



**Code and inference in metaphor
comprehension:
Interpretation of metaphorical language in
Dante's *Inferno* by Italians and Australians**

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Abstract

This thesis investigates the interpretation of metaphorical expressions in Dante's famous *Inferno* and how this may be motivated through the use of codes and inference. Based on Coseriu's *Integral Linguistics* (Coseriu, 1985), metaphorical expressions can be divided depending on the kind of knowledge that is required to interpret them. The first level is the *universal level* where metaphors can be interpreted based on potentially universal knowledge and bodily experiences. The second is the *historical level* requiring shared codes and cultural knowledge. The last is the *situated level* which requires highly specific knowledge.

Given this distinction, it was hypothesized that Italians and Australians would be able to easily interpret *Inferno* metaphors at the universal level while they would find it harder to interpret metaphors at the situated level. The historical level is where a difference between the two groups should be mostly noticeable: If metaphors at the historical level are indeed based on shared codes and cultural knowledge, their interpretation should be easier for Italians than for Australians. An empirical study was designed to test these predictions. The results suggest the validity of the hypotheses, and the study shows the potential to combine quantitative analysis with qualitative research in cognitive semiotics.

Keywords: cognitive semiotics, cultural knowledge, meaning, metaphor, specific knowledge, universal knowledge

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1. Introduction

This thesis is concerned with the role of codes and inferences in metaphor comprehension and more specifically with how these notions can be applied in the interpretation of some metaphorical expressions in Dante's *Inferno*.

One simple definition, provided by the Cambridge English Dictionary (2008), identifies a metaphor as “an expression that describes a person or an object by referring to something that is considered to have similar characteristics to that person or object”. What is being described is often called *topic* and the “similar” notion that describes it is called the *vehicle* (Richards, 1936). However, not all metaphors can be interpreted the same way and with the same cognitive processes. The association between topic and vehicle and the understanding of a metaphor can depend on very different factors such as knowledge of codes, whether cultural or more specific, and different processes of inference.

Theories of metaphors differ strongly as well. There are theories that emphasize universal processes such as cross-domain mappings (Lakoff & Johnson, 1980, 1999) and relevance-based inference (Sperber & Wilson, 1995) and, on the other hand, there are those which claim that language and culture-specific codes are more important (Eco, 1968, 1976; Zinken, 2007). Based on the *Integral Linguistics* of Coseriu (1985), it is possible to combine such views with the supposition that there are different kinds of metaphors and that their interpretation is based on different types of knowledge and kinds of inferences. This thesis investigates this proposal by using different kinds of metaphorical expressions from Dante's *Inferno*, divided on three levels corresponding to the levels of Coseriu's theory, and poses the following research questions:

- Are some metaphorical expressions more dependent on a shared (cultural) code than others?
- Are metaphors that do not presuppose a cultural code generally easier to interpret than those that require a shared code?
- Are metaphors based on cultural codes easier to interpret for people that are more familiar with them than for people belonging to a different cultural background?

- Are metaphors based on specific knowledge more difficult to interpret than others?

In chapter 2 I provide the relevant theoretical background for these research questions. Chapter 3 describes the methods of the empirical study: a carefully designed questionnaire with metaphors from Dante's *Inferno* was used to look for differences and similarities of interpretation between, on the one hand, Australians and on the other hand, Italians, whose cultural background is more closely related to Dante's. Chapter 4 presents the result of the study and chapter 5 provides a discussion, with relevance for metaphor theory and cognitive semiotics, which is the general field this thesis belongs to. Chapter 6 summarizes and gives some ideas for future research.

2. Theoretical background

This chapter presents a summary discussion of some fundamental theories regarding meaning and interpretation, and their relevance for the topic of metaphor. Starting from general semiotic theories and progressing with metaphors, the main aim is to delineate diverse points of view, some of which emphasize universal properties and inference-making, while others – conventional meanings and codes. These contradicting positions are subsequently combined in the attempt to identify different kinds of metaphors, predominantly relying one of the three levels of Coseriu's matrix (Coseriu, 1985; Zlatev, 2011).

2.1 Signs and meaning-making

Peirce's and Saussure's models of signs and meaning-making are, to this day, the two most widely recognized within semiotics. They differ in many ways, but most relevantly for this thesis, Saussurean semiotics emphasizes conventional signs and codes, while Peircian semiotics stresses the roles of interpretation and inference.

The famous notion of the sign made by Saussure (1916) is that of a binary relation between a meaning or signified, (*signifié*), and a signifier (*signifiant*), which expresses it. The relation between signifier and signified is not direct and self-evident but based on *arbitrariness*. Further, what defines signs is mostly their mutual "differences" or interrelations, and the way different languages use signs to divide a given conceptual field (e.g. color) is likewise arbitrary (cf. Chandler, 2007).

This emphasis on arbitrariness is rather extreme. Saussure himself acknowledges this by stating:

The fundamental principle of the arbitrary nature of the linguistic sign does not prevent us from distinguishing in any language between what is intrinsically arbitrary- that is, unmotivated- and what is only relatively arbitrary. Not all signs are absolutely arbitrary. In some cases, there are factors that allow us to recognize different degrees of arbitrariness, although never to discard the notion entirely. The sign may be motivated to a certain extent. (Saussure, 1916 as quoted in Chandler, 2007:26)

Thus, not all signs are fully arbitrary but, on the contrary, some may be motivated at least to a certain extent, which is recognized by modern proponents of structural

semiotics.¹ Such a point of view is reprised by Umberto Eco (1976) whose model is not systematically different but bases the relation between signifier and signified not on arbitrariness but on *conventionality* (see Caesar, 1999). Conventionality is expressed by codes that are composed of socially shared rules according to which signs have to be interpreted. In Eco's theory, codes are mainly based on cultural conventions and therefore shared within the same cultural background (Nöth, 1990: 211).

Peirce's model (e.g. Peirce, 1931) is fairly different from Saussure's as it emphasizes meaning processes rather than structures. For example, one of his many definitions of the sign (or *representamen*), as elaborated in a letter to Lady Welby dated 1908, is:

... anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its interpretant, that the latter is thereby mediately determined by the former. (Hardwick, 1977:80-81)

Here, Peirce introduces the fundamental role of the interpretant, meaning the effect that the object-representamen relation has on a subject, which is to be understood broadly and does not necessarily imply consciousness. For cognitive semiotics such a definition of the sign is too broad. For example, Sonesson (1989) points out that the sign/representamen is to be completely differentiated from what it stands for (the referent/object) from the point of view of the person who uses it. This position stresses the fundamental role of a conscious subject in the semiotic process. In any case, conscious or not, and sign-based or not, any meaning-making for Peirce involves interpretation and inference.

Peirce's model also emphasizes interpretation by identifying three different modes that connect object and representamen (Chandler, 2007: 29-34): (a) iconicity, (similarity), (b) indexicality (spatio-temporal contiguity), and (c) symbolicity, (conventionality). Somewhat as in the quotation above, but more radically so, all signs are to be viewed as mixtures of these modes. Still, one of the modes may dominate, making a given sign mostly iconic, indexical or symbolic (cf. Jakobson, 1965).

¹ For example, the choice of the color red in the traffic light to indicate "stop" is not entirely arbitrary as red carries a relevant association with danger that makes this sign motivated to a certain extent (Chandler, 2007: 27). It should be noted that Saussure did not have such examples in mind in discussing "relative arbitrariness", but they serve to make the point that conventional signs need not be arbitrary.

These concepts will be reprised in section 2.4 where iconicity will be shown to be the key for metaphors based on similarity while symbolicity will be the key for metaphors based on conventionality.

To conclude, Saussurean semiotics attempts to ground meaning in more or less arbitrary relations between signifiers and signifieds and between signs in a system, corresponding to the notion of a code. On the other hand, Peircean semiotics gives more importance to the interpretant and to the subject and views meaning above all as interpretation. To some extent, Eco's theory seems to constitute a middle ground between the two where the use of codes to associate signifier and signified is also complemented by the idea that a sign is something standing for something else only if someone interprets it in such a manner, thereby giving importance to the conscious participation of the subject (Eco, 1968). Still, by emphasizing the conventionality of all codes, Eco stays with the Saussurean tradition, as also discussed in the next section.

2.2 Codes and inferences in communication

The notion of code in Eco's theory corresponds to "any system of symbols that, by prior agreement between the source and the destination, is used to represent and convey information" (Miller, 1951 as cited in Nöth, 1990: 211) which implies the importance of conventionality and cultural knowledge in the creation of these codes. Jakobson (1971) also supports such a theory of codes by including them in his communication model:

A message sent by its addresser must be adequately perceived by its receiver. Any message is encoded by its sender and is to be decoded by its addressee. The more closely the addressee approximates the code used by the addresser, the higher is the amount of information obtained. (ibid: 130)

This suggests that the interpretation of a message depends on the sets of rules and conventions in which it is created: the more the addresser and the addressee share the used code, the more successful communication will be.

These definitions seem to identify the ground of a sign in its conventionality, which is not the same as arbitrariness. A code is a very broad concept and presupposes

various degrees of conventionality and complexity. There are different kinds of codes, based on different kinds of shared knowledge, which is more or less specific. Given this explanation, while Eco bases his theory of codes on rules of interpretation given by a whole culture, it may be safer to state that cultural codes are a specific kind shared between people who possess the same cultural background.

The process of interpreting the meaning of a sign, however, does not have to be relegated to a structured process of encoding and decoding based on a set of conventional rules, but can also be attributed to inference. In the previous section we saw that Peirce's inclusion of the interpretant and the subject in his model gives major importance to the role of *inference*, understood as a process of interpretation, in the most general sense of the word.

Consistent with the Peircean perspective, Sperber and Wilson (1995) describe inference as a process of interpretation achieved through reasoning on the basis of present evidence. In their influential *relevance theory*, they attempt to provide an alternative to (their interpretation of) the code model of communication by offering an inferential model where the sender of the message provides evidence of his intention to the receiver and the receiver draws conclusions from this evidence as well as the context of the utterance. This model is called a "clues model of communication" by Ferretti and Adornetti (in press), as it does not attribute interpretation to the decoding of a message based on a code, but by drawing the most relevant interpretation based on the "clues" sent by the speaker. *Relevance* is a technical notion in the theory, and means approximately the ratio between "cognitive effects" and "processing effort": the more cognitive effects, and the less processing effort that a given interpretation requires – the more relevant it will be. Less technically, relevant interpretation will make most sense, given the background and the context. In such a way, Sperber and Wilson (1995) claim that codes do not necessarily play any role in human communication while consciousness plays a necessary one.

Thus, a pure code model and a pure inferential model of communication differ substantially. However, both show limitations. The code model presupposes a fixed structure of coding and decoding of a message and has difficulty in dealing with context and the role of the (conscious) subject. On the other hand, an inferential model

needs “clues” to base the inferences upon, and these can be more or less equivalent to a shared code.

It is at this point that a common ground can be found in order to integrate the two models in an attempt to compensate for their limitations. It can be argued that, in complex communication, codes can be identified as the premises needed by the receiver to infer the meaning of the message. These premises consist both of shared cultural background knowledge, and of the conventional meanings of the words used. According to this proposal, the process of communicating a message does not correspond to a structural process of coding and decoding based on a set of rules but to an inferential process where interpretation comes from more or less consciously drawing conclusions with the help of clues and conventional rules to make the message optimally relevant. Furthermore, different messages can rely more on decoding than others, as argued in the following sections.

