on *feel* without any reservations. If the answers to this question are compared with the results of the MBTI test, 6 out of 12 students who marked *proof* as their preferred decision-making mode turned out to be Thinking types according to the MBTI results, and the other 6 appeared to be Feeling types. The student who reported to rely mostly on the *feel* for the correct decision, was classified as a Feeling type in the MBTI test. Among the trainees who claimed that *both* feel and proof are important, 10 were Feeling types and 5 were Thinking types. Both students who mentioned that their decision-making depends on the type of the source text were Feeling types according to the results of the psychometric test.

In the group of practising translators, 7 participants stated that they relied on *proof*, and an equal number of 4 translators opted either for *feel* or provided an alternative option of "*both*". Similar to the students, 2 of the practising translators reported that the basis for their decisions differed depending on the text type. Comparing the participants' answers to the results of their MBTI test, it appeared that 4 out of 7 translators who opted for *proof* were Thinking types, and the other 3 Feeling types. All 4 transla-

tors who reported their preference for *feel* were classified as Feeling types in the test, similar to the 2 participants who claimed that the basis for their decisions depends on the text type. Out of the 4 participants that stated that they relied on both *feel* and *proof,* 2 were Thinking types and the other 2 were Feeling types.

All in all, both translation students and practising translators defined translation mainly as a creative process. However, the two groups prioritised the components of the translation process differently. Most of the translation students especially enjoyed *word search* and *revision* for the fact that these activities contribute to the quality of their translations. Conversely, the majority of the practising translators took particular pleasure in the cognitive processes of decision-making and problem-solving. The finding may be related to the idea that novices are still at the stage of developing their translator self-concept (Kiraly 1995; Muñoz Martín 2014) and the relevant sub-competences, so they pay particular attention to extending their vocabulary and improving their translation performance. The practising translators, on the other hand, focus on the cognitive processes of decision-making and problem-solving, probably because their established self-concept helps them to refer to their experience in making the most appropriate decisions in order to produce high quality translations. Thus, while translation students seem to treat the process of translation as an opportunity to develop their professional competences and expertise, practising translators take a more task-oriented approach and use their expertise to make decisions and solve problems in translation. This assumption may be further supported by the other finding connected with the informants' basis for their decision-making in translation. Students reported that they either relied on both *feel* and *proof*, or only *proof*, which possibly indicates that they want to learn from each translation task, so they need to support their decisions with some solid proof that they find in external resources. Almost half of the practising translators mentioned that they mostly relied on *proof*, and the other half were divided between *feel* and *both*. Such a distribution of answers may point to the translator's ability to activate different decision scenarios depending on the demands of the task, e.g. the text type.

The presentation of the informants' answers to the self-report questionnaire continues with the questions related to Hypothesis 5. The responses are analysed in the next section.

4.12.3. Questions related to Hypothesis 5

The final part of the questionnaire concerned the translation task that the participants were dealing with in the course of the experiment. As an introductory question, the informants were asked to indicate which of the two text types they enjoyed translating more. The summary of the answers is provided in Figure 23.
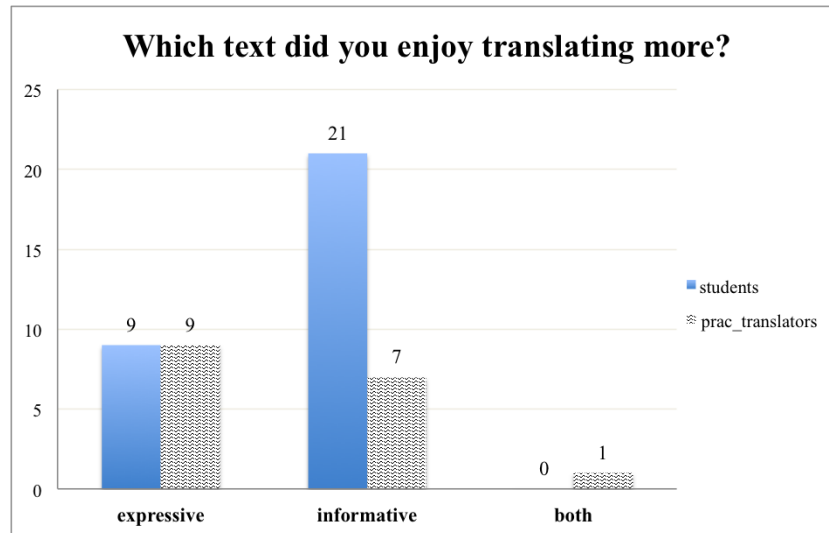
Fig. 23. Participants' answers to the question "Which text did you enjoy translating more?"

A greater majority of students (21) reported that they enjoyed translating the informative text more, and 9 students preferred the expressive text. As regards practising translators, the answers were almost equally divided between expressive (9) and informative text types (7), and one person enjoyed both (1).

In order to understand the difficulties that the participants faced while translating, the next question was: "What did you find the most challenging to render?" It was possible to mark more than one option, as well as to provide an alternative answer. The summary of responses is given in Figure 24.
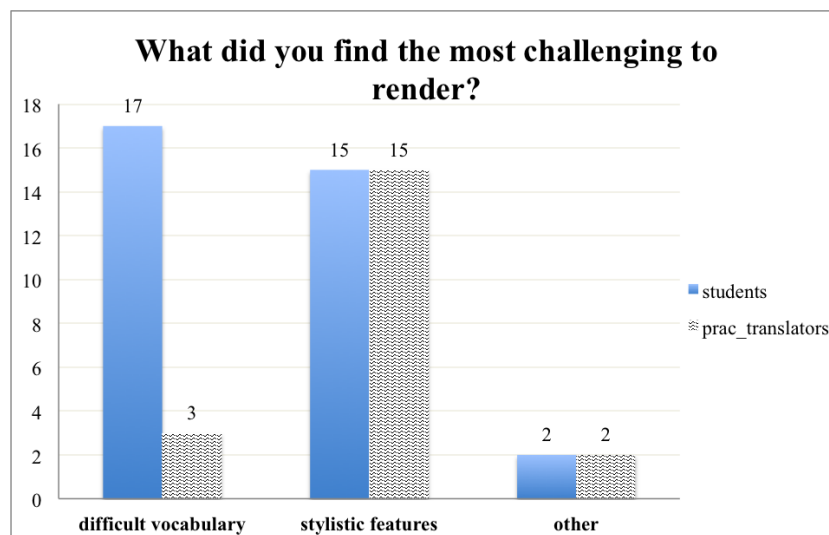
Fig. 24. Participants' answers to the question "What did you find the most challenging to render in the translation tasks?"

The students' answers were almost equally divided between "difficult vocabulary" (17) and "stylistic features" (15), the former pertaining more to the terms in the informative text, and the latter to the stylistic devices used in the expressive text. All of the alternative answers referred to the informants' wish to work more on their translations.

Referring to the group of practising translators, a substantial majority found "stylistic features" to be the most challenging, and only 3 of the translators admitted to having problems with "difficult vocabulary". Both practising translators who selected the option "other" stated that they found "complex syntax in the informative text" to be particularly difficult.