2.3 Theories of metaphor

As mentioned in the introduction, there are many diverging theories regarding the nature of metaphor and how metaphors are interpreted. For the sake of this thesis, and in correspondence with the discussion in the previous sections, two main views are considered: (a) those that see the interpretation of metaphorical expressions as a universal process mainly based on bodily experiences and (b) those that conversely rely more on conventions and cultural specific codes.

In their influential book *Metaphors We Live By*, Lakoff and Johnson (1980) state that “the essence of metaphor is to understand and experience one kind of thing in terms of the other” (ibid: 5). An important claim of their theory, known today as *Conceptual Metaphor Theory* (CMT) is that metaphors are not simply a linguistic phenomenon but mainly a cognitive one. Moreover, as a cognitive phenomenon, metaphors are part of everyday life and operate mainly unconsciously as they are at the basis of our understanding of all abstract concepts (e.g. love, time, emotion). According to CMT the process of understanding something more abstract in terms of something else more concrete is carried through *cross-domain mappings*: a series of connections that link a source domain (the domain from which the metaphor is drawn, corresponding to the “vehicle” in traditional theory) and a target domain (the domain

that is understood by being metaphorically linked to the source domain, i.e. the “topic”). Grady (1997) extended CMT by proposing the existence of *primary metaphors* within the more general definition of conceptual metaphors. These are basic and intuitive metaphors where the mapping is motivated directly through universal bodily experiences and basic patterns of perception that all human beings share; primary metaphors, like SIMILARITY IS CLOSENESS and COMFORT IS WARMTH, are therefore a natural consequence of associations in everyday life and independent from cultural conventions. A parallelism can be made, in this case, between primary metaphors and the notions of iconicity in Peircean semiotics (see Section 2.1) as the presumed relations between source domains and target domains in primary metaphors are based on experiential resemblance.

On the opposite end of the theoretical spectrum, Zinken (2007) analyses metaphors under a linguistic perspective and takes into account a fundamental element that CMT neglects: the importance of conventions and cultural constraints. In his view, the connections between source domain and target domain are not natural and universal but the result of negotiation in discourse. This process implies that a given metaphorical expression (such as *ISIS is a virus* or *our common European home*) is repeatedly interpreted, adjusted and reformulated by its users and it is therefore defined by the conventions that rule its interpretation. Zinken calls such expressions *discourse metaphors* as they depend on the negotiation of their meaning between their users and are also always changing, depending on the cultural conventions in which they are encoded. This claim is consistent with Eco’s model of the sign as not fixed but as an always changing entity based on a series of relations that vary with the variation of the conventions by which they are ruled (see Caesar, 1999). Metaphors as well can follow this pattern as the relation between source domain and target domain can change with the change of conventions.

Zlatev and Blomberg (2016) mention both CMT and Zinken’s theory while providing a comprehensive overview of metaphors. While acknowledging two main debates regarding metaphor, as a cognitive or linguistic phenomenon and as universal or culture specific, their main conclusion is that, in both cases, one point of view does not exclude the other. Through the analysis of two studies of metaphorical expressions, they confirm the role of both experiential motivations and conventional

meanings. Unlike CMT, however, they see experiential motivations as having “an intersubjective-perceptual rather than individual-representational character” (ibid: 20). Moreover, it is argued that metaphors cannot be seen as a mainly cognitive phenomenon as they necessarily involve one or another kind of expression (signifier or representamen).

Although two very different theories of metaphors have been presented and both CMT and discourse metaphor theory can be argued to present valid arguments, it appears that each fails to describe the phenomenon of metaphors in a comprehensive way. CMT focuses on metaphors as conceptual mappings based on more or less universal processes but fails to fully acknowledge the role of language (or any other kind of expression, such as pictures) and the role that cultural conventions have on their interpretation. On the other hand, Zinken’s theory mainly focuses on metaphors as linguistic expressions whose meaning is constantly negotiated by speakers and conventionally established. However, it fails to recognize that bodily experiences, and not only conventions, also play a role in interpreting metaphors and that the two can be integrated to various degrees in interpretation.

Thus it appears that such opposite theories do not necessarily exclude one another but they analyse metaphors on two different levels, cognitive and linguistic, and can be integrated, as proposed by Zlatev and Blomberg (2016). Following this line of thought, in the next section we consider how cognitive and linguistic factors may interact and explain the interpretation of different kinds of metaphors.

2.4 Kinds of metaphorical expressions and hypotheses

As we have seen in the previous sections, theories of semiotics (2.1), theories of communication (2.2) and theories of metaphor (2.3) differ in rather corresponding ways. On the one hand, some like Saussure (1916), Eco (1968) and Zinken (2007) emphasize the role of cultural conventions and codes while focusing on a form of knowledge that is language and culture specific. On the other hand, Peirce (1931), Sperber and Wilson (1995), Lakoff and Johnson (1980) and Grady (1997) claim that understanding is not so much based on such knowledge as it is on universal processes such as semiosis (sense-making), inference and cross-domain mappings.

It may be possible to find a compromise between these two extreme positions with the help of Coseriu's *Integral Linguistics* (Coseriu, 1985; Zlatev, 2011) that makes a systematic distinction between three levels of language. Those three levels are: the *universal*, the *historical* and the *individual*. The universal level is concerned with universal, pre-linguistic knowledge of the world and what is common to all languages and cultures. The historical level is concerned with specific languages (such as English, Italian, French) and is in part similar to Saussure's *langue* where language is seen as a "social institution" based on conventional meanings; therefore it implies conventional knowledge and cultural codes. Lastly, the individual level is based on contextual knowledge, on norms that regulate the use of certain expressions in certain situations and contexts. It is not to be understood as "individual" in the sense of individual speakers, which is why Zlatev and Blomberg (2015) refer to it as the *situated level*, as shown in Table 1.

Table 1. The three levels of languages (crossed with three different perspectives) in Integral Linguistics (from Zlatev & Blomberg 2015:4)

| Levels | Perspectives | | |
|------------|--------------------------------|--------------------------|------------------------|
| | Activity | Competence | Product |
| Universal | Speaking in general | Encyclopedic and logical | Totality of utterances |
| Historical | Speaking a particular language | Linguistic | "Lexicon and grammar" |
| Situated | <i>Discourse</i> | Communicative | Text |

Zlatev (2011) suggests that this theoretical framework might be very productive when applied to metaphors. Cross-domain mappings and associations between bodily experiences, in the sense of Grady (1997), would be the kind of universal knowledge that motivates the formation of metaphors on the universal level. On the other hand, this would not fully determine which conventional metaphors appear in each language, which belong to the historical level. Finally, on the situated level the interpretation of metaphors depends not only on universal processes of thought and shared cultural conventions (codes) but also on local contextual knowledge and more specific codes.

This analysis suggests that we could (tentatively) distinguish between three different kinds of metaphorical expressions, depending on which level of knowledge they are most dependent on. On the highest, universal level, there would be such expressions that can be understood on the basis of bodily experiences and universal mappings such those proposed in CMT. The importance of a shared code for understanding these expressions would be low, while the importance of inference (of the general kind that requires less cognitive effort) would be high. In relation to Peircean terminology, these metaphors would be strongly motivated through relations of iconicity and indexicality that may be common for all human beings.

A second kind of expressions would be closely related to Zinken's discourse metaphors dependent on cultural conventions. They would thus be code-dependent and would be less dependent on inference. These would therefore be mostly related to the historical level.

Finally, there could be a kind of metaphors that are highly coded although not according to broadly known conventions but on the basis of local or even secret codes which open the doors of interpretation only to insiders. These would also require a high degree of inference-making as the right kind of "premises" need to be considered to avoid more obvious but not intended interpretations. To give an example from the *Inferno*, the figure of Minos is used as a metaphor for justice, although the more obvious interpretation would be for Minos to represent power, being a famous king in mythology. Dante uses the relatively unknown reputation of Minos as a just king to motivate this highly situated metaphor of Minos as a representation of justice. A general reader familiar with this reputation could in principle infer that Minos indeed

represents justice, but an expert reader who knows the situated code would do this more easily.

In semiotic terms, metaphors belonging mostly to the historical and situated levels would rely less on iconicity but, instead, on the symbolicity of shared conventions. These three different kinds of metaphorical expressions, with examples from the study described in the following chapters, are provided in Table 2 along with the type of knowledge these kinds mostly require.

Table 2. Three kinds of metaphorical expressions from *Inferno*, based on the level of language in Coseriu’s framework, and different importance of decoding and inference for interpretation

| Level of language | Type of Knowledge | Importance of Decoding | Importance of Inference | Example from the study |
|--------------------------|---|-------------------------------|--------------------------------|---|
| universal | Embodied experiences, analogy (cross-domain mappings) | Low | High (less Cognitive effort) | Metaphors based on associations between dark and sorrow: <i>The dark wood is a place of sorrow</i> |
| historical | General cultural knowledge | High: Cultural Codes | Low (code could be sufficient) | Metaphors based on association according to cultural features: <i>the direct way is faith</i> |
| Situated | Specific cultural knowledge. | High: Specific Codes | High (specific inferences) | Metaphors based on associations according to specific codes: <i>The wolf is incontinence</i> |

Based on the considerations of the past sections and, above all, the division in kinds of metaphoric expression proposed above, the following *general* hypotheses can be formulated:

- H1: Metaphorical expressions that mostly rely on the universal level for their interpretations will be generally easier to comprehend than those that rely mostly on the historical level, which on their part will be easier than those that rely on the situated level.

- H2: There will be a marked difference in comprehension of metaphorical expressions on the historical level, when comparing interpreters that share the same general cultural code with the author and interpreters that do not.
- H3: There will be fewer differences between such groups for expressions on the universal level (as people rely on universal knowledge) and on the situated level (as they rely on too specific knowledge).

In the following chapter these hypotheses will be spelled out in an empirical study. The study investigates the understanding of metaphorical language in Dante's *Inferno* by Italian and Australian participants.

3. Method

In order to answer the research questions and test the hypotheses, a triangulation of methods has been used, as typical for cognitive semiotics (see Zlatev, 2015). The first step of the study presupposes the use of a text-based method in which the chosen text, both in its original language and in an English translation, has been carefully analysed and the required examples of metaphorical expressions have been selected according to the operationalization of the three kinds of metaphors (Section 3.1.1). The selection of metaphors was carried through the use of a first-person method (analysing the author's intuition as a native speaker of Italian) and a second-person method ("negotiation" between the author as a member of Italian culture and others belonging to the same culture). Through these, I chose parts of the text that included metaphors (i.e. a given topic is presented through some vehicle that is different from it) of approximately the same length and that do not give away the correct interpretation of the metaphorical expression in the text itself.

The choices of metaphors, and deciding on their appropriate interpretations was also based on an in depth study of the footnotes to *Inferno* and essays regarding metaphorical expressions and symbolism in Dante's work (Ariani, 2009; Finazzi, 2013).

The reason why English was chosen as the second language of analysis is the high availability of English translations of *Inferno* and the access to participants with English as native language in the experimental phase of the study.

3.1 Materials

Dante's *Inferno* is an ideal text for the present study for several reasons. Firstly, it has a high number of metaphorical expressions to choose from and divide in the three proposed categories. Secondly, as mentioned above, it is fairly well known and has been extensively translated into English.

The decision to work only on the *Inferno*, which is the first of the three books of the *Divina Commedia*, is motivated by the greater stylistic and linguistic complexity in the following two books, which causes the text to become harder to read and understand without footnotes and paraphrase. The *Inferno*, on the other hand, remains fairly easy to read without any extra-textual aid that might also give clues regarding

the interpretation of the metaphors. In the text-based phase of this research, different editions of the *Inferno*, both in Italian and English, were analysed and compared in order to choose the most pertinent extracts (*La Divina Commedia: Inferno*, Mondadori 2014; *La Divina Commedia: Inferno*, Ettore Zolesi, 2002; *The Inferno of Dante: a New Verse Translation*, Pinsky, R., 1996; *The Inferno*, Cary H. F., 1998).

For the English extracts in particular, different editions were consulted and integrated with my personal input as it was important to make the Italian and English versions of the questionnaire (see Section 3.1.2) as identical as possible and to maintain the metaphorical expressions as they are presented in the original text. The official translations, it was found, tended to change or eliminate the metaphors on one hand or to interpret the text too freely. For example, “*la diritta via*” (Canto I, v 3) from the original Italian text is translated by Pinsky (1996) as “*the right way*” and therefore eliminates the metaphor that has “right” as a topic but “direct” as a vehicle. On the other hand, Cary (1988) translates the metaphor appropriately as “*the direct way*”, which is the translation proposed in the final questionnaire, but fails to translate the remaining of the text, including other metaphors, in a loyal and completely comprehensible way. As a consequence, English examples in this thesis represent an integration between official translations and my own.

3.1.1 Operationalizing kinds of metaphors

As a preliminary to the experimental phase, the proposed subdivision of metaphors in three categories (see Table 2) needed to be applied to specific examples taken directly from the text. The operationalization of the criteria was based on the combination of personal intuition and interpersonal negotiation, as pointed out above. Reasoning of the following kind was used for each category.

Universal level metaphors could be understood on the basis of mappings between universal sensory properties and basic-level concepts (e.g. light/dark, hot/cold, fire) and abstract concepts. For example, the *Inferno* begins with the following well-known passage, where “dark wood” represents going through hardships. As the BAD/DANGER IS DARKNESS mapping is potentially universal, any reader could in principle be able to make the appropriate interpretation of the metaphor.

*In the middle of the path of our lives, I found myself in a **dark wood**, that the direct way was lost.* (Chapter 1, v 1-6)

On the other hand, metaphors based on culturally shared knowledge would be more difficult to understand for those from outside the culture. Much of the *Inferno* is embedded in Christian ideas that are widely shared in Italian culture. Hence, metaphors based on correspondences between certain sins and their punishments or other religious associations were included in the historical category. For example, the protagonist Dante and his guide Virgil reach a forest where sinners are turned into leafless trees and are condemned to be tormented by birds that build their nests on them. But what kind of sin are they punished for? A reader knowing the cultural code, based on the importance that Christianity attributes to the body, would be able to correctly understand this as punishment for suicide.

Finally, the *Inferno* includes metaphors based on specific knowledge related to mythology and classical culture that is not shared by all Italians as a culture group. Such situated level metaphors were based on correspondences between animals or mythological figures and abstract values/vices. For example, when Dante and Virgil reach the entrance of Hell they meet a demonic Minos who sends the souls to different circles by wrapping his tail around him many times as the number of the circle he intends to send them to.

There Minos stands, grinning horribly, examines the crimes at the entrance (...), and sends the guilty down according to his sins. (Chapter 5, v 4-6, 13-15)

As pointed out in Section 2.4, Minos is generally known as a king, and kings are associated with power. However, for Dante and those knowing the appropriate situated reputation of Minos as a just king – and being able to make the corresponding inference – would rather see him as a metaphorical representation of justice.

3.1.2 The questionnaire

On the basis of the reasoning explained above, as well as carefully consulting the secondary literature on the *Inferno* (e.g. Ariani, 2009; Finazzi, 2013) a questionnaire was constructed in Italian and in English, focusing on 15 metaphorical expressions, with five per category (universal, historical, situated) depending on the kind of knowledge necessary for their interpretation and corresponding importance of codes and inferences (see Table 2). Each *entry* in the questionnaire was composed of:

- a) context, where some background information was presented,
- b) quote, taken from the original text, (for the Italian version) or from a revised translation (for the English version),
- c) a question concerning the meaning of the key passage in the quote, highlighted in bold face, and
- d) three possible answers (given in various possible orders).

One answer (*metaphorically appropriate*) was based on a metaphorical interpretation, which according to all sources was the one closest to what is actually intended in the text. A second possible choice was based on a literal interpretation of the phrase in question which made sense in terms of indexicality (spatio-temporal contiguity), for example being in a dark forest is often associated with being lost. Finally, a third possible answer was chosen in a way that was clearly either directly wrong or inappropriate for the text and context, and would indicate a failure in understanding. Tables 3-5, show the fifteen entries, with (a-d) for each case, along with some explanations on the nature of the relevant metaphorical and indexical motivations.

Table 3. Metaphors on the universal level, with context, quote, question and the three possible answers

| Context/Quote/Question | Metaphorically correct | Associations | Irrelevant/ Wrong |
|---|--|---|-------------------------------|
| <p><u>Context:</u> Dante’s journey through Hell is about to begin; the incipit of the book gives an indication of how and why this has begun in the first place.</p> <p><u>Quote:</u> <i>In the middle of the path of our lives, I found myself in a dark wood, that the direct way was lost. It is a hard thing to speak of, how wild, harsh and impenetrable that wood was, so that thinking of it recreates the fear</i> (Chapter 1, v 1-6)</p> <p><u>Question:</u> What does <i>the dark wood</i> represent?</p> | <p>A hard time in Dante’s life</p> <p>Motivation: Bad is dark</p> <p>Darkness represents something bad, in this case a difficult time is someone’s life</p> | <p>A place where one is lost</p> <p>Motivation: Lost is dark</p> <p>It easy to get lost in the darkness</p> | <p>A moment of solitude</p> |
| <p><u>Context:</u> Dante and Virgil come to a river where the souls of the sinners are waiting to be transferred to the other shore by the ferryman Charon in order to be punished for what they have done in life.</p> <p><u>Quote:</u> <i>And my guide said to him: ‘Charon, do not vex yourself: it is willed there, where what is willed is done: ask no more.’ Then the bearded cheeks, of the ferryman of the livid marsh, who had wheels of flame round his eyes, were stilled.</i> (Chapter 3, v 94-99)</p> <p><u>Question:</u> What do you think the expression “wheels of flame” represents?</p> | <p>Anger</p> <p>Motivation: Anger is fire</p> <p>Fire is often associated metaphorically to anger.</p> | <p>Heat</p> <p>Motivation: Heat is fire</p> <p>A fire is hot</p> | <p>Sadness</p> |
| <p><u>Context:</u> Dante and Virgil descend to the second circle where Minos divides the souls based on the sins they have committed.</p> <p><u>Quote:</u> <i>Now the mournful notes begin to reach me, now I came where much crying hits me. I came to the place that is deprived of any light, that resounds like the sea during a storm if it is buffeted by warring winds</i> (chapter 5, v 25 - 30)</p> <p><u>Question:</u> How would you interpret the meaning of <i>the place that is deprived of any light</i> in this context?</p> | <p>A place of sorrow</p> <p>Motivation: Sorrow is no light</p> <p>A place that does not have any light, a dark place, is commonly associated metaphorically to sorrow and pain.</p> | <p>A place of darkness</p> <p>Motivation: Darkness is no light</p> | <p>A place of Hope</p> |
| <p><u>Context:</u> Dante and Virgil are about to exit hell in order to proceed further in their journey.</p> <p><u>Quote:</u> <i>The guide and I entered by that hidden path, to return to the bright world: and, not caring to rest, we climbed up, he first, and I second, until, through a round opening, I saw the beautiful things that the sky holds: and we came out to see, again, the stars.</i> (Chapter 34, v 133-139)</p> <p><u>Question:</u> How would you interpret their ascent?</p> | <p>As a journey towards what is good</p> <p>Motivation: Betterment is upward movement</p> | <p>As coming back to Earth</p> <p>Motivation: Coming back to Earth is upward movement</p> | <p>As climbing a mountain</p> |
| <p><u>Context:</u> Dante and Virgil are looking at sinners and while Virgil is speaking, Dante wants to ask him to tell him some of the names of the souls that are in front of them.</p> <p><u>Quote:</u> <i>And I said: ‘Master, your speeches are so sound to me, and so hold my belief, that any others are like faded coals.</i> (Chapter 20, v 100-105)</p> <p><u>Question:</u> How would you interpret the meaning of <i>faded coals</i> in this context?</p> | <p>Something without value</p> <p>Motivation: Words with no value are faded coals</p> <p>Faded coals lose importance and they therefore stand for something that has no value.</p> | <p>Something cold</p> <p>Motivation: Cold words are faded coals</p> <p>Faded coals are cold and therefore cold words</p> | <p>Something boring</p> |

Table 4. Metaphors on the historical level, with context, quote, question and the three possible answers

| Context/Quote/Question | Metaphorically correct | Associations | Irrelevant/Wrong |
|---|---|---|-----------------------------|
| <p><u>Context:</u> Dante is asking Virgil if anyone else ever did the journey they are doing. Virgil answers that he did it once before in order to go and see the circle that hosts those who betrayed Jesus.</p> <p><u>Quote:</u> <i>My flesh had only been stripped from me a while when she forced me to enter inside that wall, to bring a spirit out of the circle of Judas. That is the deepest place, and the darkest, and the furthest from that sky that surrounds all things.</i>(Chapter 9, v 25-29)</p> <p><u>Question:</u> How would you interpret the meaning of “<i>My flesh had only been stripped from me a while</i>”?</p> | <p>I had just transcended into a soul</p> <p>Motivation: Transcending into a soul is being stripped from the flesh</p> <p>According to Christian doctrine, once someone dies, he leaves his material body and transcends into an intangible soul in order to reach afterlife.</p> | <p>I had just died</p> <p>Motivation: Dying is being stripped from the Flesh</p> <p>Being without a physical body means being dead</p> | <p>I had just been hurt</p> |
| <p><u>Context:</u> Dante and Virgil witness the punishment of a group of sinners that are half covered in mud and they beat themselves with different parts of their bodies.</p> <p><u>Quote:</u> <i>“And I who stood there, intent on seeing, saw muddy people in the fen, naked, and all with the offended look. They were striking themselves, not only with hands, but head, chest, and feet, hurting themselves with their teeth, bite by bite”</i> (Chapter 7, v 109-114)</p> <p><u>Question:</u> The act of hitting oneself represents which one of these sins?</p> | <p>Rage</p> <p>Motivation: Rage is self inflicted violence</p> <p>Dante’s interprets self inflicted violence as a punishment for rage as sinner who used to be guilty of rage towards someone now have to direct that rage towards themselves</p> | <p>Self-harm</p> <p>Motivation: Self harm is self inflicted violence</p> <p>Self harm means literally to inflict violence on one’s self</p> | <p>Gluttony</p> |
| <p><u>Context:</u> Dante’s journey through Hell is about to begin; the incipit of the book gives an indication of how and why this journey has begun in the first place.</p> <p><u>Quote:</u> <i>In the middle of the path of our lives, I found myself in a dark wood, that the direct way was lost. It is a hard thing to speak of, how wild, harsh and impenetrable that wood was, so that thinking of it recreates the fear</i> (Chapter 1, v 1-6)</p> <p><u>Question:</u> How would you interpret the meaning of “<i>the direct way</i>”?</p> | <p>Faith</p> <p>Motivation: Christian faith is the direct way.</p> <p>According to Christian values, the direct way of living is living according to Christian values</p> | <p>The easy way</p> <p>Motivation: The easy way is the direct way</p> <p>A direct way is an easy way to follow</p> | <p>Happiness</p> |
| <p><u>Context:</u> Dante and Virgil reach a wood full of sorrow where sinners are turned in to leafless trees and they are condemned to be tormented by birds that build their nests on them.</p> <p><u>Quote:</u> <i>Then I stretched my hand out a little, and broke a small branch from a large thorn, and its trunk cried out: ‘Why do you tear at me?’ And when it had grown dark with blood, it began to cry out again: ‘why do you splinter me? Have you no breath of pity? We were men, and we are changed to trees</i> (Chapter 13, v 31-37)</p> <p><u>Question:</u> What do you think this punishment is for?</p> | <p>Suicide</p> <p>Motivation: Suicides are leafless trees</p> <p>Christian religion values the body and considers self-harm a sin. Because they harmed themselves, suicides are deprived of their bodies and dehumanized.</p> | <p>Inaction</p> <p>Motivation: Inactive people are trees</p> <p>The stillness of trees can be associated to inactive people for the criteria of the incapacity to move</p> | <p>Lust</p> |
| <p><u>Context:</u> After passing the gate of hell and Minos, Dante and Virgil come to the first group of sinners that are being carried by the wind without ever having the possibility to stop.</p> <p><u>Quote:</u> <i>And, as their wings carry the starlings, in a vast, crowded flock, in the cold season, so that wind carries the wicked spirits, and leads them here and there, and up and down. No hope of rest, or even lesser torment, comforts them</i> (Chapter 5, v 40-45)</p> <p><u>Question:</u> What do you think this punishment is for?</p> | <p>Lust</p> <p>Motivation: Led by lust is carried by the wind</p> <p>According to an Italian proverbial saying, people who let themselves being guided by their passions instead than their reasoning, tend to “go with the wind”. This analogy is used by Dante to punish the sin of lust, where sinners who followed their passion are constantly carried by the wind.</p> | <p>Indecisiveness</p> <p>Motivation: Being unable to decide is being carried by the wind</p> <p>People who are unable to decide go in the direction the wind is taking them.</p> | <p>Rage</p> |