Finally, the participants were asked to evaluate their translations by answering the question "Are you satisfied with your translations?" The results of their self-assessment are presented in Figure 25.
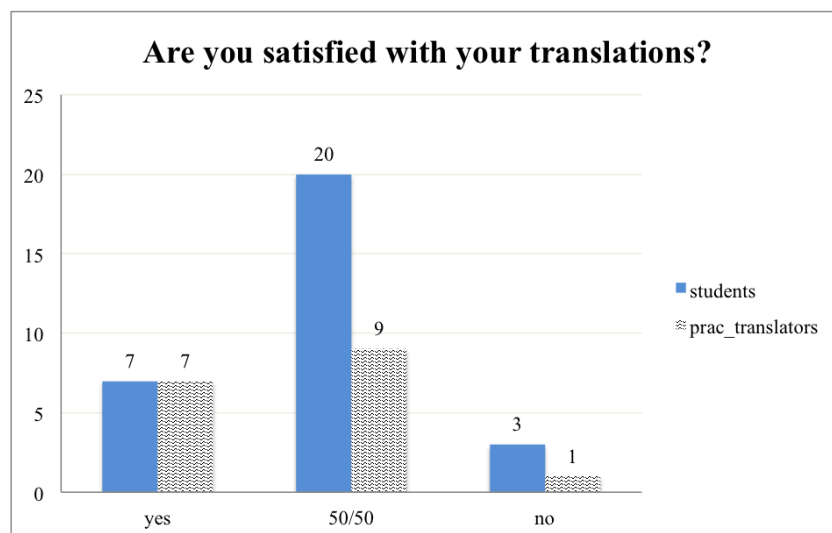
Fig. 25. Participants' answers to the questions "Are you satisfied with your translations?"

Most of the students (20) admitted that they were not very happy with the quality of their translations and chose the option "50/50", while 7 of then gave a positive evaluation of their performance in the tasks. A few novices (3) were self-critical enough to claim that their translations did not meet their own quality standards. To understand whether there is any relationship between subjective (translator's own) and objective (markers' and readers') assessment, the students' self-evaluations and the quality scores awarded by markers and potential readers were compared using inferential statistics. It was found that the translations of the expressive text produced by the students who were satisfied with their own performance received significantly higher scores by potential readers ($M = 76.7$, $SD = 4.18$) than markers ($M = 61.6$, $SD = 11.1$), $t(10) = -3.286$, $p = .044$. A possible explanation for this finding may be that the students who are more confident in their performance results may produce translations that seem to be of higher quality (cf. PACTE 2011), unless the potential user has access to the source text (as the markers did) and is able to identify the faults related to the requirements of the task.

In the case of practising translators, the self-assessment scores were divided between those who were not completely satisfied and wanted to work more on the texts (9), and those who considered their translations to be of good quality (7). One of the practising translators expressed her/his dissatisfaction with the translations, but still received one of the highest scores from both markers and potential readers for both tasks (Markers $_{expressive}$ = 90, Readers $_{expressive}$ = 86, Markers $_{informative}$ = 79, Readers $_{informative}$ = 96).

To sum up, translation students found the translation of the informative text more enjoyable, even though most of them reported that they liked the creative part of the translator's job. It must have been easier for them to deal with the terminological problems of the informative text than with the stylistic features of the expressive text. It may be inferred from their answers that the majority of the translation students wanted to work more on their translations, and only some of them claimed that they were happy with their outputs. The practising translators almost equally distributed their preferences for the two text types, but most of them stated that stylistic features were the most challenging to render. This finding supports the earlier assumption that practising translators due to their experience in translation may concentrate on the higher-order task-specific problems, e.g. stylistics. The practising translators were divided on the issue of quality, some of them being not very satisfied and others expressing their general approval of the translations.

As the results of the experiment with regard to each of the five hypotheses, and the summary of the participants' responses to the questions in the self-report questionnaires have been presented, the chapter proceeds with the discussion of results. The discussion will summarise the results of the experiment in their relation to the ideas expressed in the theoretical chapters.

4.13. General discussion of results

The present experimental study was designed so as to explore the role of the translator's personality dispositions, i.e. traits and the psychological decision-related functions, in the translation process and product. To achieve this, Hypothesis 1 sought to identify the translator's dominant personality traits, Hypotheses 2-4 investigated the role of the psychological functions in the process of self-revision, and Hypothesis 5 tapped into the relationship between the translator's psychological profile and the quality of her/his translation performance.

According to the results of testing Hypothesis 1, there is enough evidence to suggest that translators differ from the representatives of the other professions in terms of the distribution of their personality traits (Figure 26).
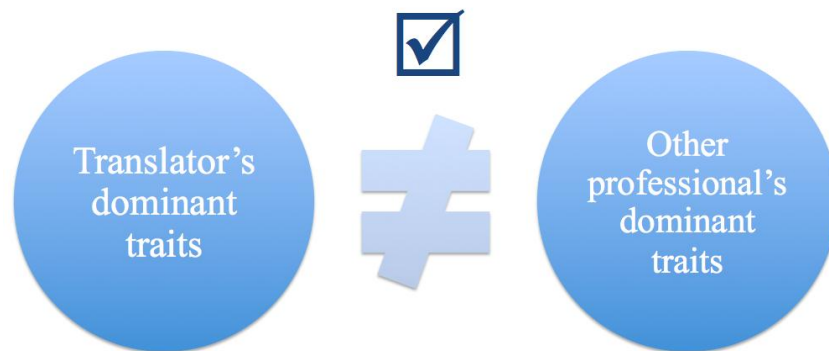
Fig. 26. Hypothesis 1 corroborated: Illustration of results.

In particular, translators were found to be considerably more Conscientious than the other individuals regardless of their level of expertise. The dominance of the lower-level component of Perfectionism belonging to the Conscientiousness trait was then repeated in further comparisons of practising translators and practising non-translators. However, neither the trait (Conscientiousness) nor the facet (Perfectionism) was found dominant among translation students.

According to the description of the facet provided by the authors of the HEXA-CO Personality Inventory,[73] Perfectionism is responsible for people being meticulous in handling details at work, i.e. high scorers tend to be particularly concerned with checking for mistakes and constantly improving their performance. The description of the facet may be related to the participants' answers to the self-report questionnaire, where the majority of the practising translators admitted to being most involved in the decision-making and problem-solving processes in translation. As discussed in chapter 2, one of the key definitions of the translation process assumed that it is a *decision-making* and *problem-solving* activity (Levý [1967] 2000; Wilss 1996) characterised by constant *self-monitoring* (Hönig 1995; Kiraly 1995), and *quality control* (Gouadec 2007; Mossop 2014).

In personality psychology, the trait of Conscientiousness is believed to be associated with task-related endeavours (Ashton and Lee 2007). Moreover, the domain was found to be the strongest predictor of academic and occupational attainment among all

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[73] Available at www.hexaco.org (date of access: 4 Dec. 2017).

other traits (Ackerman and Heggestad 1997; Shiner et al. 2003; Noftle and Robins 2007), especially in the areas where high self-organisation and goal-setting are appreciated. Another important feature of the trait is its relationship with executive control activated in the prefrontal cortex in the brain (Nigg 2000). The elements of executive control such as working memory, problem-solving and decision-making (Hernandez 2015) are particularly relevant in the process of translation, and their level of activation may therefore be higher in translators than the other professionals studied in the present project. Although Diamond et al. (2014) have addressed the issue of cognitive control in the bilingual brain in an exploratory study, it remains to be investigated in more detail in future empirical studies combining neuroscience and Translation Process Research.

The fact that the trait of Conscientiousness was not found to be dominant among translation trainees may probably be accounted for by the developmental changes in the students' personality characteristics ("intrinsic maturational position", Costa and McCrae 2000). Furthermore, Conscientiousness levels are believed to be increasing across the lifespan (Roberts et al. 2006), which may possibly mean that Conscientiousness among translation students would increase with age and professional practice. Importantly, it was the facet of Perfectionism, but not the Conscientiousness domain on the whole, which was found dominant among practising translators. This suggests that both translators and non-translators may have already developed their Conscientiousness levels to a certain degree, but the facet of Perfectionism may be particularly relevant in translation practice. This finding may indicate that translation practice may have an effect on the translators' personalities, and support the "life course position" in personality development (Roberts et al. 2006). The assumption needs to be tested in longitudinal studies into the non-cognitive personality characteristics of translators.