Table 5 Metaphors on the situated level, with context, quote, question and the three possible answers

| Context/Quote/Question | Metaphorically correct | Associations | Irrelevant/W Rong |
|--|--|--|-------------------|
| <p><u>Context:</u> In the wood where the suicides are located, the mythological figures of the Harpies live. They have the body of birds and the face of women.</p> <p><u>Quote:</u> <i>Here the brutish Harpies make their nests, they who chased the Trojans from the Strophades, with dismal pronouncements of future tribulations. They have broad wings, and human necks and faces, clawed feet, and large feathered bellies, and they make mournful cries in that strange wood..</i>(Chapter 13, v 10-15)</p> <p><u>Question:</u> What do you think the figure of the Harpies represent?</p> | <p>Violence</p> <p>Motivation: Violence is a Harpy</p> <p>In Mythology, the Harpies represent violence. In punishing suicides they symbolize the violence that the sinners inflicted to themselves.</p> | <p>Regret</p> <p>Motivation: Regret is a Harpy</p> <p>Some literature associate harpies with regret as they imply the regret of suicides for what they have done.</p> | <p>Lust</p> |
| <p><u>Context:</u> Dante and Virgil reach the entrance of hell where they find a demoniac representation of Minos who sends the souls to different circles by wrapping his tail around him many times as the number of the circle he intends to send them to.</p> <p><u>Quote:</u> <i>There Minos stands, grinning horribly, examines the crimes at the entrance (...), and sends the guilty down according to his sins. (...) A multitude always stand before him, and go in turn (...), speak and hear, and then they go downwards</i> (Chapter 5, v 4-6, 13-15)</p> <p><u>Question:</u> What do you think the figure of Minos represents?</p> | <p>Justice</p> <p>Motivation: Justice is Minos</p> <p>In mythology, Minos was not only known for his role as the king of Crete but also for being a very just and severe judge and legislator. That is why, in Hell, he judges the souls for their sins.</p> | <p>Power</p> <p>Motivation: Power is Minos</p> <p>Minos is mostly known as a king so the more literal interpretation is to see him as representing power.</p> | <p>Faith</p> |
| <p><u>Context:</u> At the beginning of his journey, Dante is alone as he is trying to climb up a mountain. Three animals are blocking his path.</p> <p><u>Quote:</u> <i>But look! Right near the upgrade of the climb, loomed a fleet and nimble-footed leopard. With coat completely covered by dark spots! He did not flinch or back off from my gaze But blocking the path that lay before me, Time and again he forced me to turn around</i> (Chapter 1, v 31-36)</p> <p><u>Question:</u> What do you think the animal symbolizes?</p> | <p>Fraud</p> <p>Motivation: Fraud is a Leopard</p> <p>Although commonly denoted by being a strong and fast animal, in this context Dante uses the Leopard as a symbol for fraud. His spotted fur represents the camouflage of pretending to be something he is not, which is the principle of fraud.</p> | <p>Aggression</p> <p>Motivation: Aggression is a Leopard</p> <p>The leopard is a very aggressive creature</p> | <p>Cowardice</p> |
| <p><u>Context:</u> At the beginning of his journey, Dante is alone as he is trying to climb up a mountain Three animals are blocking his path.</p> <p><u>Quote:</u> <i>And then a wolf stalked, ravenously lean, Seemingly laden with such endless cravings, that she had made many live in misery! She caused my spirits to sink down so low, from the dread I felt in seeing her there I lost all hope of climbing to the summit</i> (Chapter 1, v 49-54)</p> <p><u>Question:</u> What do you think the wolf represents in this context?</p> | <p>Indulgence</p> <p>Motivation: Indulgence is a Wolf</p> <p>The wolf is traditionally considered, in ancient roman culture, the symbol of indulgence. In particular the female wolf is infamous for her incontrollable sexual treachery.</p> | <p>Cruelty</p> <p>Motivation: Cruelty is a wolf</p> <p>Wolves are considered cruel creatures</p> | <p>Theft</p> |
| <p><u>Context:</u> Dante and Virgil see many sinners whose appearance is disguised by flames that surround and move with them. Every soul hides itself behind the fire that is burning it.</p> <p><u>Quote:</u> <i>Each of those flames moved, along the throat of the ditch, for none of them show the theft, but every flame steals a sinner. (...) And the guide, who saw me so intent, said: 'the spirits are inside those fires: each veils himself in that which burns him.</i> (Chapter 26, v 40-42, 46-48)</p> <p><u>Question:</u> What do you think this punishment represents?</p> | <p>Fraud</p> <p>Motivation: Fraud is fire</p> <p>This punishment it situated by Dante in the Divina Commedia, and only in this specific context, to symbolize the sin of fraud. It relies on the free association between flames hiding the sinners and sinners hiding their true nature to commit fraud.</p> | <p>Heresy</p> <p>Motivation: Heresy is fire</p> <p>People guilty of Heresy have been historically known to be burnt to death</p> | <p>Suicide</p> |

As can be seen in tables 3-5, an effort was made to keep the contexts, quotes and questions in the different categories of similar length. Deciding on the exact metaphors and formulations was an incremental process, subjecting preliminary versions of the questionnaire to Italian and English-speaking persons, and interviewing them from any ambiguity of interpretation due to external factors. In the final version of the questionnaire (see Appendix A and B) the entries in table 3-5 were used, but presented in a pseudo-random order to prevent participants from realizing the underlying division in the three proposed kinds of metaphorical expressions.

3.2 Participants

Two groups of subjects were recruited for the study: native speakers of Italian, who could be assumed to share at least some of cultural codes as the author, and native speakers of English, who could be assumed to do so to a lesser degree.

The Italian group was composed of twenty participants, mainly from the University of Bologna, eight male and twelve female, with average age 26.9 years. They were recruited through personal connections and were mostly university students at a master degree level. The group of native English speakers was composed of twenty-two Australian students, thirteen female and nine male. They were recruited in Australia with the help of Professor Sandra Elsom from the University of the Sunshine Coast, Queensland, Australia. Their participation was part of an academic writing seminar where each student had the opportunity to complete the questionnaire, before the ideas of the thesis project were explained to them. The average age for the Australian group was 27.8 years.

Figure 1 shows the distribution of the participants for both groups based on age. As can be seen, although the average age for the two groups was fairly close, the Italian group was more homogeneous than the Australian group, with the exception of a few outliers.

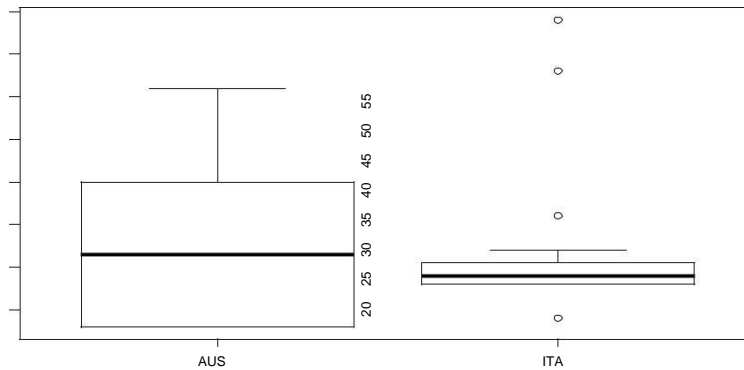


Figure 1. Age distribution for the participants in the Australian (AUS) and Italian (ITA) groups

3.3 Procedure

Prior to filling in the questionnaire, participants were presented with a form for informed consent, in Italian and English versions (see Appendix C and D), which also explained the task and asked some additional information, such as age and gender, that was helpful not only for making the two groups of participants more similar in these respects, but for interpreting the results.

While the questionnaires were conducted anonymously, the informed consent forms were not. As a consequence, the two contributions by each participant were stored separately and were matched by a code number.

Each document was presented to the participants in paper form and the completion of both parts took place in the presence of the author, or a trusted collaborator in a few exceptional cases. This manner of collecting the data was chosen rather than e.g. an on-line platform, in order to create a controlled environment where instructions were given properly and possible questions were answered. Moreover, this also allowed the results to be more reliable. All participants completed the questionnaire in quiet places, mainly university buildings such as classrooms or libraries. They did this either one by one, or in groups of maximum five people, depending on the occasion. In the latter case, they sat on opposite sides of the room and were not allowed to interact with each other. Each participant was allowed as much time as considered necessary to complete the task. Overall, the completion of the questionnaire took from five to fifteen minutes.

Most participants showed a strong interest in discussing their answers and sharing thoughts afterwards. This provided some helpful insights to the process of their interpretation of the metaphorical expressions and showed that the task was properly understood. Each participant was offered to receive a copy of the present thesis, when completed.

No participant needed to be excluded, as all questionnaires were completed in a clear and complete manner. Those who neglected to include some of the personal information in the informed consent form did not need to be excluded as this information was not fundamental but mainly served to provide ideas for further research and auxiliary hypotheses.

3.4 Specific hypotheses

In Section 2.4, three general hypotheses were presented on the basis of the provided theoretical background. Given that the experimental study was designed as described in this chapter, it was possible to apply the general hypotheses to the topic of the interpretation of metaphorical expressions in Dante's *Inferno* by Italians and Australians. Accordingly, it was possible to spell out H1-H3 as H1'-H3', in a more specific manner.

- H1': For both groups, metaphorical expressions on the universal level will be easier to comprehend than those on the historical level, which on their part will be easier than those that rely on the situated level.
- H2': There will be a significant difference in the comprehension of metaphorical expressions on the historical level between the Italian and Australian groups, with higher scores for the Italian group.
- H3': A smaller difference in comprehension should be found on the universal and situated levels between the two groups, compared to the difference on the historical level (H2').

The following chapter presents the results of the study in compact form, while chapter 5 will offer some more general discussion.