Apart from the facet of Perfectionism within the Conscientiousness domain, the trait of Openness to Experience and the facets of Aesthetic Appreciation and Inquisitiveness were found to be characteristic of practising translators. It has been reported that Openness to Experience may have predictive power in areas that require creativity (Ackerman and Heggestad 1997; Ashton et al 2000; Barrick et al 2003), verbal aptitude (Notfle and Robins 2007), as well as the ability to work under unstable working conditions (Rothman and Coetzer 2003). All of the above job characteristics can be associated with the translation profession. In addition, the trait of Openness to Experience correlates with the function of Intuition in the Myers-Briggs Type Indicator (McCrae and

Costa 1989), which supports the results obtained by Hubscher Davidson (2009) who observed that Intuitive types outperformed the Sensing types in the translation task.

As regards the issue of personality development, the levels of Openness to Experience are believed to increase in the period from adolescence to adulthood and then remain stable up until a decrease in the mid fifties (Roberts et al. 2006). This may explain the absence of Openness as a dominant trait among translation students, who might be still at the stage of developing it, and account for the dominance of the trait among the practising translators. In view of the intrinsic maturational position, both practising translators and non-translators may have already developed a certain level of the trait, but among practising translators it remained central. As in the case of the facet of Perfectionism, the high level of Openness to Experience among practising translators may indicate that the translators' professional practice may have an impact on their personalities in line with the "corresponsive principle" of personality development (Caspi et al. 2005). In other words, certain traits may be "activated" in response to the situational factors (Tett and Burnett 2003).

The idea of translators being focused on eliminating mistakes and improving their work, which involves being critical and self-evaluative, can be associated with the fact that the practising translators were found to be less Agreeable than the other professionals. In particular, translators scored significantly lower on the facets of Gentleness and Flexibility. By definition, the two facets as well as the Agreeableness domain on the whole are primarily connected with the people's ability to cooperate with others. Individuals who score low on the Gentleness facet tend to be more critical in their evaluations of others, and low scorers on the Flexibility facet have a tendency to be more determined and argumentative. Moreover, Agreeableness trait in personality psychology research was found to have predictive power in occupations that involve extensive contact with others (Salgado 1997; Judge et al. 1999), which is definitely not the case in translation practice today, when the exchanges with clients are done predominantly online. Importantly, Roberts et al. (2006) found that people generally become more Agreeable with age, so the fact that the translators scored lower on Agreeableness may indeed point to the interaction between intrinsic personality dispositions and external situational variables. Thus, it is possible to surmise that the translators become more critical towards others, but also probably towards themselves, which is what the translation profession often entails. The element of self-doubt and self-criticism was also re-

vealed in the way translators (both students and practising translators) self-assessed their performance in the tasks, since a decisive majority in both groups stated that they were not entirely satisfied with their translations.

Looking into the "person-organisation fit" assumption, the trait of Emotionality was found particularly high in the group of translation trainees in comparison with non-translation students. In particular, translation trainees scored significantly higher on the facets of Fearfulness and Anxiety within the Emotionality domain. According to the descriptions of the facets, high Anxiety levels refer to one's ability to notice problems, even the minor ones, and high Fearfulness levels point to one's inclination to avoid harm and stressful situations in interpersonal contacts. Another characteristic non-cognitive feature of translation students was the facet of Patience within the Agreeableness domain. Highly Patient individuals are believed to be able to inhibit negative emotions and anger and remain calm in stressful situations. It may be inferred, therefore, that it is partially due to being initially predisposed to problem solving, self-control and emotion regulation that students are attracted to translation profession, where they solve problems and avoid potentially stressful contact with others. In the course of their translation practice, translators also activate certain "defence mechanisms" (Barboni 1999) that seem to be rooted in their personalities.

This significance of the above trait and facets was also supported by the students' answers about the reasons for their choice to become translators. Most of the students wanted to improve their English skills and expand their horizons, but they also expressed their preference for working at home and avoiding cooperation with people. The mind-broadening element of translation was again reflected in the students' answers concerning their wish to learn new words in the process of translation and improve their work during end revision.

As regards the dominance of Emotionality in the group of translation students, it should be noted that those students who produced "high" and "good" quality translations of both texts also had the highest scores on the scale of the Emotionality trait and the facets of Fearfulness, Anxiety and Patience. The finding needs to be related to the results of a recent study by Cifuentez-Férez and Fenollar-Cortés (2017) into the translator's emotion regulation and expressivity. It was reported that those students who were able to suppress their emotions (potentially high on Fearfulness and Agreeableness) performed better than those who did not. Psychological research shows that Emotionali-

ty may predict successful performance in individuals with high cognitive abilities scores (Perkins and Corr 2005). Further research is needed into the influence of emotions and affective states on the outcomes of the students' translation training. Whether there is a relationship between the dominance of the Emotionality trait and the text type among translation students is another area that requires further investigation.

All in all, the verification of Hypothesis 1 shows that the individuals who are initially predisposed to emotion regulation and control may be inclined to choose translation as their major. They later develop into highly conscientious professionals who are also open to new experience, as well as to self-criticism and determination to succeed. Such a psychological profile of a translator is similar to the one proposed by Henderson (1987: 123), who was the first to notice that translators are "emotionally stable", "conscientious", "self-sufficient" and "controlled", but did not manage to prove that these are also the psychological features that may differentiate translators from the representatives of the other professions.

In Hypotheses 2-4, the role of the decision-related psychological functions of Thinking and Feeling was verified in the process of self-revision as a decisional activity, which may be potentially influenced by the translator's "individual psychology" (Mossop 2007: 19). In the mixed group composed of translation students and practising translators, there were 30 Feeling types and 17 Thinking types participants. The prevalence of the Feeling function-dominated translators supports the assumption of Schweda-Nicholson (2005), who surmised that translators are more likely to reconsider different translation variants with their Feeling function as opposed to interpreters who need to rely on analytical thinking and produce the translations as quick as possible.

The role of the preferred psychological function (Thinking or Feeling) was found to be particularly prominent at the end revision stage for all participants. As hypothesised, the translators with the dominant Thinking function spent considerably more time on the end revision stage, introduced more deletions and made more meaning-related changes at this stage of their translation process (Figure 27).
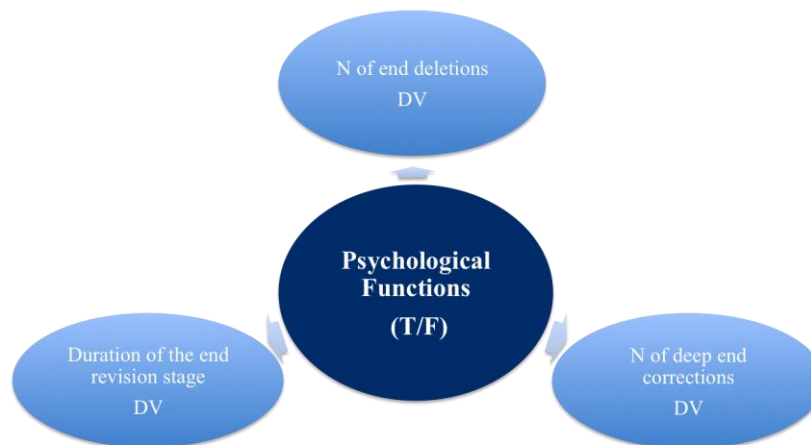
Fig. 27. Illustration of Hypotheses 2-4: partially corroborated.