4. Results

The results were coded and analysed in two different ways. First, this was done numerically, in the following manner: all metaphorically appropriate answers were given the score 3, literally appropriate answers, the score 1, and wrong/irrelevant answers were given 0. The gap between the first two was motivated by the focal research topic: metaphorical interpretation. Accordingly, the *dependent variable* of comprehension was treated as a numerical variable. Table 6 shows the average scores for each level for the two groups, and Figure 2 shows this graphically.

Table 6. Average scores for the two language groups and three metaphor kinds

| | Universal | Historical | Situated |
|-------------------------|------------------|-------------------|-----------------|
| Italian group | 2.47 | 2.40 | 1.72 |
| Australian group | 2.06 | 1.66 | 1.53 |

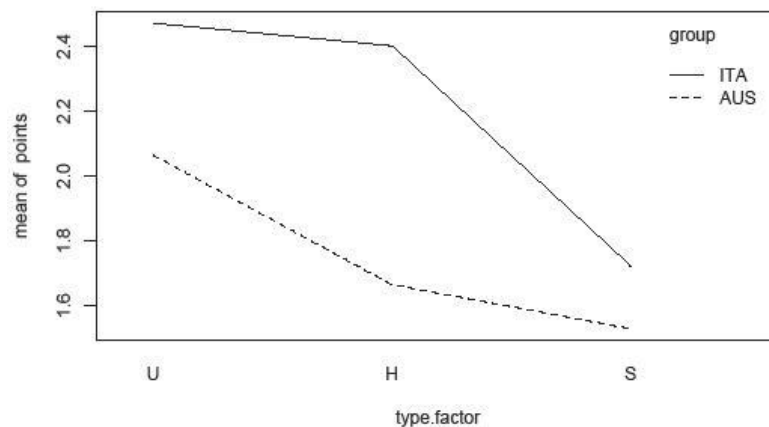


Figure 2. Results from numerical analysis (Table 6), U = universal level, H = historical level, S = situated level

Table 6 and Figure 2 both show H1' is supported: for both groups universal level metaphors were easier than historical level metaphors, which are easier than situated level metaphors, though the most significant difference is between the historical and situated levels for the Italian group, and between universal and situated levels for the Australian groups (see below). Also consistently with H2' and H3', the difference is

particularly high at the historical level while it is smaller at the universal level and almost non-existent at the situated level.

The second way of analysing the results is to see the dependent variable as a categorical variable, distinguishing in a binary manner between metaphorically correct (1) or not (0), thus collapsing “literal” and “wrong” answers. Table 7 shows comprehension of metaphorical expressions as such a categorical variable, corresponding to the proportions of correct interpretations for the two groups, and Figure 3 shows this graphically.

Table 7. Proportions of correct metaphorical interpretations for the two groups and three metaphor kinds

| | Universal | Historical | Situated |
|-------------------------|------------------|-------------------|-----------------|
| Italian group | 0.79 | 0.73 | 0.45 |
| Australian group | 0.61 | 0.40 | 0.39 |

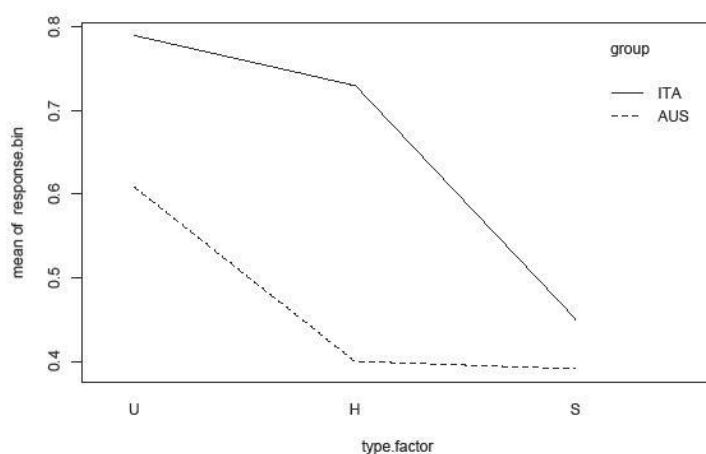


Figure 3. Results from ordinal analysis (Table 6), U = universal level, H = historical level, S = situated level

As can be seen by the tables and figures, the results from both manner of analysis are remarkably similar, supporting the three hypotheses. But which of the differences in the analysis are statistically significant?

Regression analysis for both types of analysis was conducted to answer these questions, with all variables, as well as age and gender, included. The main predictors in this analysis were group (ITA, AUS) and metaphor type (U, H, S), especially the differences between the groups for each of the metaphor kinds separately. This means that the interaction of group and metaphor kind was of central interest. Furthermore, it was important to control for age and gender effects, so these two variables were added as two covarying predictors. The results from the regression analysis for the numerical manner of analysing the results (Table 6, Figure 2) are presented in Table 8.

Table 8. Results of the numerical regression analysis with groups (ITA, AUS) and metaphor kind (U, H, S) were main predictors, and age and gender effects are controlled

| | | Estim. | Std. Error | df | t | p | Significance |
|---|----------------|--------|------------|---------|--------|-------|--------------|
| 0 | (intercept) | 2.184 | 0.297 | 45.200 | 7.364 | | *** |
| 1 | groupITA | 0.720 | 0.185 | 118.700 | 3.885 | 0.001 | *** |
| 2 | typeS-AUS | -0.136 | 0.148 | 584.000 | -0.922 | 0.357 | |
| 3 | type U-AUS | 0.400 | 0.148 | 584.000 | 2.704 | 0.007 | ** |
| 4 | Age | -0.018 | 0.008 | 38.000 | -2.154 | 0.038 | * |
| 5 | genderM | -0.036 | 0.155 | 38.000 | -0.230 | 0.820 | |
| 6 | groupITA:typeS | -0.544 | 0.214 | 584.000 | -2.536 | 0.011 | * |
| 7 | groupITA:typeU | -0.330 | 0.214 | 584.000 | -1.540 | 0.124 | |
| 8 | typeS-ITA | -0.680 | 0.155 | 584.000 | -4.383 | 0.000 | *** |
| 9 | type U-ITA | 0.070 | 0.155 | 584.000 | 0.451 | 0.652 | |

Starting with row 0 (Intercept), this shows that the expected average for H-level metaphors for Australians is much higher (2.18), given that age and gender are taken into account, than what was in fact observed (1.66). Row 1 (groupITA) shows the difference between the two groups for H-level metaphors, which is significantly higher for the Italian compared to the Australian group. Together, these results strongly support H2': there was a strong difference between the two groups with respect to metaphors on the historical level.

Row 2 (typeS-AUS) shows the difference between H-level and S-level metaphors for the Australian group only. This is a non-significant difference indicating that the Australians found both categories equally hard. Row 3 (typeU-AUS) is the

difference between H-level and U-level metaphors for the Australian group only. This is a significant difference: the Australians gave significantly higher ratings to universal level metaphors than to historical level metaphors.

Row 4 (age) shows the age effect. It is significant and the value of the Estimate is negative, saying that older participants gave lower ratings than younger participants, which was on the whole rather unexpected, if age is considered to correlate with knowledge. Row 5 (genderM) shows that the gender effect is not significant: male participants did not give significantly different ratings than female participants.

Row 6 (groupITA:typeS) is the first interaction effect. This shows that the difference between the two groups for S-level metaphors was significantly smaller than for the H-level metaphors, thus confirming H3' in part. However, Row 7 (groupITA:typeU), the second interaction effect, shows that the difference between the two groups for U-level metaphors was *not* significantly different than the difference for the H-level metaphors, which was not consistent with H3'. The implications of this will be addressed in chapter 5.

Rows 8 and 9 show the results for the Italian group that correspond to those in rows 2 and 3 for the Australians. As can be seen, the Italian group behaved in the exactly opposite way compared to the Australian group: while for Australians the difference in comprehension between the historical and the situated levels was not significant, it was significant for Italians (row 8). On the other hand, while for Australians the difference in comprehension between metaphors on the historical and the universal level was significant (row 3), it was not for Italians (row 9). In sum, H1' was only *in part* supported, and differently so for the two groups. This finding will also be addressed in chapter 5.

5. Discussion

5.1 Analysis of results according to the specific hypotheses

Let us here consider the three hypotheses (in both general and specific versions) in more detail.

The first hypothesis (H1) stated a decrease in performance between the three levels for both culture groups. Results in tables 6-7 and figure 2-3 seem to support this hypothesis as the average scores show higher performance on the universal level, a decrease in the historical level and the lowest result at the situated level. However, this effect was partly contradicted by the regression analysis. Although there was a difference between the three levels for both groups, this difference was significant, for Australians, only between the universal and the historical levels and, for Italians, only between the situated and the historical levels. For the Australian group, the pattern was therefore $U > H > S$ while for the Italian group, it was $U = H > S$.

These results may seem to partially contradict H1 but can be easily interpreted: for Australian participants, the interpretation of the metaphorical expressions at the historical level, without sharing the cultural code of the author, becomes so difficult that it is not so distant from their performance at the situated level. The use of a (partially) shared cultural code, on the contrary, allows Italians to perform at the historical level nearly as well as at the universal level. Therefore, it can be said that, although there is a general tendency of $U > H > S$ if the groups are combined, the degree of difficulty of the historical level varies depending on how fully the cultural code of the author is shared.

H2 proposed a significant difference in comprehension of metaphorical expressions on the historical level where Italians were expected to perform better than Australians. This hypothesis was fully supported through both the numerical and categorical analysis, as well as the regression analysis where it was confirmed that Italians performed significantly better than Australians at the historical level.

Finally, H3 assumed that between both groups, smaller differences would be found at the situated and universal levels compared to larger differences at the historical level. This was generally the case but the regression showed the need for qualifications: while there was a significantly smaller difference between the two

groups at the situated level compared to the historical level, the Italians performed significantly better than the Australians on the universal level as well. This result is unexpected and there are many factors that might have led to it. In order to explain it properly further testing would be needed but some speculations can be here made.

It is possible that the results of the Australian group, generally lower on each level, are caused by less familiarity with Dante's work itself and, as a consequence, Italians are more prone to choose the metaphorically correct answer as they have read the work before, discussed it at school etc. This consideration could prove to be problematic for the study as it did not control for familiarity with the text. However, there are different counterarguments to this critique: firstly, for all Italian participants, the study of Dante's *Inferno* dates back to at least five years for the youngest participant and up to forty years for the oldest. This is a fairly long time and it is therefore very unlikely that participants remember the "correct" answers from their studies. Moreover, in Italian schools the *Inferno* is not read in its entirety so it is highly probable that participants have never read some of the quotations of the text that figured in the questionnaire.

Secondly, if Italian participants were indeed primed to choose the correct answers because of their studies, that would not explain why many performed poorly with the metaphors on the situated level, for which school-based familiarity would be most essential.

Thirdly, although it is plausible to say that interpretation of metaphors in Dante's *Inferno* is easier for Italian participants because of their background, it is possible that, in this specific context, at the universal level, where inference-based or mapping based interpretation can be common to both groups, there is an extra advantage for Italians which share the cultural code of the author to a greater extent than the Australians.

5.2 Independent variables

Age and gender were the two main independent variables taken into account in the regression analysis.

Gender distribution was consistent between the two groups and it was shown to be non-significant for the results in the regression analysis. This means that the gender of the participant did not influence their performance.

Age, on the other hand, was significant for the results with younger participants performing better than the older ones. This result was rather surprising because, although not present in the hypotheses, the expectation was for older participants to perform better because of more life-experience and cultural knowledge. It can be speculated that this result might be due to younger participants knowing better how to deal with poetry and its interpretation because of their more recent studies while older participants might not be accustomed anymore to this kind of task, unless they have a specific interest in poetry which is a variable the study does not account for. This would be a speculation that favours the role of codes for metaphor interpretation. However, as age was significant for both groups, one could also speculate that faster inferences were what gave younger participants an advantage, as there are many theories such as the processing-speed theory of cognitive aging phenomena (Salthouse, 1996) that show a correlation between age and cognitive processing.