The individual variations at the end revision stage have been many times reported in translation process studies (e.g. Jakobsen 2003; Englund Dimitrova 2005; Carl et al. 2011; Dragsted 2011). As the results of the present study have shown, the variations may be related to the translator's dominant psychological functions connected with decision-making. It should also be noted that the stage of end revision allows translators to concentrate on improving their translations and making final decisions in line with their individual "appropriateness thresholds" (Shih 2015). According to Hönig (1995), this is also the stage where the "macrostrategy" has most probably been already developed for a given translation task, and the translator is ready to complete the translation in line with her/his own quality standards.

The results of the present study indicate that the different "translation production styles" (Mossop 2014) or "cognitive styles" (Asadi and Séguinot 2005) displayed during end revision may be based on the translator's preferred decision-related psychological function. For instance, the Thinking type translator may be more likely to show the behavioural pattern of a "Steamroller" (Chandler 1993), an "anticipatory planner" (Krings [1995] 2001), a "prospective thinker" (Asadi and Séguinot 2005) and "end reviser" (Carl et al. 2011). The Feeling type translator may be associated with an "Oil-Painter" (Chandler 1993), a "correctional planner" (Krings [1995] 2001), an "on-screen translator" (Asadi and Séguinot 2005) and "online revisor" (Carl et al. 2011).

The effect of expertise level (or *experimental group membership*) was only found to be statistically significant for the variable of the *number of end deletions* with practising translators deleting more than translation students at the end revision stage in

both texts. This may probably support Gerloff's (1988) "translation-does-not-get-easier" assumption and Lörscher's (1996) "ex-post-realisation of translation problems" hypothesis, which may be revealed not so much in the duration and the type of corrections made during end revision, but in the number of deletions introduced.

The effect of the text type was found for the variable of the *number of end deletions* in the mixed group and in the group of translation trainees, and the *number of meaning-related ("deep") corrections* introduced while drafting and during end revision in the same groups. In each of these cases, the participants invested more time, made more deletions and corrections in the expressive text. This might indicate that the text appeared to be more challenging and required more effort from the participants. This finding may be referred to Buchweitz and Alves' (2006) study, where higher self-revision rates were explained by means of the translator's cognitive adaptation to the task difficulty. The absence of the effect in the group of practising translators may be either due to a small sample size, or because the translators were able to adjust their processing modes more effectively than students (cf. Dragsted 2005).

When the group of practising translators was analysed separately, the variable of the *duration of the end revision stage* was not affected by the preferred psychological function. The absence of the effect, which was observed in the mixed group of novices and practising translators, and in the group of translation trainees as well, may have several explanations. Firstly, the sample of practising translators may have been too small for the inferential statistics tests to reach significance levels. Secondly, some translators may have incorporated their revision stage into the drafting process, which has been reported in previous studies (cf. the category of "constant revisers" Carl et al. 2011). In order to remove the doubts, though, it would be advisable to repeat the experiment with a larger sample of practising translators.

In line with the expectations, the Feeling type translators introduced more deletions at the drafting stage than the Thinking type translators in the group comprising novices and practising translators, and in the group of translation trainees analysed separately. The absence of the effect in the group of practising translators may have been as well due to the reasons discussed above. The issue remains to be clarified in further studies. A similar observation refers to the variable of *surface corrections* introduced at the end revision stage, where the effect was absent in the group of practising translators.

Hypothesis 5 aimed to tap into the participants' psychological profiles in relation to the quality of their translation performance. The results of the statistical tests have shown that there is no evidence to suggest that the translator's preference for one of the decision-related functions (Thinking or Feeling) is associated with higher translation quality. This may be accounted for by the fact that the preferred decision-making function may better predict the behavioural patterns identifiable in the process of translation (Hypotheses 2-4), especially at the end revision stage, but it does not necessarily influence translation quality. The variable that was found to have an effect on the quality of translations is expertise level, i.e. practising translators generally outperformed students in both texts. This supports the idea that sustained quality of performance is one of the elements of expertise in translation (Muñoz Martín 2014b). The qualitative analysis of the psychological profiles of the translation students who produced "high" and "good" quality translations of both texts has shown that these participants also scored higher on the scales of the trainees' dominant personality traits revealed as a result of testing Hypothesis 1 (Emotionality trait, the facets Fearfulness, Patience and Anxiety). It has also been identified that the majority of the translation trainees and practising translators who successfully translated the expressive text had Feeling as their dominant decision-related function. A similar observation was made by Furnham and Medhurst (1995), who found that it was the Feeling rather than the Thinking function that was characteristic of the psychology students who performed well in their studies. The practising translators who produced "high" and "good" quality translations did not score higher on the scales of the translator's dominant personality traits than the rest of the group. This may probably indicate that their personality traits have already been "activated" (Tett and Burnett 2003) as a result of exposure to the translation profession, and other factors such as domain knowledge, experience, etc., contribute more to translation quality.

Based on the above discussion of results, it is possible to conclude that translators do possess a certain set of personality traits that attract them to the profession, and differentiate translators from the other professionals. Due to the interplay of natural maturational factors and external situational variables, the personalities of novices may potentially adjust to the requirements of the translation profession. The role of the translator's psychological functions of Thinking and Feeling was found to be significant at the end revision stage, whereby certain distinct self-revision modes were identifiable depending on the preferred decision-related function. Different self-revision modes,

however, do not lead to different quality of the translation products. As regards the translator's predisposition to translate certain text types, it is only possible to suggest on the basis of the results of the study that the Feeling type participants dealt better with rendering the artistic content of the expressive text type.

Limitations of the study and further research avenues

The section will point to the limitations of the present study and future areas of research. Due to its interdisciplinary character, the study would have greatly benefited from a close cooperation with the Faculty of Psychology. First and foremost, it would have granted access to a wider range of psychometric tests that are only accessible to qualified psychologists. For instance, it would have ensured that the official version of the Myers-Briggs Type Indicator was used in the study. Another advantage of the joint effort would have been a more comprehensive interpretation of results of the psychometric tests in their relation to the task-related behaviour and its outcomes. In addition, such cooperation would have possibly resulted in a more detailed analysis of the psychological aspects of the translator's personality that might have been overlooked. The research would have also benefited from the use of more sophisticated statistical models, which would help to identify the predictive power of the personality characteristics considered in the study. All in all, further research into the issue of the translator's personality needs to be conducted in a joint interdisciplinary project with a team of researchers specialising in translation, psycholinguistics and psychology.

As regards the participants of the study, more rigid inclusion criteria for practising translators would have been necessary. It would be important to ensure that the translators who take part in the experiment do not specialise only in one particular area, and that translation is their main source of income. This would have contributed to the homogeneity of the group. In addition, the results of statistical testing could have been more powerful had the sample sizes (translation students and practising translators) been balanced. However, satisfying such criteria would have been difficult under the time and financial constraints of the PhD project.

In order to explore the issue of whether literary and non-literary translators differ in terms of their dominant personality traits, which was a secondary aim of the present

thesis, it would have been important to recruit a group of literary translators as another population sample. The absence of this group in the study makes it hard to draw any conclusions regarding the potential relationship between personality and one's predisposition to translate certain text types. The findings of the present study, however, make it possible to speculate that the students with the dominant Emotionality trait are probably more likely to efficiently deal with the texts that require creative approach in their further professional practice.

The analyses would have probably been more effective had the texts chosen for the experiment been shorter, c. 100-150 words. This would have also saved the researcher some time for a warm-up session in Translog that would ensure that all participants get used to the interface of the programme, as well as the keyboard and the mouse in the laboratory. This would have possibly increased the ecological validity of the study.

Furthermore, the analysis of the translation process data would have probably benefited from the focus on the rich points of each text. This would allow the researcher to trace the number and types of corrections, as well as their distribution across the stages of the translation process in a more controlled way. In the context of future research into the translator's process of self-revision, it would be also interesting to evaluate the types of corrections in their relation to the quality of the final translation products. In other words, it seems to be worthwhile not only to classify revisions according to the linguistic level, but also evaluate their role in the final quality of translations. In a global sense, such type of analysis would allow correlating two types of quality identified by Jääskeläinen (2016), *translation process quality* and *translation product quality*.

Finally, it would have been beneficial to relate the questions in the self-report questionnaire more closely to each translation task. In particular, asking the participants to comment on the specific problems they faced while translating two different texts would allow the researcher to better understand the nature of individual decisions made by translation students and practising translators. To achieve this, replaying the Translog files and asking participants to comment on their decisions would have been appropriate. This would have been possible, however, had the source texts been shorter.

The consideration of the above mentioned limitations of the present study in future research may contribute to the quality of the findings and facilitate their interpretation. It should also be mentioned that the results of the present study point to the signifi-

cant impact of the preferred psychological functions on the process of *end revision*, which is closely related to the completion of the translation task. Thus, it might be informative to tap into the role of executive functions as goal-directed cognitive processes (e.g. working memory, attentional control, cognitive flexibility) in the translator's approach to self-revision.[74] Research into the executive functions of translation students and practising translators might also contribute to the understanding of the development of the translator's self-concept that includes the necessary competences and leads to expertise in translation.

Didactic implications

The findings of the present study may be useful for the teachers of translation, who might want to pay attention to the emotional side of their students' personalities and make them aware of the role that personality plays in their professional practice. Furthermore, translation teachers may feel inspired to consult the students about the personality-related reasons for the differences in their self-revision patterns, and motivate them to try out different revision practices in order to choose those that they would feel most comfortable with in their further translation practice.

Translation trainees may find the information about the role that their personality characteristics plays in their professional practice particularly intriguing, as it could increase their self-awareness and help them build their working self-concept. Moreover, knowledge about the potential interaction between their personalities and profession may help translation trainees better understand the requirements of the field.

Taking a more global perspective, the findings of the study point to the need to introduce the course of *Translation Psychology* to translation training curriculum. The course may not only make students aware of the role of the complex cognitive processing involved in translation, but also motivate them to conduct experiments and find out more about the "black box" of the translator's mind. Moreover, the course of *Trans-*

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[74] *Working memory* helps to activate the relevant information in the long-term memory store that is related to previous knowledge and expertise; *attentional control* is responsible for monitoring the selection and evaluation of the relevant information that is important for the successful completion of the task (Kormos 2015: 372-373); and *cognitive flexibility* is the ability to switch between different cognitive activities (Hernandez 2015: 553).

lation Psychology may bridge the gap between translation theory and practice, which is in fact one of the main tasks of the process-oriented approach to translation.

Concluding remarks

The thesis aimed to contribute to the understanding of the role of the translator's psychological characteristics in the translation process and product, which makes it an important contribution to Holmes's ([1972] 2000) "psycho-translation studies", and Bell's (1991) "theory of translation and translating". As an interdisciplinary endeavour combining Translation Process Research and personality psychology with multi-method approaches, it may be placed at the fourth phase of TPR development. With regard to Muñoz Martín's (2014b) research-driven taxonomy of translation behaviours, the thesis investigated the relationship between the cognitive process of *decision-making* reflected in *self-revision* as a sub-task of written translation, and the translator's *preferred psychological functions*. The translators' psychological profiles were then analysed in their relation to the quality of the translators' performance.

Chapter 1 presented an overview of the personality approaches in psychology, paying particular attention to the trait and typological approaches due to their relevance to the present study. Chapter 1 also reviewed existing research into the psychological aspects of the translator's personality in Translation Studies. Chapter 2 looked into the potential role of the translator's personality in the cognitive processes involved in translation, as well as in the development of translation competence and expertise. It also reported on the methodological advancements in TPR that have lead to some of the most important findings related to the "black box" of the translator's mind. Chapter 3 tapped into the potential role of the translator's personality in the process of self-revision as a decisional activity in the translation process that also performs the quality-assuring function. Chapter 4 reported on an experimental study designed with a view to investigate the relationship between the translator's personality, translation process and

product. In particular, the study aimed to identify the dominant personality traits of translation students and practising translators. It also sought to tap into the role of the translator's preferred psychological function on the selected aspects of the self-revision process. Finally, the psychological profiles of the most successful translators were analysed.

The study used the methods of psychometric testing (HEXACO and MBTI), key logging (*Translog-II*, Jakobsen and Schou 1999), and self-report. In addition, translation quality was evaluated on the basis of the specifically designed assessment sheets adapted from Williams (2009). The participants of the study were 30 translation students and 17 practising translators, whose task consisted in translating two extracts of different text types in *Translog-II* (expressive and informative, Reiss [1971] 2000). Additionally, 94 representatives of other professions took part in the experiment and completed the HEXACO personality test. This was necessary so as to identify the dominant personality traits of the translation students and practising translators.

The findings of the study revealed that the characteristic feature of the psychological profiles of translation students is the dominance of Emotionality trait, which might be also relevant to the quality of their performance. The practising translators were found to be more Open to Experience and less Agreeable than the representatives of the other professions who participated in the study, which might indicate that translation practice as an external situational factor may also contribute to the shaping of the translators' personalities as they develop their translation competence and expertise. Regardless of their expertise level, all translators were more Conscientious than the other individuals with a particular dominance of the facet of Perfectionism. Notably, the facet was also found dominant in the group of translation trainees, which might point to its importance at the early stages of translation competence development.

As regards the dynamic characteristics of both personality and translation, the role of the preferred decision-related psychological function (Thinking or Feeling) was found to be particularly important at the end revision stage, whereby consistent behavioural self-revision patterns were identified. In particular, the analytical Thinking types spent more time on the end revision stage, introduced more deletions and more meaning-related changes than the Feeling types. Different process characteristics, however, do not necessarily lead to different translation quality, which is a fortunate finding

showing that many other experience- and field-related variables may account for the quality of the final translation outputs.

To sum up, the present study does not only point to some of the intriguing relationships between the non-cognitive and cognitive personality characteristics and translation, but also lends support to the concept of "reciprocal determinism" of personality and situational factors in psychology (Bandura 1999), thus making Translation Studies "[n]ot only a borrower, but also a lender" (O'Brien 2013: 14). The findings of the study may be particularly informative for translation teachers, who might wish to raise the students' awareness of the role of the translator's personality in their future professional practice. Further research should be carried out in order to tap into the relationship between the translator's executive functions and their translation performance, as well as between the quality of corrections introduced by the translators in the translation process and the final quality of their translations.

Streszczenie

W rozprawie doktorskiej pojęcie autokorekty jest zdefiniowane jako etap decyzyjny w procesie tłumaczenia oraz jako „procedura zapewniania jakości" (Mossop 2014) powstającego produktu − tłumaczenia. Takie zintegrowane podejście do autokorekty pozwala na połączenie ilościowych danych z procesu tłumaczenia oraz jakościowych danych z ocenionego produktu tłumaczenia. Podobnie, pojęcie osobowości jest postrzegane w kontekście takich jego składników jak cechy osobowości, uważane za charakterystyki ilościowe, oraz funkcje psychologiczne, przedstawiające opis jakościowy. Łącząc psychologię osobowości i przekładoznawstwo, projekt doktorski wpisuje się w ramy najnowszego interdyscyplinarnego nurtu „badań dotyczących tłumacza" (ang. "Translator Studies") (Chesterman 2009), czy też „translatologii kognitywnej" (Muñoz Martín 2010), gdzie w centrum uwagi znajduję się tłumacz wraz z jej/jego cechami psychologicznymi i kognitywnymi.