Although age and gender are the only independent variables that were analysed in the study, there are others that might need to be accounted for in further research. Familiarity with Dante's work, as mentioned in Section 5.1, is one of these, along with the religious background of the participant. Religion, in fact, could be shown to be a significant factor in interpreting metaphors at the historical level. The Italian participants all came from a religious background and Italian culture in general is influenced by Christian doctrine and ideas. The Australian participants, on the other hand, were not controlled for religion so it is possible that, within the group, Christian participants performed better than others. Religious background is, however, a delicate matter and, as this information can be considered sensitive, many participants omitted it in their questionnaire so it hasn't been possible to properly analyse it as an independent variable.

Finally, concentration and commitment to the task and the choice of some answers by chance constituted, for sure, an influencing factor. This, however, is something that cannot be controlled with a method such as the questionnaire.

5.3 Relation to theories of metaphor and cognitive semiotics

The purpose of this study was to investigate different theories of metaphor and apply them to different kinds of interpretation of metaphorical expressions. Starting from a theoretical background that defined two main theories of metaphor: (a) as a universal phenomenon based on inferences on one hand and (b) as a conventional phenomenon based on codes on the other hand, a distinction between three kinds of metaphors was proposed following Coseriu's Integral Linguistics (Coseriu, 1985; Zlatev, 2011), with its three levels of knowledge (see tables 1 and 2). It was proposed that three different kinds metaphorical expressions may be predominantly linked to knowledge on one of these levels: one kind of metaphors, at the universal level, are based on universal knowledge and bodily experiences; A second kind, at the historical level, are based on cultural knowledge and codes and a third kind, at the situated level, are based on specific knowledge and require both codes and inferences.

Overall, the general hypotheses in Section 2.4 were supported by the results of the study and have given some interesting insights into the different theories of metaphor. The two groups of participants, selected for the experimental phase, were geographically, linguistically and culturally very different. Both groups performed very well at the universal level and, although the regression analysis showed some inconsistencies addressed in Section 5.1, the good performance of the Australians strongly suggests that, for metaphors at the universal level, there is a relatively low level of encoding, whether cultural or more specific. Therefore, this finding supports the claim that there are some metaphorical expressions that are largely based on universal embodied experiences (Lakoff & Johnson, 1980; Grady, 1997). Moreover, as they are less dependent on codes, the interpretation of such metaphors seems to depend more on inferences and in this specific case, on inferences requiring a low cognitive effort (Sperber & Wilson, 1995; Ferretti & Adornetti, 2016). At the same time, the finding that the Italians were nevertheless better than the Australians in

understanding this kind of metaphors shows that the role of cultural codes should not be fully dismissed.

Furthermore, the results for the metaphors at the historical level show an even stronger effect of culture. In this case, the Italians performed significantly better than Australians and this seems to confirm that, for this metaphor kind a cultural shared code is essential for interpretation. These results give substantial support to some aspects of the code model of meaning (Eco, 1976; Jakobson, 1971) and to the identification of metaphor as a conventional, more than universal, phenomenon (Zinken, 2007).

Results for the third kind of metaphors at the situated level showed a generally poorer performance by both groups, very much as expected. In table 2 it was proposed that these metaphorical expressions presuppose a high level of specific coding as well as a high level of inferences and cognitive effort. They are considered encoded as their creation is dependent on conventional rules but they are not considered *culturally* coded because their interpretation does not depend on cultural knowledge but on “secret” codes that allow correct interpretation only for insiders. They are also considered to depend partially on inferences but, unlike metaphors at the universal level, require a high cognitive effort to be interpreted. The fact that both Italians and Australians performed poorly for this kind of metaphors is evidence against the universal model of metaphor and more in favour of the conventional model. However, the fact that, even within a strict code, both groups managed to interpret some of the metaphors correctly suggests that inference, and not codes alone, also played an important role. Thus, independently from the metaphor kind, codes and inferences are constantly combined to different degrees in order to allow interpretation.

To summarise, the empirical study has shown that the subdivision of metaphors in three kinds, corresponding to the levels of Coseriu’s theory, can be given empirical support. Theoretically, this supports the position that universal and conventional theories of metaphor can and should be combined, supporting Zlatev and Blomberg’s (2016) proposal that metaphors are both a cognitive and linguistic phenomenon that combines universal and conventional features.

This thesis is relevant for the field of cognitive semiotics for several different reasons. Firstly, it recognizes metaphor as a cognitive process as much as a linguistic

one and therefore integrates both cognitive and linguistics aspects. Moreover, it finds its roots in Husserl's phenomenology where "the basic idea is to depart from experience itself and to provide descriptions of phenomena of the world, including ourselves and others, as true to experience as possible" (Zlatev, 2015: 1060). Although knowledge is always related to a subject, this does not presuppose any strict subjectivism as what we experience is always communicable. The concept of intersubjectivity, central in phenomenology, is adopted in this thesis both with a pre-linguistic character, as to motivate shared bodily experiences (Zlatev & Blomberg, 2016), and with a linguistic character as to motivate conventional meanings negotiated by a group of people. On this line of thought, intersubjectivity therefore plays a central role in all the three proposed kinds of metaphors.

Secondly, from a methodological point of view, it presents a conceptual-empirical spiral (Zlatev, 2015) where both conceptual and empirical issues are presented in a way in which the empirical research departs from certain concepts (e.g. code, convention, inference) while also providing new insights on them. This therefore creates a constant loop in which both parts continuously benefit from the interaction. Moreover, the study also follows Zlatev's (2015) methodological triangulation where, in the experimental phase, first person (author's intuition as a native speaker) second person (author's intuition as a culture member) and third person (objective results based on the questionnaire) are combined. Finally, this thesis also presents an interdisciplinary study of a phenomenon by combining theories of semiotics, theories of communication and theories of metaphor in its theoretical background.

6. Conclusions

This thesis aimed at investigating the interpretation of metaphorical expressions in Dante's *Inferno*.

Generally speaking, the acknowledgment of two main theories of metaphor as universal and based on inference (Lakoff & Johnson, 1980; Grady, 1997; Sperber & Wilson, 1995; Ferretti & Adornetti, in press) or as conventional and based on codes (Eco, 1976; Jakobson, 1971; Zinken, 2007) did not serve the purpose of supporting one of the two but more to underline that both have strengths and weaknesses and that they can be integrated to account for a complex phenomenon such as metaphor. The study supports Zlatev and Blomberg's (2016) proposal that metaphor is both a cognitive and linguistic phenomenon and integrates both universal bodily experiences and conventions. The possibility of integrating different theories was used as the basis for the original for this thesis proposal of a distinction between three different kinds of metaphorical expressions based on three different levels of knowledge, following the lead of Coseriu's matrix (1985) (see table 2). Although metaphors have been widely recognized as a complex phenomenon and their nature has been openly debated, this subdivision in three kinds that presupposes the integration of universalist and conventionalist theories may be considered a new way of looking at and interpreting metaphorical expressions.

On an experimental level, the proposed distinction has been applied in a study where Australians and Italians were asked to interpret metaphorical expressions in quotations from Dante's *Inferno*. This small-scale experiment seems to support not only the validity of this three-levels system but also that there are indeed different kinds of metaphors that need to be interpreted in different ways. For some of them it is more important to rely on universal bodily experiences and inferences, for others it is necessary to rely more on conventional cultural codes and for a third kind it is necessary to rely both on conventional codes and inferences. Therefore, the results of the experimental study seem to support the claim that there is not one theory that prevails over the others but that the best way to investigate such a complex phenomenon as metaphor is to integrate different theories and use them to account for different features of the this phenomenon.

It is important to acknowledge that the proposal of the three kinds of metaphors has to be seen as an indication of how different factors, integrated to different degrees, play an important role in metaphor comprehension. For the sake of the experimental study, which presupposed a mostly quantitative analysis of the results, this subdivision had to be interpreted very schematically in order to classify examples as belonging to one of the three kinds. From a theoretical point of view, however, such distinction of kinds of metaphor is not as clear-cut.

To conclude, this thesis has validated many of its claims even though, for further research, some have to be revised and more factors (considered here as independent variables) need to be accounted for. It constitutes, however, a valid starting point for a deeper qualitative research regarding the cognitive processes that are behind the answers of the participants. A possible way to continue the study would be, for example, to conduct follow up interviews with the participants to ask them questions regarding their choice of answers and address variables that might have been partially neglected in the questionnaire, such as religion and religious background which deserves to be taken into higher consideration as a variable that could have influenced the results. However, although only the surface of such a complex phenomenon has been scratched, the results of this study have been overall satisfying and consistent with both the general and specific hypotheses formulated.

References

- Alighieri, D. (2014). *La Divina Commedia: Inferno*. Milan: Mondadori.
- Ariani, M. (2009). *La metafora in Dante. Volume 358 of Biblioteca dell'Archivum romanicum* Michigan: L.S. Olschki Editore.
- Caesar, M. (1999). *Umberto Eco: Philosophy, Semiotics and the Work of Fiction*. Cambridge UK: Polity press.
- Cambridge Advance Learner's Dictionary (2008). Cambridge University Press.
- Cary, H. F. (1998). *Dante: The Inferno*. Wordsworth classics of world literature. Herfordshire: Wordsworth Editions Limited.
- Chandler, D. (2007) *Semiotics: the basis. Second Edition*. London: Rourledge.
- Coseriu, E. (1985). Linguistic competence, what is it really? *The Modern Language Review*, LXXX, p. XXV-XXXV.
- Eco, U. ([1968] 2012). *La struttura assente: la ricerca semiotica e il metodo strutturale*. Milan: Bompiani editore.
- Eco, U. (1976). *A theory of semiotics*. Bloomington: Indiana University Press.
- Ferretti, F, & Adornetti, I. (in press). Mindreading, mind-travelling and the proto-discursive origins of Language. In J. Zlatev, G. Sonesson & P. Konderak (eds), *Meaning, mind and communication: Explorations in cognitive semiotics*. Frankfurt am Main: Peter Lang.
- Finazzi, S. (2013). La metafora nella tradizione testuale ed esegetica della Commedia di Dante: problemi ecdotici e ricerca delle fonti. *Volume 18 of Filologia e ordinatori*. Florence: Cesati.
- Grady, J.E. (1997). Foundations of meaning: primary metaphors and primary scenes. Berkley: PhD Dissertation, University of California.
- Hardwick, C. (1977). *Semiotic and Significs: the correspondence between Charles S. Peirce and Victoria Lady Welby*. Bloomington: Indiana University Press.
- Jakobson, R. (1965). Quest for the essence of language. *Diogenes* 51, 22-38
- Jakobson, R. (1971). Linguistics in relation to other sciences, in *Selected Writings II: words and language*, 655-96 Paris: Mouton.