Cechy procesu autokorekty wykonywanej przez tłumacza, takie jak: czas poświęcony na korektę końcową, ilość i typ wprowadzonych poprawek, często były uznawane jako składniki „indywidualnego stylu pracy" tłumacza (Jakobsen 2003; Carl i in. 2011; Hansen 2013), lub jego „profilu" (Dragsted and Carl 2012). Mossop (2007: 19) zasugerował, że różnice indywidualne mogą zależeć od „indywidualnej psychologii" tłumacza. Hansen (2013) zauważyła, że indywidualne style autokorekty ujawniają się już na etapie studiów tłumaczeniowych i utrzymują się w późniejszej pracy zawodowej. Niejasne pozostawało jednak, (1) czy i jak cechy psychologiczne związane z procesem decyzyjnym (Jung [1921] 1971) wpływają na preferencje tłumacza co do wyboru strategii autokorekty, oraz (2) czy pewne „style pracy" korelują z jakością tłumaczenia.

Dane dotyczące procesu tłumaczenia zostały zebrane za pomocą programu Translog (Jakobsen i Schou 1999), który zapisuje proces powstawania tekstu na komputerze. Dane dotyczące osobowości zebrano za pomocą odpowiednich testów psychometrycznych mierzących cechy osobowości (HEXACO) oraz funkcje psychologiczne (MBTI). Opisane w rozprawie badanie empiryczne ujawniło, że preferowana funkcja psychologiczna związana z podejmowaniem decyzji odgrywa role w procesie autokorekty, szczególnie na jej końcowym etapie, ale nie koreluje z jakością tłumaczenia. Na

przykład, tłumacze z preferowaną funkcja decyzyjną „Odczuwanie" (ang. "Feeling") spędzali mniej czasu na etapie końcowej autokorekty (ang. "end revision"), wprowadzali mniej zmian na tym etapie oraz mniej poprawek znaczeniowych niż tłumacze z dominującą funkcją „Myślenie" (ang. "Thinking"). Tak więc wydaje się, że „styl pracy" częściowo zależy of preferowanych przez tłumacza funkcji decyzyjnych. W odniesieniu do cech osobowości ujawniono, że tłumacze są na ogół bardziej Sumienni (ang. "Conscientious") i Otwarci na Doświadczenie (ang. "Open to Experience") oraz mniej Ugodowi (ang. "Agreeable") niż przedstawicieli innych zawodów, którzy uczestniczyli w badaniu. Ważna obserwacja dotyczy tego, że studenci przekładu mieli wyższe wyniki w skali Emocjonalności (ang. "Emotionality") niż ich rówieśnicy w danej próbie, co wskazuje na potrzebę dalszego badania roli czynników afektywnych w szkoleniu tłumaczy. Nie wykazano korelacji pomiędzy dominującymi cechami osobowości i jakością tłumaczenia, co oznacza, że inne czynniki, takie jak poziom doświadczenia w tłumaczeniu, wiedza o danej dziedzinie oraz doświadczenie w tłumaczeniu podobnych tekstów bardziej przyczyniają się do jakości tłumaczenia niż cechy osobowości. Podsumowując, wyniki badania mogą być szczególnie przydatne dla nauczycieli tłumaczenia, ponieważ mogą pomóc im uświadomić rolę, jaką poszczególne cechy osobowości odgrywają w wyborze zawodu tłumacza przez studentów, oraz w tym, jak studenci rozwijają swoje podejście do aspektów decyzyjnych w procesie autokorekty tłumaczenia.

Abstract

In the dissertation, self-revision is viewed as both the decision-related stage of the *translation process* and the "quality-assurance procedure" (Mossop 2014) of the emerging *translation product*. Such a view of self-revision allows combining the *quantitative* translation process data and *qualitative* translation product assessment data using *multi-method approaches*. Similarly, the concept of personality is referred to as a set of its *quantitative* characteristics, *personality traits*, and *qualitative* characteristics, *personality types*. Bringing together personality psychology and translation, the study fits into the recent *interdisciplinary* paradigm of "Translator Studies" (Chesterman 2009), or "cognitive translatology" (Muñoz Martín 2010), whereby the *translator* with her/his psychological and cognitive features appears at the forefront.

The process characteristics of the translator's self-revision behaviour, such as the duration of the final revision and the number and the type of corrections introduced, have often been found to form the translators' "individual working styles" (Jakobsen 2003; Carl et al. 2011; Hansen 2013) or "profiles" (Dragsted and Carl 2012). Mossop (2007: 19) suggested that these most probably depend on the translators' "individual psychology", and Hansen (2013) revealed that the individual revision styles are already present during translation training and survive later in the translator's professional practice. It remains unclear, though, (1) whether and how the decision-related *psychological functions* (Jung [1921] 1971) influence the translators' preferences to display certain self-revision behaviours and (2) whether the translator's dominant *psychological functions* and *personality traits* contribute to the quality of translation products.

The translation process data were collected with Translog, the key-logging programme (Jakobsen and Schou 1999), and the personality-related data were gathered with the help of the relevant psychometric tests measuring personality traits (HEXACO) and psychological functions (MBTI). The present empirical study revealed that the preferred decision-related psychological function does play a role in the process of self-revision, especially at the end revision stage, but does not correlate with translation quality. In particular, the Feeling type personalities spent less time on the end revision stage, introduced fewer changes at this stage and made fewer meaning-related corrections than the translators with the dominant Thinking function. Thus, the "working styles" seem to be influenced by the translator's preferred decision-making functions.

As regards the personality traits, it has been found that translators are generally more Conscientious and Open to Experience, but less Agreeable than the representatives of other professions who participated in the study. An important observation concerned the fact that translation students scored higher on the scale of Emotionality than their peers in the sample, which points to the need to further explore the role of affective factors in translation training. No relationship was found between the translator's dominant personality traits and translation quality, which means that the other factors such as the level of expertise in translation, domain knowledge and task-related experience better contribute to the quality of translation than the translator's personality characteristics. All in all, the results of the study may be particularly informative for translation teachers, who might become aware of the role that individual personality characteristics play in the trainees' choice of the profession, and in their approach to the decisional aspects of the translation process reflected in self-revision.

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Appendix A

Personality tests used in the thesis:

(1)   HEXACO Personality Inventory, 60-Item Version (in Polish), developed by Ashton and Lee (2009), http://hexaco.org/hexaco-inventory (date of access: 24 Jan. 2018).

(2)   Myers-Briggs Type Indicator (Jung typology Test adapted form the original Myers-Briggs Type Indicator, in English), http://www.humanmetrics.com/personality (date of access 24 Jan. 2018).

Appendix B

Expressive text

It was a representative Riviera party. There was an English Lord and his Lady, long and lean both of them, who were prepared to dine with anyone who would give them a free meal. They were certain to be as tight as drums before midnight. There was a gaunt Scotch woman, with a face like a Peruvian mask that has been battered by the storms of ten centuries, and her English husband. Though a broker by profession, he was bluff, military, and hearty. He gave you an impression of such integrity that you were almost more sorry for him than for yourself when the good thing he had put you on to as a special favour turned out to be a dud. There was an Italian countess who was neither Italian nor a countess, but played a beautiful game of bridge, and there was a Russian prince who was ready to make Mrs Barrett a princess and in the meantime sold champagne, motor–cars, and Old Masters on commission. A dance was in progress, and Mrs Barrett, waiting for it to end, surveyed with a look which her short upper lip made scornful the serried throng on the dance floor. It was a gala night and the dining tables were crowded together. Beyond the terrace the sea was calm and silent. The music stopped and the head waiter, affably smiling, came up to guide her to her table. She swept down the steps with majestic gait.

Extract from W. S. Maugham's (1988) short story *Gigolo and Gigolette*.

Story background: two cabaret entertainers gathered a high-class audience described in the extract. Stella, a stuntwoman and a show-star, is going to dive into a shallow tank filled with blazing petrol.

Informative text

Article 3

(1)   The Union's aim is to promote peace, its values and the well-being of its peoples.

(2)   The Union shall offer its citizens an area of freedom, security and justice without internal frontiers, in which the free movement of persons is ensured in conjunction with appropriate measures with respect to external border controls, asylum, immigration and the prevention and combating of crime.

(3)   The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment.

(4)   It shall promote scientific and technological advance. It shall combat social exclusion and discrimination, and shall promote social justice and protection, equality between women and men, solidarity between generations and protection of the rights of the child.

It shall promote economic, social and territorial cohesion, and solidarity among Member States.

It shall respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced.

(5)   In its relations with the wider world, the Union shall uphold and promote its values and interests and contribute to the protection of its citizens. It shall contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, free and fair trade, eradication of poverty and the protection of human rights, in particular the rights of the child, as well as to the strict observance and the development of international law, including respect for the principles of the United Nations Charter. Extract from: The Treaty on European Union, Article 3.[75]

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[75]   http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0013:0045:en:PDF   (date   of access: 24 Jan. 2018).

Appendix C

Experiment instructions:

BASIC GUIDELINES

(1)   Please do your translations in Translog, the key-logging software used to trace your translation process. Listen carefully to the instructor and follow her guidelines. Should any questions/hesitations regarding the programme arise, feel free to address her or other lab workers. Do not forget to save your log file when you finish the tasks.

(2)   Please do the translation of full extracts to ensure validity of your results.

(3)   If there is anything you need, ask the instructor or other lab workers, but do not disturb your fellow-participants.

SPECIFIC GUIDELINES – TRANSLOG

(1)   To start the experiment, find the *Translog-II User* icon on the desktop and open it.

(2)   Click *File* and choose *PerTrans_text1.project* file and then *Open* (*Otwórz*).

(3)   Go to *Start logging* option in the menu which appeared on the screen. The top-to-bottom layout will appear with the source text at the top and the space for your translation at the bottom.

(4)   Once you are ready, start translating.

(5) When you finish, click *Stop logging* button in the upper left corner orf the screen.

(6) Save your log file to the desktop and use the following sample title: *Code name_text1*. The code names are on yellow stickers next to the keyboard.

(7) Follow the same steps with the second text (project name: *Per-Trans_text2.project*)

(8) Save the second log file to the desktop and use the following sample title: *Code name_text2*.

GOOD LUCK!

SPECIFIC GUIDELINES
RETROSPECTIVE QUESTIONNAIRE AND PSYCHOMETRIC TESTS

(1) Right after finishing your translation, inform the instructor about it.

(2) You will receive the paper version of the personality test in Polish. Please follow the instructions given.

(3) Put your test into the folder on your desk.

(4) Create a Microsoft Office Document and sign it with your *Code name*. Save it to the desktop.

(5) Then go to *www.humanmetrics.com* and choose *Jung Typology Test*.

(6) Answer the questions and click *Score it*.

(7) Under your results there will be an option *permanent link to bookmark or share*, click it and then save the link to the document created before.

THANK YOU!
YOU HAVE DONE A GREAT JOB!

Appendix D

Phia thesis on:

PhD thesis on:

The relationship between the psychological aspects of the translator's personality and translation performance

Prepared by

Olha Lehka-Paul, MA

PhD student,

Supervised by

Dr hab. Bogusława Whyatt, Prof. UAM

Department of Psycholinguistic Studies

PARTICIPANT'S FORM (STUDENTS)

RETROSPECTIVE QUESTIONNAIRE AND SELF-REPORT

PARTICIPANT'S CODE: ___

PART 1. BACKGROUND INFORMATION

Instructions: Please answer the following questions about yourself.

(1)   Age: ____

(2)   Duration of translation training:

_____

(3)   Why have you chosen to become a translator?

_____
_____
_____

(4)   How do you feel about your translations? (Are you normally satisfied with your results, do you enjoy the process?)

_____
_____
_____

PART 2. TRANSLATION AND PERSONALITY

Instructions: Read the questions carefully and give answers that best reflect your views. Provide extended answers if possible.

(1)   Is personality important in professional life?

_____
_____
_____

(2)   From the list below, select TWO traits that in your opinion describe translators best: _____

sincerity	fearfulness	social self-esteem	forgivingness
anxiety	social boldness	modesty	gentleness
greed avoidance	dependence	sociability	flexibility
sentimentality	aesthetic appreciation	diligence	fairness
organization	perfectionism	inquisitiveness	liveliness
prudence	patience	creativity	unconventionality

(3)   Which adjective best describes the translation process: "creative", "mechanical",
        "other (=provide your own answer)"?

_____

_____

_____

(4)   Which part of the translation process do you enjoy the most? (e.g. preparatory
        reading, writing, final editing and proofreading, making decisions, solving prob-
        lems, looking up new words, looking for information) Why?

_____

_____

_____

(5)   While making decisions in translation, what do you base them on: your *feel* for
        the right word (feeling of correctness) or a *proof* (e.g. dictionary entry)?

_____

_____

_____

PART 3: TASK-SPECIFIC REPORT

Instructions*:*   Please report on the translation tasks you have just completed.

(1)   Were the texts chosen for the study interesting for you?

- yes, I liked them a lot.
- quite interesting, but not exactly to my taste.
- not interesting at all.
- other:_____

(2)   Which text did you enjoy translating more?

- expressive type (extract from the literary work)
- informative type (extract from the EU Treaty)
- both

(3)   What did you find the most challenging to render in the translation tasks?

- difficult vocabulary
- stylistic features
- other:_____

(4)   Are you satisfied with your translations?

- yes
- 50/50
- no
- other:_____

(5)   Provide more feedback/comments on the experiment if you like.

_____

_____

_____

THANK YOUF FOR YOUR PARTICIPATION!

CONGRATULATIONS! TODAY YOU HAVE DONE A GOOD THING! ☺

Appendix E

PhD thesis on:

The relationship between the psychological aspects of the translator's personality and translation performance

Prepared by

Olha Lehka-Paul, MA

PhD student,

Supervised by

Dr hab. Bogusława Whyatt, Prof. UAM

Department of Psycholinguistic Studies

PARTICIPANT'S FORM (PR. TRANSLATORS)

RETROSPECTIVE QUESTIONNAIRE AND SELF-REPORT

PARTICIPANT'S CODE: ___

PART 1. BACKGROUND INFORMATION

Instructions: Please answer the following questions about yourself.

Age: ____

(1)   For how long have you been practicing translation? (please indicate the number of years in brackets)

1. below 1 year
2. 1-3 years
3. 4-7 years
4. 8-10 years
5. over 10 years

(2)   What is the form of your professional employment in translation?

1. part-time
2. full-time

(3)   What are the text types that you usually translate:

1. literary works
2. functional (medical, economic, law, etc.)
3. advertising
4. publicist
5. other:_____

(4)   What are your working languages? (please indicate language pairs):

1. _____
2. _____
3. _____

PART 2. TRANSLATION AND PERSONALITY

Instructions: Read the questions carefully and give answers that best reflect your views. Provide extended answers if possible.