- Lakoff, G. & Johnson, M. ([1980] 2003). *Metaphors we live by*. Chicago: The University of Chicago Press.
- Lakoff, G. & Johnson, M. (1999). *Philosophy in the flesh: the embodied mind and its challenges to western thought*. New York: Basic books.
- Miller, G. A. (1951). *Language and Communication*. New York: McGraw-Hill
- Nöth, W. (1990). *Handbook of semiotics*. Bloomington: Indiana University Press.
- Peirce, C. (1931). *The collected papers of C.S. Peirce*, vols 1-6 ad Charles Hartshorne and Paul Weiss. vols 7-8. Ed A.W. Burks, Cambridge: Harvard. Prior, Arthur.
- Pinsky, R. (1996). *The Inferno of Dante: a New Verse Translation, Bilingual Edition*, trade paperback ed. New York: Farrar, Straus and Giroux.
- Richards, I. A. (1936). *The philosophy of rhetoric*. Oxford: Oxford University Press.
- Salthouse, T. A. (1996). The processing-speed theory of Adult Age Differences in Cognition. *Psychological review* 103 (3), 403-428.
- Saussure, F. de (1916). *Course in general linguistics*. Wade Baskin translation (1959), New York: Philosophical library (XV-XX)
- Sonesson, G. (1989). *Pictorial concepts*. Lund: Lund University Press
- Sperber, D. & Wilson, D. (1995) *Relevance, communication and cognition*, Oxford: Blackwell.
- Zinken, J. (2007). Discourse metaphors: the link between figurative language and habitual analogies. *Cognitive Linguistics*, 18(3), 445-466
- Zlatev, J. (2011) From cognitive to integral linguistics and back again. *Intellectica*, 56(2), 125-147.
- Zlatev, J. (2015) Cognitive semiotics. In Trifonas, P. (ed.), *International handbook of semiotics*, 1043–1067. Dordrecht, Netherlands: Springer.
- Zlatev, J. & Bloomberg, J. (2015) Language may indeed influence thought. *Frontiers in psychology* 6:1631.
- Zlatev, J. & Bloomberg, J. (2016) Embodied intersubjectivity, sedimentation and non-actual motion expressions. *Nordic Journal of Linguistics*, 39(2), 1-24.
- Zolesi, E. (2002) *La divina commedia commentate da Ettore Zolesi, vol I Inferno.*, Roma: Armando Editore.

Appendix A: Questionnaire in English

Instructions: answer to the following questions by choosing the option that you think is best, based on your interpretation of the provided passages.

Question 1

- Context: Dante's journey through Hell is about to begin; the incipit of the book Inferno gives an indication of how and why this journey has begun in the first place.
- Quote: *In the middle of the path of our lives, I found myself in a **dark wood**, that the direct way was lost. It is a hard thing to speak of, **how wild, harsh and impenetrable that wood was**, so that thinking of it recreates the fear* (Chapter 1, v 1-6)
- Question: What does *the dark wood* represent?
- Answers:
 - (a) A hard time in Dante's life
 - (b) A moment of solitude
 - (c) A place where one is lost

Question 2

- Context: Dante and Virgil see many sinners whose appearance is disguised by flames that surround and move with them. Every soul hides itself behind the fire that is burning it.
- Quote: *Each of those flames moved, along the throat of the ditch, for none of them show the theft, but every flame steals a sinner. (...) And the guide, who saw me so intent, said: '**the spirits are inside those fires: each veils himself in that which burns him**.* (Chapter 26, v 40-42, 46-48)
- Question: What do you think this punishment is for?
- Answers:
 - (a) Greed
 - (b) Heresy
 - (c) Fraud

Question 3

- Context: At the beginning of his journey, Dante is alone as he is trying to climb up a mountain. Three animals are blocking his path.
- Quote: *But look! Right near the upgrade of the climb, **loomed a fleet and nimble-footed leopard**. With coat completely covered by dark spots! He did not flinch or back off from my gaze But blocking the path that lay before me, Time and again he forced me to turn around* (Chapter 1, v 31-36)
- Question: what do you think the animal symbolizes?
- Answers:
 - (a) Fraud
 - (b) Aggression
 - (c) Cowardice

Question 4

- Context: After passing the gate of hell and Minos, Dante and Virgil come to the first group of sinners that are being carried by the wind without ever having the possibility to stop.
- Quote: *And, as their wings carry the starlings, in a vast, crowded flock, in the cold season, so that **wind carries the wicked spirits, and leads them here and there**, and up and down. No hope of rest, or even lesser torment, comforts them* (Chapter 5, v 40-45)
- Question: What do you think this punishment is for?
- Answers:
 - (a) Lust
 - (b) Indecisiveness
 - (c) Rage

Question 5

- Context: In the wood where the suicides are located, the mythological figures of the Harpies live. They have the body of birds and the face of women.
- Quote: *Here the brutish Harpies make their nests, they who chased the Trojans from the Strophades, with dismal pronouncements of future tribulations. They have broad wings, and human necks and faces, clawed feet, and large feathered bellies, and they make mournful cries in that strange wood.* (Chapter 13, v 10-15)
- Question: What do you think the figure of the Harpies represent?
- Answers:
 - (a) Violence
 - (b) Regret
 - (c) Lust

Question 6

- Context: Dante and Virgil come to a river where the souls of the sinners are waiting to be transferred to the other shore by the ferryman Charon in order to be punished for what they have done in life.
- Quote: *And my guide said to him: 'Charon, do not vex yourself: it is willed there, where what is willed is done: ask no more.' Then the bearded cheeks, of the ferryman of the livid marsh, who had **wheels of flame** round his eyes, were stilled.* (Chapter 3, v 94-99)
- Question: What do you think the expression “wheels of flame” represents?
- Answers:
 - (a) Anger
 - (b) Heat
 - (c) Sadness

Question 7

- Context: Dante and Virgil reach a wood full of sorrow where sinners are turned in to leafless trees and they are condemned to be tormented by birds that build their nests on them.
- Quote: *Then I stretched my hand out a little, and broke a small branch from a large thorn, and its trunk cried out: 'Why do you tear at me?' And when it had grown dark with blood, it began to cry out again: 'why do you splinter me? Have you no breath of pity? **We were men, and we are changed to trees*** (Chapter 13, v 31-37)
- Question: What do you think this punishment represents?
- Answers:
 - (a) Suicide
 - (b) Lust
 - (c) Inaction

Question 8

- Context: Dante and Virgil reach the entrance of hell where they find a demoniac representation of Minos who sends the souls to different circles by wrapping his tail around him many times as the number of the circle he intends to send them to.
- Quote: ***There Minos stands, grinning horribly**, examines the crimes at the entrance, judges, and sends the guilty down according to his sins. (...) A multitude always stand before him, and go in turn to be judged, speak and hear, and then they go downwards* (Chapter 5, v 4-6, 13-15)
- Question: What do you think the figure of Minos represents?
- Answers:
 - (a) Justice
 - (b) Power
 - (c) Faith.

Question 9

- Context: Dante is asking Virgil if anyone else ever did the journey they are doing. Virgil answers that he did it once before in order to go and see the circle that hosts those who betrayed Jesus.

- Quote: *My flesh had only been stripped from me a while when she forced me to enter inside that wall, to bring a spirit out of the circle of Judas. That is the deepest place, and the darkest, and the furthest from that sky that surrounds all things.*(Chapter 9, v 25-29)
- Question: How would you interpret the meaning of “*My flesh had only been stripped from me a while*”?
- Answers:
 - (a) I had just died
 - (b) I had just been hurt
 - (c) I had just transcended into a soul

Question 10

- Context: Dante and Virgil descend to the second circle where Minos divides the souls based on the sins they have committed.
- Quote: *Now the mournful notes begin to reach me, now I came where much crying hits me. I came to **the place that is deprived of any light**, that resounds like the sea during a storm if it is buffeted by warring winds* (chapter 5, v 25-30)
- Question: How would you interpret the meaning of *the place that is deprived of any light* in this context?
- Answers:
 - (a) A place of sorrow
 - (b) A place of darkness
 - (c) A place of hope

Question 11

- Context: Dante and Virgil are about to exit hell in order to proceed further in their journey.
- Quote: *The guide and I entered by that hidden path, to return to the bright world: and, not caring to rest, **we climbed up**, he first, and I second, until, through a round opening, I saw the beautiful things that the sky holds: and **we came out to see, again, the stars**.* (Chapter 34, v 133-139)
- Question: How would you interpret their ascent?
- Answers:
 - (a) As coming back to earth
 - (b) As climbing a mountain
 - (c) As journey towards what is good

Question 12

- Context: Dante’s journey through Hell is about to begin; the incipit of the book inferno gives an indication of how and why this journey has begun in the first place.
- Quote: *In the middle of the path of our lives, I found myself in a dark wood, **that the direct way was lost**. It is a hard thing to speak of, how wild, harsh and impenetrable that wood was, so that thinking of it recreates the fear* (Chapter 1, v 1-6)
- Question: How would you interpret the meaning of “*the direct way*”?
- Answers:
 - (a) Happiness
 - (b) Faith
 - (c) Ease

Question 13

- Context: At the beginning of his journey, Dante is alone as he is trying to climb up a mountain. Three animals are blocking his.
- Quote: ***And then a wolf stalked**, ravenously lean, Seemingly laden with such endless cravings, that she had made many live in misery! She caused my spirits to sink down so low, from the dread I felt in seeing her there I lost all hope of climbing to the summit* (Chapter 1, v 49-54)
- Question: What do you think the wolf represents in this context?
- Answers:
 - (a) Theft
 - (b) Indulgence

(c) Cruelty

Question 14

- Context: Dante and Virgil are looking at sinners and while Virgil is speaking, Dante wants to ask him to tell him some of the names of the souls that are in front of them.
- Quote: *And I said: 'Master, your speeches are so sound to me, and so hold my belief, that any others are like faded coals.* (Chapter 20, v 100-105)
- Question: How would you interpret the meaning of *faded coals* in this context?
- Answers:
 - (a) Hard to understand
 - (b) Boring
 - (c) Without value

Question 15

- Context: Dante and Virgil witness the punishment of a group of sinners that are half covered in mud and they beat themselves with different parts of their bodies.
- Quote: *And I who stood there, intent on seeing, saw muddy people in the fen, naked, and all with the offended look. **They were striking themselves, not only with hands, but head, chest, and feet,** hurting themselves with their teeth, bite by bite* (Chapter 7, v 109-114)
- Question: The act of hitting oneself represents which one of these sins?
- Answers:
 - (a) Rage
 - (b) Self harm
 - (c) Gluttony

Appendix B: Questionnaire in Italian

Istruzioni: rispondi alle seguenti domande selezionando l'opzione che pensi sia più appropriata a seconda della tua interpretazione dell'estratto proposto.