(1)   Is personality important in professional life?

_____

_____

_____

(2)   From the list below, select TWO traits that in your opinion describe translators
        best: _____

sincerity   fearfulness   social self-esteem forgivingness
anxiety   social boldness   modesty   gentleness
greed avoidance   dependence   sociability   flexibility
sentimentality   aesthetic appreciation diligence   fairness
organization   perfectionism   inquisitiveness   liveliness
prudence   patience   creativity   unconventionality

(3)   Which adjective best describes the translation process: "creative", "mechanical",
        "other (=provide your own answer)"?

        _____
        _____
        _____

(4)   Which part of the translation process do you enjoy the most? (e.g. preparatory
        reading, writing, final editing and proofreading, making decisions, solving prob-
        lems, looking up new words, looking for information) Why?

        _____
        _____
        _____

(5)   While making decisions in translation, what do you base them on: your *feel* for
        the right word (feeling of correctness) or a *proof* (e.g. dictionary entry)?

        _____
        _____
        _____

PART 3: TASK-SPECIFIC REPORT

Instructions: Please report on the translation tasks you have just completed.

(1)   Were the texts chosen for the study interesting for you?

- yes, I liked them a lot.
- quite interesting, but not exactly to my taste.
- not interesting at all.
- other:_____

(2)   Which text did you enjoy translating more?

- expressive type (extract from the literary work)
- informative type (extract from the EU Treaty)
- both

(3)   What did you find the most challenging to render in the translation tasks?

- difficult vocabulary
- stylistic features
- other:_____

(4)   Are you satisfied with your translations?

- yes
- 50/50
- no
- other:_____

(5)   Provide more feedback/comments on the experiment if you like.

_____

_____

_____

THANK YOUF FOR YOUR PARTICIPATION!

CONGRATULATIONS! TODAY YOU HAVE DONE A GOOD THING! ☺

Appendix F

TQA sheet (markers): Expressive text

(adapted from Williams' Weighted ARTRAQ Grid 2009)

PARAMETER	WEIGHT (/10)	QUALITY SCORE (/10)	MINIMUM WEIGHTED SCORE (/100)	FINAL SCORE (/100)
ARGUMENT (PRAG-MATIC EFFECT)	3		30	
VOCABULARY USE	2		16	
GRAMMAR	1		8	
STYLISTIC DEVICES	3		24	
COHERENCE/COHESION	1		8	
TOTAL	10	/10	86	

Assessment scale:

9-10 – excellent

7-8 – good

5-6 – satisfactory

3-4 – fair

1-2 – poor

Explanation of parameters:

Argument (pragmatic effect): Does the translation convey the message encoded by the author?

Vocabulary use: Has the translator made adequate translation choices? Does the lexical inventory correspond to the style of the original?

Grammar: Does the translator adhere to the grammar rules of the target language (Polish)? Are the grammatical structures used efficiently throughout the text?

Stylistic devices: Have the original stylistic devices been successfully rendered? Do they conform with the stylistic norms of the target language?

Coherence / Cohesion: Does the translation read smoothly (in terms of sentence structure, text layout and organisation)?

TQA sheet (markers): Informative text

(adapted from Williams' Weighted ARTRAQ Grid 2009)

PARAMETER	WEIGHT (/10)	QUALITY SCORE (/10)	MINIMUM WEIGHTED SCORE (/100)	FINAL SCORE (/100)
ARGUMENT (PRAGMATIC EFFECT)	3		30	
VOCABULARY USE	2		16	
GRAMMAR	2		16	
STYLE AND REGISTER	2		16	
COHERENCE/COHESION	1		8	
TOTAL	10	/10	86	

Assessment scale:

9-10 – excellent

7-8 – good

5-6 – satisfactory

3-4 – fair

1-2 – poor

Explanation of parameters:

Argument (pragmatic effect): Does the translation convey the original message?

Vocabulary use: Has the translator made adequate translation choices? Does the lexical inventory correspond to the style of the original?

Grammar: Does the translator adhere to the grammar rules of the target language (Polish)? Are the lexical structures used efficiently throughout the text?

Style and register: Do the style and register of the target text conform with the norms of the administrative style in the target language (Polish)?

Coherence / Cohesion: Does the translation read smoothly (in terms of sentence structure, text layout and organisation)?

Appendix G

Ocena jakości tłumaczenia: Tekst artystyczny

O tekście: fragment opowiadania *Gigolo and Gigolette* Williama Somerseta Maughama (1988r.).

KRYTERIA	WARTOŚĆ(/10)	JAKOŚĆ (/10)	WYNIK MIN. (/100)	WYNIK WŁAŚCIWY (/100)
OGÓLNE WRAŻENIE	3		30	
SŁOWNICTWO	2		16	
POPRAWNOŚĆ GRAMATYCZNA	1		8	
STYLISTYKA TEKSTU	3		24	
SPÓJNOŚĆ TEKSTU	1		8	
OCENA	10	/10	86	

Skala ocen:

9-10 – bardzo dobry

7-8 – dobry

5-6 – dostateczny

3-4 – dopuszczający

1-2 – niedostateczny

W kolumnie „Jakość" proszę wpisać liczby <u>od 1 do 10</u> (według skali ocen) w zależności od tego, na ile oceniony został każdy kryterium.

Wyjaśnienie kryteriów:

Ogólne wrażenie: Czy tekst czyta się jako tekst artystyczny?

Słownictwo: Czy jednostki leksykalne oraz związki frazeologiczne są dobrane do tego typu tekstu, sprawiają odpowiedzie wrażenie na czytelnika?

Poprawność gramatyczna: Czy poprawnie użyte są fleksje, deklinacje rzeczowników, przymiotników, oraz przyimków według reguł gramatycznych w j. polskim?

Stylistyka tekstu: Czy środki stylistyczne (epitety, porównania, metafory) są dobrane odpowiednio, nie przeczą sobie nawzajem?

Spójność tekstu: Czy tekst ułożony w sposób naturalny, zgodnie z wymaganiami danego stylu?

Ocena jakości tłumaczenia: Tekst urzędowy

O tekście: fragment Traktatu o Unii Europejskiej.

KRYTERIA	WARTOŚĆ(/10)	JAKOŚĆ (/10)	WYNIK MIN. (/100)	WYNIK WŁAŚCIWY (/100)
OGÓLNE WRAŻENIE	3		30	
SŁOWNICTWO	2		16	
POPRAWNOŚĆ GRAMATYCZNA	2		16	
STYL OFICJALNY	2		16	
SPÓJNOŚĆ TEKSTU	1		8	
OCENA	10	/10	86	

Skala ocen:

9-10 – bardzo dobry

7-8 – dobry

5-6 – dostateczny

3-4 – dopuszczający

1-2 – niedostateczny

W kolumnie „Jakość" proszę wpisać liczby <u>od 1 do 10</u> (według skali ocen) w zależności od tego, na ile oceniony został każdy kryterium.

Wyjaśnienie kryteriów:

Ogólne wrażenie: Czy tekst czyta się jako tekst urzędowy?

Słownictwo: Czy użyto odpowiedniej terminologii ekonomicznej, prawniczej, administracyjnej?

Poprawność gramatyczna: Czy korzysta się z odpowiednich form czasowych, fleksji, deklinacji rzeczowników, przymiotników, oraz przyimków według reguł gramatycznych w j. polskim?

Styl oficjalny: Czy użuto charakterystycznych oficjalnych zwrotów zgodnie z wymaganiami stylu?

Spójność tekstu: Czy tekst ułożony w sposób naturalny?