Domanda 1

- Contesto:** Il viaggio di Dante attraverso l'Inferno sta per cominciare. L'inizio dell'opera fornisce degli indizi riguardo al motivo per cui Dante ha intrapreso questo viaggio.
- Estratto:** *Nel mezzo del cammin di nostra vita mi ritrovai per una selva oscura, ché la diritta via era smarrita. Ahi quanto a dir qual era è cosa dura esta selva selvaggia e aspra e forte che nel pensier rinnova la paura!* (Canto 1, v 1-6)
- Domanda:** Che cosa rappresenta una selva oscura?
- Risposte:**
 - (a) Un periodo difficile della vita di Dante
 - (b) Un momento di solitudine
 - (c) Un posto dove ci si perde

Domanda 2

- Contesto:** Dante e Virgilio si trovano davanti a dei peccatori la cui figura è nascosta da fiamme che li circondano e si muovono con loro. Ogni peccatore è nascosto da ciò che lo fa bruciare.
- Estratto:** *tal si move ciascuna per la gola del fosso, ché nessuna mostra 'l furto, e ogne fiamma un peccatore invola. (...)E 'l duca, che mi vide tanto atteso, disse: "Dentro dai fuochi son li spirti; catun si fascia di quel ch'elli è inceso"* (Canto 26, v 40-42, 46-48)
- Domanda:** Cosa pensi che questa punizione rappresenti?
- Risposte:**
 - (a) Avarizia
 - (b) Eresia
 - (c) Frode

Domanda 3

- Contesto:** All'inizio del suo cammino, Dante cerca, da solo, di scalare una montagna. Tuttavia, tre animali bloccano il passaggio.
- Estratto:** *Ed ecco, quasi al cominciar de l'erta, una lonza leggera e presta molto, che di pel macolato era coverta; e non mi si partia dinanzi al volto, anzi 'mpediva tanto il mio cammino, ch' i' fui per ritornar più volte vòlto.* (Canto 1, v 31-36)
- Domanda:** Cosa pensi che l'animale rappresenti?
- Risposte:**
 - (a) Frode
 - (b) Violenza
 - (c) Codardia

Domanda 4

- Contesto:** Dopo aver superato l'entrata dell'Inferno e Minosse, Dante e Virgilio raggiungono il primo gruppo di peccatori che vengono trasportati dal vento senza la possibilità di fermarsi.
- Estratto:** *E come li stornei ne portan l'ali nel freddo tempo, a schiera larga e piena, così quel fiato li spiriti mali di qua, di là, di giù, di sù li mena; nulla speranza li conforta mai, non che di posa, ma di minor pena.* (Canto 5, v 40-45)
- Domanda:** Cosa pensi che questa punizione rappresenti?
- Risposte:**
 - (a) Lussuria
 - (b) Indolenza
 - (c) Rabbia

Domanda 5

- Contesto:** Nella foresta dove i suicidi puniti, vivono anche le Arpie. Esse hanno il corpo di uccello e il viso di donne

- Estratto:** *Quivi le brutte Arpie lor nidi fanno, che cacciar de le Strofade i Troiani con tristo annunzio di futuro danno. Ali hanno late, e colli e visi umani, piè con artigli, e pennuto 'l gran ventre; fanno lamenti in su li alberi strani.* (Canto 13, v 10-15)
- Domanda:** Cosa pensi che le Arpie rappresentino?
- Risposte:**
 - (a) Violenza
 - (b) Rimpianto
 - (c) Lussuria

Domanda 6

- Contesto:** Dante e Virgilio giungono a un fiume dove le anime dei peccatori sono in attesa di essere trasportate all'altra riva dal traghettatore Caronte in modo essere puniti per i peccati che hanno commesso in vita.
- Estratto:** *E 'l duca lui: "Caron, non ti crucciare: vuolsi così colà dove si puote ciò che si vuole, e più non dimandare". Quinci fuor quete le lanose goteal nocchier de la livida palude, che 'ntorno a li occhi avea di fiamme rote* (Canto 3, v 94-99)
- Domanda:** Che cosa pensi che l'espressione *fiamme rote* rappresenti?
- Risposte:**
 - (a) Rabbia
 - (b) Caldo
 - (c) Tristezza

Domanda 7

- Contesto:** Dante e Virgilio raggiungono una foresta dove odono molti pianti. Qui i peccatori vengono trasformati in alberi spogli e sono costantemente tormentati da uccelli che costruiscono nidi sui loro rami.
- Estratto:** *Allor porsi la mano un poco avante e colsi un ramicel da un gran pruno; e 'l tronco suo gridò: "Perché mi schiante?". Da che fatto fu poi di sangue bruno, ricominciò a dir: "Perché mi scerpi? non hai tu spirto di pietade alcuno? Uomini fummo, e ora siam fatti sterpi.* (Canto 13, v 31-37)
- Domanda:** A quale peccato assoceresti questa punizione?
- Risposte:**
 - (a) Suicidio
 - (b) Lussuria
 - (c) Indolenza

Domanda 8

- Contesto:** Dante e Virgilio raggiungono l'entrata dell'Inferno dove si trovano di fronte alla rappresentazione demoniaca di Minosse. Minosse ha il compito di mandare le anime ai rispettivi cerchi infernali e comunica la sua decisione cingendo la coda intorno al suo corpo tante volte quante il numero del cerchio.
- Estratto:** *Stavvi Minòs orribilmente, e ringhia: esamina le colpe ne l'intrata; giudica e manda secondo ch'avvinghia. (...) Sempre dinanzi a lui ne stanno molte: vanno a vicenda ciascuna al giudizio, dicono e odono e poi son giù volte.* (Canto 5, v 4-6, 13-15)
- Domanda:** Che cosa pensi che la figura di Minosse rappresenti?
- Risposte:**
 - (a) Giustizia
 - (b) Potere
 - (c) Fede

Domanda 9

- Contesto:** Dante chiede a Virgilio se qualcun altro abbia mai intrapreso il suo stesso viaggio. Virgilio risponde che lui stesso si è addentrato nell'inferno in precedenza per vedere il cerchio dove sono punite le anime di coloro che hanno tradito Gesù.

- Estratto: *Di poco era di me la carne nuda, ch'ella mi fece intrar dentr'a quel muro, per trarne un spirto del cerchio di Giuda. Quell'è 'l più basso loco e 'l più oscuro, e 'l più lontan dal ciel che tutto gira: ben so 'l cammin; però ti fa sicuro.* (Canto 9, v 25-29)
- Domanda: Come interpreteresti il significato di “*Di poco era di me la carne nuda*”?
- Risposte:
 - (a) Ero appena morto
 - (b) Ero appena stato ferito
 - (c) Avevo abbandonato il mio corpo per trascendere in un'anima

Domanda 10

- Contesto: Dante e Virgilio discendono al secondo cerchio infernale dove Minosse regna e divide le anime in base ai peccati che hanno commesso in vita.
- Estratto: *Or incomincian le dolenti note a farmisi sentire; or son venuto là dove molto pianto mi percuote. Io venni in loco d'ogne luce muto, che mugghia come fa mar per tempesta, se da contrari venti è combattuto* (canto 5, v 25-30)
- Domanda: come interpreteresti il significato del verso “*loco d'ogne luce muto*” in questo contesto?
- Risposte:
 - (a) Un posto di dolore
 - (b) Un posto buio
 - (c) Un posto di speranza

Domanda 11

- Contesto: Dante e Virgilio stanno per lasciare l'inferno in modo da proseguire con il proprio viaggio.
- Estratto: *Lo duca e io per quel cammino ascoso intrammo a ritornar nel chiaro mondo; e senza cura aver d'alcun riposo, salimmo sù, el primo e io secondo, tanto ch'ì vidi de le cose belle che porta 'l ciel, per un pertugio tondo. E quindi uscimmo a riveder le stelle.* (Canto 34, v 133-139)
- Domanda: Come interpreteresti la loro ascesa?
- Risposte:
 - (a) Come l'arrivo sulla terra
 - (b) Come la scalata di una montagna
 - (c) Come un processo di miglioramento

Domanda 12

- Contesto: Il viaggio allegorico di Dante attraverso l'Inferno sta per cominciare. L'inizio dell'opera fornisce degli indizi riguardo al motivo per cui Dante ha intrapreso questo viaggio.
- Estratto: *Nel mezzo del cammin di nostra vita mi ritrovai per una selva oscura, ché la diritta via era smarrita. Ah! quanto a dir qual era è cosa dura esta selva selvaggia e aspra e forte che nel pensier rinnova la paura!* (Canto 1, v 1-6)
- Domanda: Come interpreteresti il significato de “*la diritta via*”?
- Risposte:
 - (a) Felicità
 - (b) Fede
 - (c) Facilità

Domanda 13

- Contesto: All'inizio del suo viaggio Dante cerca di scalare in solitudine una montagna. Tre animali gli impediscono il passaggio.
- Estratto: *Ed una lupa, che di tutte brame sembiava carca ne la sua magrezza, e molte genti fé già viver grame, questa mi porse tanto di gravezza con la paura ch'uscìa di sua vista, ch'io perdei la speranza de l'altezza.* (Canto 1, v 49-54)
- Domanda: Che cosa pensi che il lupo rappresenti in questo contesto?
- Risposte:

- (a) Furto
- (b) Incontinenza
- (c) Crudeltà

Domanda 14

- Contesto: Dante e Virgilio osservano alcuni peccatori. Nel frattempo Dante chiede alla sua guida alcuni dei nomi delle anime che si trovano davanti a loro.
- Estratto: *E io: "Maestro, i tuoi ragionamenti mi son sì certi e prendon sì mia fede, che li altri mi sarien **carboni spenti**. Ma dimmi, de la gente che procede, se tu ne vedi alcun degno di nota; ché solo a ciò la mia mente rifiede".* (Canto 20, v 100-105)
- Domanda: Come interpreteresti il significato di *carboni spenti* in questo contesto?
- Risposte:
 - (a) Difficile da capire
 - (b) Noioso
 - (c) Senza valore

Domanda 15

- Contesto: Dante e Virgilio assistono alla punizione di un gruppo di peccatori che sono ricoperti di fango e si colpiscono ripetutamente con diverse parti del loro corpo.
- Estratto: *E io, che di mirare stava inteso, vidi genti fangose in quel pantano, ignude tutte, con sembiante offeso. **Queste si percotean non pur con mano, ma con la testa e col petto e coi piedi, troncadosi co' denti a brano a brano.*** (Canto 7, v 109-114)
- Domanda: l'atto di colpirsi ripetutamente rappresenta quale di questi peccati?
- Risposte:
 - (a) Rabbia
 - (b) Autolesionismo
 - (c) Gola

Appendix C: Informed consent in English

Hereby I give my consent to participate in a study for a MA thesis in Cognitive Semiotics, at Lund University, Sweden.

For this purpose, I will first answer a few background questions. Then, I will be given a questionnaire with 15 questions related to interpreting certain passages of Dante's Divine Comedy.

- By my signature below, I certify that:
I understand that my participation is voluntary and I may cancel at any time without having to give any explanation.
- I have received assurance that my personal data will be kept separate from the analysis data.
- I understand that the results of the study - in anonymous form - will be used in academic texts and may be presented at scientific conferences.
- On completion, I will have the opportunity to ask questions about the purpose of the study, and when the thesis is completed, to receive a digital copy of it.

This consent form is signed in two copies, one for me and one for project documentation

Place and date

Signature

Name:

Email (for possible future correspondence):

For more information, please contact Sara Albrici at sara.albrici@hotmail.com

Background information

Name:

Surname:

Age:

Native language/other languages:

Religion:

Educational background:

Familiarity with Dante's work:

Appendix D: Informed consent in Italian

Di seguito do il mio consenso al trattamento dei dati personali per la partecipazione al progetto di ricerca in Cognitive Semiotics presso l'università di Lund, Svezia.

Per questo preciso scopo, risponderò inizialmente ad alcune domande di carattere generale. In seguito, mi verrà proposto un questionario con 15 domande relative all'interpretazione di alcuni estratti della Divina Commedia di Dante.

Con la mia firma certifico che:

- Comprendo l'aspetto volontario della mia collaborazione e la possibilità di sottrarmi a questa senza dover dare alcuna spiegazione.
- Mi è stato assicurato che i miei dati personali verranno tenuti separati dai dati del questionario che rimarrà anonimo.
- Riconosco che i risultati del progetto di ricerca, in forma anonima, verranno usati in testi accademici e potranno inoltre essere presentati durante conferenze e seminari.
- Una volta completato il questionario, mi verrà garantita l'opportunità di fare domande riguardanti l'obiettivo del progetto e, una volta completa, di ricevere una copia digitale della tesi.

Questo documento viene firmato in due copie, una per me e una per la documentazione del progetto.

Luogo e data

Firma

Nome:

Email (per ogni futura necessità)

Per maggiori informazioni, contattare Sara Albrici all'indirizzo email sara.albrici@hotmail.com

Domande generali

Nome:

Cognome:

Età:

Lingua nativa/altre lingue:

Religione:

Educazione:

Familiarità con le opere di Dante: