

The epistemic pragmatics of presupposition effects

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***« We may not be responsible for the world that
created our minds, but we can take responsibility for the
mind with which we create our world.»***

– Gabor Maté

***To my sisters, Saskia and Francesca
And to my sons, Akira and Koyaan***

ABSTRACT

Title: The epistemic pragmatics of presupposition effects (thesis).

Author: Misha-Laura Müller (University of Neuchâtel)

This thesis is devoted to the processing and accommodation of presuppositions in the light of Relevance theory. I emphasize from the start that presuppositions were left aside early on by Relevance theory and need to be reintegrated into the theory, in the light of recent, often major, contributions from this tradition.

The first part outlines the different categories of presuppositions considered, ranging from semantic presuppositions to discursive presuppositions. With regard to semantic presuppositions, I present the main approaches and debates, highlighting the problem of the extreme heterogeneity of this category. As for discursive presuppositions, I provide specific identification criteria for this pragmatic category and identify three distinct levels in which this category is involved: first-order presuppositions being background inferences in the absence of encyclopedic knowledge about concepts, second-order being background inferences based on encyclopedic knowledge about concepts, and third-order being background inferences relating to social hierarchies which enable a specific speech act.

The second part argues that semantic and discursive presuppositions can be conceived as a homogeneous category once their pragmatic effects are closely examined. First, I argue that both semantic and pragmatic presuppositions are triggered by the presumption of relevance that each utterance communicates. While processing the foreground content of an utterance, the addressee enriches the meaning by building hypotheses about the reasons that motivate the utterance. Furthermore, I argue that presupposition effects are relatively less ostensive meanings that need to be taken into account by adding a third dimension to Sperber and Wilson's (2015) diagram. Subsequently, I address the epistemic effects of presupposition accommodation. Building on the seminal work of Sperber et al. (2010) on Epistemic Vigilance, I reconsider presuppositions from a developmental perspective. I argue that presuppositions are "primary inferences",

relevant to the acquisition of knowledge about the world, but that they are gradually relayed to the conversational background. Returning to presuppositions in adult populations, I argue that they contribute more to the *acceptance* of an utterance than to its *comprehension*, highlighting the many cases where the addressee encounters no difficulty in interpreting the utterance when the presupposition turns out to be lacking a referent or even to be false. However, I point out the paradox that such an approach raises when paying attention to the epistemic errors made in famous cognitive illusions, such as the Moses Illusion. Indeed, several experiments in psychology have shown that in some cases the addressee accepts an utterance as relevant while overlooking an obvious error.

The third part addresses specifically the problem of accepting verbal contents that contain an obviously false presupposition. I present various approaches that have attributed to presuppositions a highly persuasive or manipulative power, either because they would allow for plausible deniability or because they would force the incorporation of new beliefs in an unconscious way. I highlight the limitations of these approaches, discussing numerous counterexamples, as well as experimental data that portray the phenomenon in a more nuanced way. Finally, I distinguish three types of accommodation, namely a) conscious accommodations, b) unconscious accommodations *with* epistemic effects and c) unconscious accommodations *without* epistemic effects. To conclude, I suggest a way of resolving the contradiction raised by the acceptance of obviously false presuppositions for the addressee's epistemic vigilance: first, drawing on the distinctions made between different types of accommodation, I point out that only a subset of them raise a problem for the addressee's epistemic vigilance, namely "unconscious accommodation with epistemic effects". Secondly, I emphasize the optimal – and therefore imperfect – nature of processes dedicated to the verification of information. This allows us to reconcile the idea that humans accommodate false information despite their epistemic vigilance.

Keywords: Relevance theory, presuppositions, accommodation, cognitive pragmatics, epistemic vigilance, manipulation, utterance comprehension, presupposition acquisition, epistemic effects.

RÉSUMÉ

Titre : Pragmatique épistémique des effets présuppositionnels.
(thèse)

Autrice : Misha-Laura Müller (Université de Neuchâtel)

Cette thèse est consacrée au traitement et à l'accommodation de présuppositions, à la lumière de la pragmatique cognitive. Je souligne d'emblée que les présuppositions ont été laissées de côté très tôt par la théorie de la Pertinence et qu'elles doivent être réintégrées au sein de la théorie, à la lumière des contributions récentes, souvent majeures, de cette tradition.

La première partie présente les différentes catégories de présuppositions considérées, allant des présuppositions sémantiques aux présuppositions discursives. Concernant les présuppositions sémantiques, je présente les principales approches et débats à leur sujet, soulignant le problème de l'hétérogénéité de cette catégorie. Concernant les présuppositions discursives, je fournis des critères d'identification spécifiques pour cette catégorie pragmatique et j'identifie trois niveaux de présuppositions discursives : les présuppositions de premier ordre sont des inférences d'arrière-plan en l'absence de connaissances encyclopédiques sur les concepts, les présuppositions de deuxième ordre sont des inférences d'arrière-plan basées sur des connaissances encyclopédiques sur les concepts, et les présuppositions de troisième ordre sont des inférences d'arrière-plan basées sur des hypothèses concernant les hiérarchies sociales permettant l'accomplissement d'actes de langage spécifiques.

La deuxième partie de cette thèse soutient que les présuppositions sémantiques et discursives peuvent être considérées comme une catégorie homogène, dès lors qu'on les aborde du point de vue de leurs effets pragmatiques. D'abord, je soutiens que les présuppositions sémantiques et pragmatiques sont déclenchées par la présomption de pertinence que chaque énoncé communique. Dans le processus d'attribution de contenus d'avant-plan, le destinataire enrichit l'information communiquée en faisant des hypothèses sur les raisons qui justifient l'énoncé. En outre, je souligne que les effets présuppositionnels sont relativement moins ostensifs que les contenus faisant partie du vouloir-dire du locuteur. Cela m'amène à discuter la manière dont le continuum de significations plus ou moins ostensives de Sperber et Wilson (2015) pourrait être utilisé pour rendre compte

des effets présuppositionnels. Suite à cela, je présente l'hypothèse de la Vigilance Epistémique de Sperber et al. (2010), mettant l'accent sur la distinction entre la compréhension et l'acceptation d'un énoncé. Dans ce cadre, je présente une hypothèse relative à l'acquisition des présuppositions, dans laquelle je soutiens que les présuppositions sont des contenus de premier plan, pertinents pour la l'acceptation d'un énoncé comme objet digne d'être interprété. Je qualifie donc les présuppositions d'"inférences primaires", soulignant que ces contenus sont fondamentaux dans l'acceptation d'un contenu, mais que leur caractère « élémentaire » les expose à progressivement être relayés à l'arrière-plan conversationnel. Revenant aux présuppositions au sein d'une population adulte, je soutiens que les présuppositions contribuent davantage à l'acceptation d'un énoncé qu'à sa compréhension, soulignant les nombreux cas où le destinataire ne présente aucune difficulté d'interprétation lorsque la présupposition s'avère être dépourvue d'un référent ou lorsqu'elle est simplement fautive. Cependant, je souligne la tension qu'une telle approche soulève dès lors que l'on prête attention aux erreurs épistémiques commises dans les illusions cognitives telles que l'illusion de Moïse. En effet, de nombreuses expériences en psychologie ont montré que le destinataire accepte des énoncés comme pertinents tout en omettant une erreur évidente.

La troisième partie aborde le problème de l'accommodation de présuppositions manifestement fausses. Je présente différentes approches qui ont attribué aux présuppositions un pouvoir de persuasion ou de manipulation, soit parce qu'elles permettraient une rétractation plausible, soit parce qu'elles forceraient l'incorporation de nouvelles croyances de manière subliminale. Je souligne les limites de ces approches, présentant des contre-exemples ainsi que des données expérimentales qui nuancent l'idée selon laquelle l'accommodation est fondamentalement manipulatrice. Enfin, je distingue trois types d'accommodation, à savoir a) les accommodations conscientes de présuppositions, b) les accommodations inconscientes *avec* effets épistémiques et c) les accommodations inconscientes *sans* effets épistémiques. En conclusion de ce chapitre, je résous le paradoxe que pose l'accommodation de présuppositions manifestement fausses pour la vigilance épistémique du destinataire de la manière suivante : premièrement, à partir des distinctions faites entre les différents types d'accommodation, je souligne que seul un sous-ensemble d'entre elles pose un problème pour la vigilance épistémique du destinataire, à savoir « l'accommodation inconsciente avec effets épistémiques ». Deuxièmement, je souligne la nature optimale – et donc imparfaite – des processus dédiés à la

vérification de l'information. Cela permet de réconcilier l'idée que les humains accommodent des présuppositions fausses malgré leur vigilance épistémique.

Mots-clés : théorie de la Pertinence, présupposition, accommodation, pragmatique cognitive, vigilance épistémique, manipulation, compréhension verbale, acquisition de présuppositions, effets épistémiques.

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INTRODUCTION

Presuppositions, again? What more can be said about them? Be it the identification of presupposition triggers, the functioning of presupposition projection, their being semantic or pragmatic, mandatory or optional, processed online or offline, *etc.*, it seems difficult to say anything new about this topic. Presuppositions have been studied from a variety of perspectives: philosophy, semantics, pragmatics, discourse analysis, experimental linguistics.

The key contribution of this thesis is to propose a contemporary and unified approach to presupposition effects from the perspective of Relevance theory. The interest of Relevance theory lies in the tools it offers to explain how information is processed by the addressee, shedding light on phenomena ranging from the acquisition of semantic *vs* pragmatic contents to considerations of discourse, persuasion and manipulation. In particular, Relevance theory makes clear predictions about the processing of pragmatic contents, many of which are confirmed by numerous experimental investigations. Thus, it is reasonable to believe that Relevance theory can provide some insights regarding how presuppositions are processed by the addressee. However, as I shall show, some careful thought is needed to reintegrate presuppositions into Relevance theory, which very early on left out the study of these contents. Thus, the originality of this thesis consists in making a proposal concerning what Relevance theory could say today about these contents, taking into account, of course, some major recent contributions to the study of communication and cognition.

The first articulations of Relevance theory can be found in Deirdre Wilson's thesis, *Presuppositions and non-truth-conditional semantics* (1974), which argues that presuppositions are entailments, that the addressee infers as belonging to the conversational background. Wilson's thesis echoes the more general "presupposition crisis" of the seventies, that lead many researchers to claim that presuppositions are a "myth" (Boër and Lycan, 1976), or only belong to what the speaker takes for granted (Stalnaker, 1970).

Interestingly, presuppositions initiated the very first collaboration between Wilson and Sperber (1979), now famous for having subsequently founded Relevance theory with their seminal book *Relevance, communication and cognition* (1987). However, Relevance theory has devoted only marginal importance to the study of presuppositions, certainly under the influence of their initial idea that presuppositions do not exist as a linguistic category, but would merely be entailments. For Sperber and Wilson (1987), presuppositions should be characterized as “presuppositional effects”, which contribute to relevance by instructing the addressee to spend little effort on information that is presented as given. In this way, presuppositional effects allow the addressee to focus his attention on recovering the speaker’s communicative intention, for which he hopes to get valuable information. Sperber and Wilson (1987) illustrate presuppositional effects by contrasting two utterances, "Bill has a twin sister who lives in Berlin" and "Bill's twin sister lives in Berlin" (Sperber and Wilson 1987, 202). While the first sentence asserts that Bill has a twin sister, the second one presents this information as taken for granted, signaling to the addressee that this information is not relevant to what the speaker wishes to communicate.

Relevance theory soon left presuppositional effects to the side of its main considerations, investing more in the study of other pragmatic inferences (e.g., lexical pragmatic inferences, metaphor, irony, etc.).

Over the past decade, however, presuppositions have enjoyed renewed interest in approaches stemming from Relevance theory. These approaches highlight two noteworthy aspects: first, semantic presuppositions appear to have striking similarities with some implicatures. This can be seen in the example first discussed by Marmaridou (2000), for which one can distinguish a semantic presupposition triggered by the definite description “the umbrella”, and two implicatures which may also relate to background information:

- (1) I took the umbrella.
Semantic presupposition: “There is only one umbrella”.
Implicature:

- a. There is no longer an umbrella at home.
- b. It is raining/ it might rain outside.

(adapted from Marmaridou 2000, 123)

The speaker may utter "I took the umbrella" in order to warn his partner that "there is no longer an umbrella at home". In such case, the speaker would be presupposing, in a pragmatic sense, that "It is raining or it might rain outside". Conversely, the speaker might have wanted to inform his partner that it might rain, but taking for granted that there will be no more umbrella at home.

In *Background Relevance* (2013), de Saussure refers to these background implicatures as being "discursive presuppositions". They differ from Stalnaker's pragmatic presuppositions, in that they are triggered by the sentence (like an implicature) and would be preconditions for the relevance of an utterance (similar to presuppositions). De Saussure (2013, 2014, 2016) shows that Relevance theory is equipped to account for both semantic and discursive presuppositions: in his perspective, both contents share the property of not being "overtly intended as manifest contents" (de Saussure 2013, 181). Note that, shortly before him, Simons (2005) pointed out that some implicatures serve as relevance establishers. She proposes to extend the concept of presuppositions "beyond the range of linguistically triggered presuppositions" (Simons 2005, 21). Thus, in the first part of this essay, I evaluate the plausibility of the hypothesis that the addressee processes semantic and discursive presuppositions in a similar way, pointing out that the tools derived from Relevance theory do indeed support this hypothesis.

The second important characteristic of presuppositions that has been highlighted in the recent pragmatic literature is their responsibility for making errors or misjudgments, as attested by numerous experiments in psychology. The hypothesis that presuppositions constitute a cognitive bias is found notably in de Saussure (2013), who argues that the addressee is led to process presuppositions, both semantic and discursive, as if they were true and given information. He recalls the Moses Illusion experiment,

which demonstrates the blindness of participants towards presupposed contents: when people were asked to answer the question "How many animals of each kind did Moses take on the Ark?", they rushed to answer the question, not seeing the error encoded by the presupposition (*i.e.*, it is Noah, and not Moses who took animals on the Ark). Such observations regarding presuppositions, which have been corroborated by numerous other findings in psychology, raise the question of whether these contents are processed in specific ways by the addressee, compared with asserted contents. Do presuppositional effects really constitute a cognitive bias, capable of bypassing the addressee's epistemic vigilance?

Faced with these two important claims, namely the proximity of semantic and discursive presuppositions, as well as their potential correlation with epistemic errors, Relevance theory, as initially formulated, is not equipped to account for such phenomena. Indeed, it is necessary to provide an update, a "Relevance theory 2.0", that would take into account the major contributions of Epistemic Vigilance (Sperber et al., 2010) and their reconsideration of meaning (Sperber and Wilson, 2015). In this way, I hope, presuppositions can find a more coherent place within a theory of communication and cognition.

The present work defends three main claims about presuppositions. The first one relates to semantic and discursive presuppositions, the second to the link between presuppositions and cognitive biases, and the third to presupposition "accommodation", namely contexts in which the addressee is unaware of the presupposed content, requiring an eventual update of previous beliefs.

CLAIM 1: Semantic and discursive presuppositions are processed by the addressee in a similar way:

- Presuppositions are, at a first stage, "primary inferences", highly relevant for the acquisition of world knowledge. However, it is precisely this elementary property of presuppositions that exposes them to being progressively relayed into the background of the addressee's cognitive environment.

- The acquisition of different types of presupposition depends not on their semantic or pragmatic nature, but on the cognitive skills required to identify them.

CLAIM 2: Semantic and discursive presuppositions do not constitute a cognitive bias.

- The difficulties in detecting errors can be explained by the addressee's expectations of relevance, which lead him to process the presupposition less thoroughly.
- Other important parameters, such as lexical and stereotypical features, are responsible for potential errors in information processing.

CLAIM 3: Presuppositions accommodation begins with lexical inferences and ends when relevance expectations are met.

- So defined, accommodation may not be a process distinct from the relevance-guided comprehension heuristic.
- Accommodation goes beyond semantic presuppositions, also including discursive presuppositions.
- Three levels of accommodation can be distinguished: conscious accommodation with the integration of a new belief, and unconscious accommodation with or without the integration of a new belief.
- Concept broadening may be able to explain the Moses Illusion, where “Moses” is merely interpreted as meaning "a biblical character", making the lexical entry “Noah” less easy to detect as being false.

Importantly, the approach I suggest runs against an idealization of communication, in which the speaker and the addressee could actually achieve a complete mutual understanding. Although such idealization is crucial in a formal approach, it would not do justice to the way in which the addressee actually processes the information. As Sperber and Wilson

emphasize, a theory of communication should be able to account for the reasons why an act of communication also carries the risk of not succeeding. In some cases, as they argue, “what is aimed at [...] is a degree of cognitive alignment, not a duplication of precise contents” (Sperber and Wilson 2015, 147).

This dissertation sheds new light on presuppositions, using the tools of Relevance theory. The reader will understand that the interest of such an approach lies more in the new questions it raises than in the answers it suggests. The itinerary I propose is as follows:

Part 1 outlines the different categories of presuppositions considered, ranging from semantic presuppositions to discursive presuppositions. I begin with an overview of the foundational works on presuppositions (*i.e.*, Frege, Russell and Strawson). I emphasize the extent to which early approaches delimited presupposition theory in logical terms, rather than in psychological terms. As a result, the study of presuppositions focused exclusively on grammatical constraints, and did not consider information processing.

I then move on to the “pragmatic turn” of presuppositions, presenting Stalnaker’s (1975) concept of “pragmatic presupposition”, discussing the links between this approach and a cognitive pragmatic one. In addition, I present the objections of Boër and Lycan (1976) as well as of Wilson (1974) to the notion of presupposition. Both argue that presuppositions do not exist as a linguistic category but are merely a pragmatic phenomenon.

Finally, I introduce “discursive presuppositions” (de Saussure 2013), which are triggered by the utterance as a whole, and not by a lexical item or syntactic structure. I provide specific identification criteria for this pragmatic category and identify three levels of discursive presuppositions: a) first-order discursive presuppositions, namely background inferences in the absence of encyclopedic knowledge about concepts, b) second-order discursive presuppositions, that is, background inferences based on encyclopedic knowledge about concepts, and c) third-order discursive presuppositions, which are background inferences based on hypotheses

about social hierarchies allowing for the performance of specific speech acts. I conclude this chapter by showing to what extent both semantic and discursive presuppositions can be construed as comparable cues from the listener's perspective, in that they are both perceived as poorly relevant information while still being crucial for the acceptance of the utterance.

Part 2 presents semantic and discursive presuppositions as triggered by the presumption of relevance. I argue that presupposition effects can be considered as a homogenous category when considering that they both contribute to the acceptance of an utterance as relevant. Furthermore, I point out that presupposition effects are relatively less ostensive than intended meanings. This justifies the addition of a third dimension in Sperber and Wilson's (2015) diagram of showing-meaning, namely that of a more or less ostensive continuum (Müller, 2021). Subsequently, I present the Epistemic Vigilance hypothesis of Sperber *et al.* (2010), emphasizing the distinction between comprehension and acceptance. Within this framework, I reconsider presuppositions from an acquisitional perspective, arguing that they are relevant for acquiring world knowledge. I therefore refer to them as “primary inferences”, stressing that these contents are fundamental in the acceptance of a content, but that their soon to be triviality exposes them to be progressively relayed in the background of the cognitive environment of the addressee. Returning to presuppositions in the adult population, I argue that they contribute more to the *acceptance* of an utterance than to its *comprehension*, pointing to the many instances in which the addressee has no difficulties in understanding a sentence when the presupposition has no referent or when the presupposition is false. However, I point out the tension that such an approach raises when paying attention to the epistemic errors committed in famous cognitive illusions, such as the *Moses Illusion* (*i.e.*, “How many animals of each kind did Moses take on the Ark”).

Part 3 addresses the problem of accepting verbal contents that contains an obviously false presupposition. I present various approaches that have attributed to presuppositions a highly persuasive or manipulative power,

either because they would allow for plausible deniability or because they would force the incorporation of new beliefs in a subliminal way. I highlight the limitations of these approaches, discussing numerous counterexamples, as well as experimental data that present the phenomenon in a more nuanced way. Finally, I distinguish three kinds of accommodation, namely a) conscious presupposition accommodations, b) unconscious accommodations *with* epistemic effects and c) unconscious accommodations *without* epistemic effects. The distinction between these different types of accommodation makes it possible to put into perspective the idea that presuppositions are inherently manipulative, insofar as only unconscious accommodations with epistemic effects are problematic. Furthermore, I emphasize that these manipulative effects do not contradict the addressee's epistemic vigilance, insofar as this information-filtering mechanism functions optimally rather than exhaustively.

METHODOLOGY

Although the last two decades have seen a significant development of experimental approaches to pragmatics, I have opted for a conceptual and theoretical perspective in this dissertation, rooted in Relevance theory.

The methods and postulates of Relevance theory, also known as cognitive pragmatics, are to a large extent rooted in the Chomskyan revolution, which puts “linguistic intuition” forward as an investigative tool, as opposed to the traditional tools of corpus linguistics. In the following paragraphs, I outline the theoretical underpinnings of linguistic intuition and the arguments in favour of its use in linguistic investigations.

Following that, I turn to the experimental approaches that characterize much of contemporary research, arguing that caution should be exercised with regard to the conclusions that can be drawn from experimental work alone. In particular, I stress the importance of remaining critical regarding the theoretical assumptions that underlie experimental investigations, and emphasize the crucial importance of a theoretical approach to presuppositions within Relevance theory.

Linguistic intuition in cognitive pragmatics

Traditionally, linguistic investigations were considered objective only if they were based on corpora. Corpora in linguistics were endowed with the status enjoyed by fossils or human artifacts in paleontology and archaeology. Much like these, linguistic corpora were considered to be the ultimate source of data. Combined with the "comparative method" applied to Indo-European languages (Meillet 1925), the study of corpora was fundamental in the establishment of linguistics as one of the most respected disciplines of the human sciences (Benveniste 1974).

However, the necessity to use corpus for linguistic investigations was first put into perspective by Ferdinand de Saussure, who developed a

synchronic approach to the study of language, conceived as a self-contained system for which the rules needed to be described (F. de Saussure [1916] 2005). De Saussure's contributions provide the basis for a level of abstraction in the study of language, where the linguist focuses on the relationship between language and thought, with the goal of explaining the implicit knowledge that a speaker has of his own language.

Half a century later, Noam Chomsky initiated a second revolution, with the claim that language is a cognitive and innate faculty, which he calls language competence (Chomsky 1957). According to this approach, linguistic intuition, which is characterized by the immediate and spontaneous judgment a speaker makes about grammaticality of his native language, is a transparent symptom of language competence that can be used as an investigative tool (Chomsky 1966, 533; Collins 2020)¹.

Since Chomsky, linguistic intuitions have become an essential tool for linguistics investigations, along with a specific methodology, such as the comparison by minimal pairs and the use of linguistic tests (*e.g.* substitution, insertion, deletion, permutation) for determining constituency. For example, the fact that the pronoun *he* in example (2) substitutes for *my little brother* but not for *my brother* in (3), shows that the sequence *my little brother* in (1) is a single constituent, and cannot be broken down into *my brother* and *little*.

- (1) My little brother loves to draw.
- (2) He loves to draw.
- (3) *He little loves to draw.

Note that the order of adjectives and nouns includes parameters specific to each language, which will themselves be evaluated by linguistic intuition. For example, a native speaker of English will accept only one order of nouns

¹ Linguistic intuition has been the subject of some debate since the foundations laid by Chomsky, particularly with regard to the delimitation between intuitions dealing with syntax and those dealing with semantics. Schindler et al. (2020) reviews the current state of research on these issues.

and adjectives (see (4) and (5)), whereas this parameter allows more flexibility in French (cf. (6) and (7)):

(4) A heavy smoker.

(5) *A smoker heavy.

(6) Un gros fumeur.

[A heavy smoker.]

(7) Un fumeur gros.

[A fat smoker.]

(Thuillier 2013, 8)

It is also worth noting that linguistic intuition can be applied to considerations at the syntactic/semantic interface, as interpretative differences arise from the simple noun-adjective order in French, where the two above sentences are grammatically correct, but have different meanings (cf. (6) [A heavy smoker], as opposed to (7) [A fat smoker]).

Minimal pair comparison, where a pair of sentences differ by only one trait, combined with transformations applied to them, enable linguists to test their hypotheses. A similar methodology can be observed in semantic investigations applied to the projection of presuppositions, known as the "family of sentence test" (Chierchia and McConnell-Ginet 2000, 281). The various operations carried out on sentence (8) became the defining criterion for identifying presuppositions, because they resist entailment-cancelling operators (cf. §1.2.2):

- (8) John has stopped smoking. (assertion)
 - a. John hasn't stopped smoking. (embedded under negation)
 - b. Has John stopped smoking? (embedded under interrogation)
 - c. John might stop smoking. (embedded under a modal)
 - d. If John has stopped smoking, we don't have to provide ashtrays. (embedded in the antecedent of a conditional)

(adapted from Roberts et al. 2009)

Relevance theory – the framework chosen for the present dissertation – is known for having established a fundamental turning point in the explanation of conversational phenomena, following the work of Paul Grice. Their approach is explicitly in line with Chomskyan assumptions, arguing that humans are cognitively equipped, from birth, with the necessary skills to produce pragmatic inferences following universal cognitive principles.

Relevance theory develops hypotheses based on observations of utterances from a variety of sources (e.g., common expressions, newspaper headlines, movie lines, advertising slogans, etc.) and tests them on the basis of linguistic intuition (Drożdżowicz 2020), which would be more appropriate to call "pragmatic intuition" because they relate to the addressee's ability to make spontaneous judgements about the speaker's communicative intention. These pragmatic intuitions are indirectly discussed when Sperber and Wilson reflect on presuppositional effects, arguing that they play on foreground and background effects in the following two utterances:

(9) Bill's twin sister lives in Berlin.

(10) Bill has a twin sister who lives in Berlin.

(Sperber and Wilson 1987, 202)

Upon hearing these two utterances which describe the same facts, the addressee understands that utterance (9) places the proposition "Bill has a twin sister" in the conversational background, whereas it comes to the foreground in utterance (10). When several implicit contents are in competition with each other, further methodological considerations are required, along the lines of those proposed by de Saussure and Oswald (2009), and Oswald (2016), which are discussed in §4.1.3.

Despite the success of this methodological approach, Chomsky's linguistic intuition has been criticized for failing to meet Popper's scientific criterion of falsifiability (Popper [1962] 2014)². However, these approaches have shown scientific rigor in the construction of their hypotheses as well as their ability to make generalizations and predictions. It is particularly at this point that experimental investigations come into play, for which the greatest hopes of testability have been placed.

Hopes and limitations of experimental pragmatics

Relevance theory experienced a fundamental shift with the emergence of experimental pragmatics, allowing one to test the theory's hypotheses. Among the most notable experiments was that of Noveck et al. (2001), which showed that children interpret the scalar term "some" according to a logical reading, where "Some birds have wings" is interpreted as true because it is entailed by "All birds have wings". Thus, children would not make the scalar inference, which is robustly found among adults, for whom "Some birds have wings" is false because they understand it as meaning "Not all birds have wings". This experiment provided evidence in favour of Relevance theory's claim that pragmatic inferences apply at the lexical level.

Another major focus of experimental pragmatics was devoted to testing the differences in processing between metaphors and irony. I shall return to this point later (§3.1.1), emphasizing that these results helped to establish Relevance theory's reputation as being capable of articulating more precise hypotheses than Grice's.

Although experimental pragmatics is a relatively recent field, it is obviously important to discuss the preliminary results obtained in this area, which may shed light on a number of questions relating to pragmatic phenomena, in particular the difference between semantic and discursive

² For example, Waller (1977, 48) argues the following against Chomsky's notion of linguistic intuition: "There is always sufficient latitude for adjustments which will preserve the mentalistic system – no matter what data are offered. And it is precisely this feature of mentalism and mentalistic explanation which reveals its emptiness: it "explains" all possible cognitive phenomena, and thus explains nothing."

presuppositions, which are central to my work. These methods provide insights on the relative processing ease of various presupposition triggers, the memory capacity related to these contents, or possible difficulties in processing information when the presupposed content is not encoded in the context.

However, experimental approaches call for precautions when translating theoretical postulates into experimental predictions. What's more, experimental investigations are not instructive when they test theoretical postulates that turn out, sometimes belatedly, to be wrong (as argued in Müller 2024). It is clear, then, that any linguistic approach requires theoretical and philosophical reconsiderations on how mind and language work together.

As far as experimental investigations on presupposition are concerned, I shall emphasize that it remains difficult to derive any reliable conclusions at this stage, as there is still a serious lack of evidence and study replications.

For all these reasons, the present thesis opts for a theoretical approach, based on the tools of linguistic/pragmatic intuition described above, with the aim of reintroducing presuppositions into Relevance theory. The aim of this work is above all to provide a pragmatic theory of presuppositions which, I hope, will give rise to new perspectives for possible experimental investigations.

PART I: PRESUPPOSITIONS, FROM SEMANTICS TO
PRAGMATICS

« Il est toujours aisé d'être logique. Il est presque impossible d'être logique jusqu'au bout. »

– Albert Camus

Overview

This section introduces the types of contents considered in the present dissertation. Chapter 1 is dedicated to the so-called semantic presuppositions, introducing the fundamental notions for the identification of these contents as well as some problems raised essentially from the point of view of pragmatic approaches. I close the chapter with a discussion of some issues raised in experimental approaches, namely the semantic vs. pragmatic nature of these contents, the question of whether triggers are mandatory or optional and, finally, the question of how the comprehension of these contents is acquired.

Chapter 2 is devoted to a category identified much later in the literature, namely that of discursive presuppositions. I present the key criteria from Relevance theory for characterising these contents. Secondly, I propose various tools to facilitate their identification. In addition, I distinguish three different types of discursive presuppositions as a function of their mobilisation of encyclopedic knowledge about concepts and as a function of the social roles which are presupposed for the performance of a speech act.

This first part provides an overview of the types of content considered in the present work, for which I will seek to put forward a unified approach, using the tools of Relevance theory.

Chapter 1. Semantic presuppositions

1.0. Introduction

The foundational questions about semantic presuppositions are presented within this section. Section 1.1 covers the early discussions related to definite descriptions, introducing Frege's approach to non-referential definite descriptions, followed by the famous Russell-Strawson debate about the implications of non-referential presuppositions on the truth-conditions of a sentence. I emphasize the contrast between Frege's broad initial program and the narrower field that prevailed in semantic approaches until the presuppositional crisis of the 1960s-70s. Indeed, Frege's approach considers both logical and psychological types of presuppositions, whereas the debate between Russell and Strawson is focused on the logical formalization of presuppositions as well as their contribution to the truth conditions of a sentence. It is on this latter line of analysis that most subsequent approaches to presuppositions have been based.

Section 1.2 acquaints the reader with the tools from semantics allowing for their identification and for the study of their projective behaviour (namely, their persistence under the scope of entailment cancelling operators). More specifically, section 1.2.1 is devoted to Strawson's criterion by which presuppositions are preconditions for attributing a truth value to the sentence. Section 1.2.2 introduces the projection tests for the identification of presuppositions and section 1.2.3 outlines the different types of presupposition triggers discussed in the literature and the issues raised by the extreme heterogeneity of this category.

Section 1.3. addresses the pragmatic turn in presupposition theory. I first present Grice's theory of implicatures, introducing the fundamental concepts involved (*i.e.*, his conversational maxims as well as the Cooperative principle). I then focus on his "conventional implicatures" which are the most similar to semantic presuppositions (§1.3.1). Grice's

theory will appear as fundamental for the later works that challenged formal approaches to presuppositions, namely Stalnaker's concept of "pragmatic" presuppositions (§1.3.2), Boër and Lycan's *Myths of Semantic Presuppositions* (§1.3.3), as well as Wilson's (1974) and Wilson and Sperber's (1979) non-truth-conditional account to presuppositions (§1.3.4). Finally, I turn to French-speaking research, introducing Ducrot's polyphony theory and his concept of speaker commitment (i.e., *prise en charge du locuteur*), which is key to contemporary questions stemming from Relevance theory (§1.3.5). I then discuss Kleiber's approach which stands against Ducrot's theory (§1.3.6).

The last part of this chapter reviews some key issues that have been experimentally addressed in relation to presuppositions, namely the question of their semantic or pragmatic nature (§1.4.1), whether different triggers are mandatory or optional (§1.4.2), and how presuppositions are understood in the context of child development (§1.4.3).

1.1. The beginnings: the case of definite descriptions

1.1.1. Frege: *On Sense and Reference*

In a seminal paper, "On Sense and Reference" (*Über Sinn und Bedeutung*) published in 1892, Frege distinguishes the concepts of *signs* (i.e., names, combination of words, letters), *sense* (i.e., the thought expressed by a sentence), *reference* (i.e., the object to which a sign refers) and *truth conditions* (i.e., the conditions under which a sentence can be judged as true or false). First, he defines the relationship between *signs* and *reference* as arbitrary, arguing, for example, that "Venus" can be designated by distinct and arbitrary noun phrases such as "morning star" and "evening star" (Frege [1892] 2013, 35). Interestingly, these observations resonate with Ferdinand de Saussure's ([1916] 2005, 97–103) nearly contemporary approach to the linguistic sign, defined as an arbitrary combination between an acoustic sound ('*signifiant*') and its referent ('*signifié*').

Frege carries on his analysis on the level of *sense* and *reference*, focusing on assertions which bear meaning but which lack an identifiable referent. As an example, he mentions the noun phrase (1) below:

- (1) The celestial body most distant from the Earth. (Frege [1892] 2013, 36).

Frege underlines that (1) has a comprehensible *meaning*, but the identification of the referent is impossible (Frege [1892] 2013, 36). It is at this stage that he introduces the concept of presupposition, pointing out that some sentences can generate a problem opposite to that mentioned in (1). Indeed, whereas (1) contains meaning without having an identifiable referent, sentence (2) below designates a referent without it being part of the meaning of the sentence:

- (2) The Moon is smaller than the Earth. (Frege [1892] 2013, 37)

For Frege, the idea of *the existence of* the Moon is not part of the meaning intended by the speaker. Rather, the idea we have of the Moon is presupposed³. In the same vein as example (2), Frege discusses at greater length sentences (3) and (4) below, which would later become among the most cited in debates about presuppositions:

- (3) Kepler died in misery.
(4) Kepler did not die in misery.

(Frege [1892] 2013, 41)

Assertions (3) and (4) express two different thoughts about Kepler due to the use of negation. However, they both trigger the same “presupposition”

³ It is worth noting that Frege explicitly speaks of the speaker's *intention* when he refers to the thought expressed by an assertion: “*Wollte der Sprechende dies [...]*” [if the speaker wanted this [...]]; “[...] *es nicht unsere Absicht ist*” [[...] it is not our intention] (cf. Frege 1892, 31). Thus, Frege addresses here questions that typically belong to the realm of pragmatics.

(*Voraussetzung*) that the name ‘Kepler’ has a referent. Thus, the very same presupposition can be shared by an assertion and its negation. This fact lends support to the view that presuppositions do not belong to the meaning of the sentence.

Importantly, the translation of the original article has consequences for the function we attribute to presuppositions in relation to the truth conditions of the assertion. Indeed, the original version of the paper uses the word ‘*Voraussetzung*’, which has been translated in English as «presupposition» (*cf.* Martinich and Sosa 2013). However, the word ‘*Voraussetzung*’, in German, can also be translated as a “precondition” or a “prerequisite” for a following element to be fulfilled. If we understand the term “*Voraussetzung*” as a “precondition” or “prerequisite”, this favours a strictly logical understanding, where the truth of the presupposition is necessary for the sentence to be considered true. In other words, for the sentence “The King of France is bald” to be considered true, it would require the existence of a King of France. The “precondition” understanding of ‘*Voraussetzung*’ corresponds to Frege’s “narrow construal” of presuppositions, which, incidentally, was borrowed by Russell (see below). However, the translation ‘*Voraussetzung*’ into “presupposition” appears to be more compatible with a psychological view, relating to general background assumptions made by the addressee. This latter approach corresponds to what I call Frege’s “broad construal” of presupposition (see below).

Concerning the problem of meaning and reference, Frege asks early on what the relation between presupposition and assertion is, and what the consequence would be if a presupposition turned out to be false. In discussing example (5) below, he argues that the truth of the presupposition is a precondition for the sentence to be true. For example, he claims that the truth of the presupposition expressed in (6) is a necessary condition for the sentence (5) to be held as true (Frege [1892] 2013, 42):

- (5) Whoever discovered the elliptical form of the planetary orbits died in misery. (Frege [1892] 2013, 42)

- (6) Someone discovered the elliptical form of the planetary orbits.
(Frege [1892] 2013, 42)

The truth of the sentence (5) depends on whether someone really discovered the elliptical form of the planetary orbits, expressed in (6). Thus, from this perspective, the truth of a presupposition is a necessary condition for an assertion to be true.

However, Frege's position regarding the falsity of a presupposition is not self-evident. Indeed, it has also been pointed out in contemporary literature that he held the falsity of a presupposition as merely implying that the assertion lacks a truth value:

According to Frege (1892), if an expression *A* suffers from presupposition failure, then any sentence containing *A* will lack a truth value. (Beaver, Geurts, and Denlinger 2021).

In fact, Frege's opinion on presupposition failure points in several directions. First, as presented above, he argues that the truth of a presupposition is, in some cases, a necessary condition for a sentence to be true (*cf.* (5) and (6) above). But Frege also introduces a broader construal of presupposition that makes his approach more challenging. This broader construal has received surprisingly little attention, despite its great interest from a cognitive pragmatic point of view. Frege illustrates the phenomenon with the following example:

- (7) Napoleon, who recognized the danger to his right flank, himself led his guards against the enemy position. (Frege [1892] 2013, 44)

According to Frege, sentence (7) expresses two thoughts. First, that "*Napoleon recognized the danger to his right flank*" and, second, that "*Napoleon himself led the guards against the enemy position*". He underlines that this sentence also expresses a third thought, namely that "the knowledge of the danger was *the reason why* he led *the guards to the*

enemy position” (Frege [1892] 2013, 44). In his perspective, the third thought is triggered by the relation between the first and the second thought, in “accordance with *psychological laws*” (*Ibid.*, *my emphasis*). Importantly, just as it is the case for the other examples of presuppositions (*cf.* (2) - (6)), this thought is not part of the meaning expressed by the sentence. The reason for this is that the truth-conditions of sentence (7) could be satisfied even if Napoleon’s decision “had already been made recognized before the danger” (*Ibid.*). Thus, this content is comparable to the previous examples of presuppositions, in that it is triggered by the assertion whilst being external to the thought expressed. However, the difference between Frege’s “narrow construal” of presuppositions (*cf.* (2) - (6)) and his “broader construal” (*cf.* (7)) is that the former is necessary for a sentence to be held as true, while the latter has no implications on the sentence’s truth-conditions.

The analysis provided for example (7) is strikingly similar to that provided much later by Grice (1975) to illustrate the phenomenon of conventional implicatures. Take the widely discussed example below:

(8) He is an Englishman; he is, therefore, brave. (Grice 1975, 44)

As a reminder, Grice sought to explain the apparent inconsistencies of verbal communication by providing a logic of conversation. With regard to sentence (8), he argues that it triggers the proposition that “it follows from his being English that he is brave”. This content remains implicit but is however not part of the speaker’s intended meaning, thus making it distinct from a conversational implicature (Grice 1975, 45). Just like Frege, Grice argues that the truth of this content is not necessary for the main assertion to be true: “I do not want to say that my utterance of this sentence would be, strictly speaking, false should the consequence fail to hold.” (Grice 1975, 45). Let us note here that conventional implicatures, as exemplified in (8), have often been assimilated to presuppositions.

In order to summarize, Frege identifies two kinds of presuppositions, one belonging to the classical definition, with a specific linguistic trigger, and the other in accordance with “psychological laws”, generated by the

sentence. In the first case, the falsity of the presupposition affects the truth-conditions of the sentence, while in the other case, it will not affect the truth-conditions of the sentence at all.

Before concluding this section, let us consider Frege's following observation, which shows how his approach to meaning is consistent with contemporary pragmatic concerns. When discussing some of the specific features of poetry in his seminal article, Frege argues that a truth-conditional approach is far from being able to capture their purpose nor their communicative effects. The interest of poetry, he believes, lies more in the exchange of sensations and emotions:

In hearing an epic poem [...] we are interested only in the sense of the sentences and the images and feelings thereby aroused. The question of truth would cause us to abandon aesthetic delight for an attitude of scientific investigation. (Frege [1892] 2013, 38)

These considerations align with the most recent interests in cognitive pragmatics, which seek to capture not only truth-evaluable propositional meanings, but also 'non-propositional meanings'. As I will argue later, adopting the idea that verbal communication may not be strictly propositional is beneficial not only for the analysis of poetic or stylistic effects (Wharton 2003; Sperber and Wilson 2015; L. de Saussure and Wharton 2019; Wharton and Strey 2019; L. de Saussure 2021; Wharton et al. 2021), but also for the study of presupposition effects (§3.2.3).

Thus, Frege's observations are not only important in that they set the research agenda for semantic approaches to presuppositional phenomena. They are also visionary with regard to the pragmatic processes involved in the reconstruction of meaning. As far as the debate on non-referential presuppositions is concerned, one has to turn to Russell and Strawson for explicit arguments about their involvement in the truth conditions of an assertion.

1.1.2. Russell's account on definite descriptions

Russell provides an analysis of definite descriptions in *On Denoting* (1905) and *Descriptions* (1919). He focuses on the problem highlighted before him by Frege regarding descriptions which lack a referent, as discussed in the previous section.

Russell ([1905] 2013, 105) distinguishes three denoting forms, namely “a man”, “the present king of England” and “the present king of France”. These nominal phrases contain fundamental differences in meaning, despite their structural similarities. “A man” raises the paradox of denoting ambiguously whilst having a definite referent. If one says, “I met a man”, the sentence is true if the speaker met “one definite man” (Russell [1905] 2013, 106). On the other hand, felicitous uses of definite descriptions require the identification of a unique and existing referent in the world. Indeed, when considering “the present king of England”, it describes a definite and unique object in the world (Russell [1905] 2013, 106) and “[accounts] for the existence of the proposition” (Russell [1919] 2013, 115). However, if one considers “the current king of France”, it also describes a definite and unique object in the world but, unlike “the king of England”, the noun has no denotation because there is no current king of France. (Russell [1905] 2013, 107). Based on these last two examples, Russell distinguishes the abstract meaning of a sentence (*i.e.*, the “sense”) from its denotation (*i.e.*, the “reference”), in the same way as Frege.

However, in contrast to Frege, Russell does not use the concept of “presupposition” or “precondition” in his account of definite descriptions. Rather, he describes the *consequences* of non-existing definite descriptions on the truth-conditions of a sentence. When analysing “The king of France is bald” or “I met a unicorn”, Russell argues against the view that these sentences merely fail to refer. In particular, he stands against Meinong’s theory (1904), according to which propositions about unreal objects can be true in specific contexts, such as imagination, literature, *etc.* According to Russell, assertions about objects that do not exist are “plainly false” (Russell [1905] 2013, 107). For instance, he insists that “a unicorn” does not describe *something unreal*, rather it describes *nothing* (Russell [1919] 2013, 115). Adopting this view is, for Russell, fundamental to building a robust theory based on logic:

The sense of reality is vital in logic, and whoever juggles with it [...] is doing disservice to thought. A robust sense of reality is necessary in framing a correct analysis of propositions about unicorns, [...] and other such pseudo-objects. (Russell [1919] 2013, 115)

Russell's approach echoes Boole's earlier works on describing the laws governing language and thought. Indeed, in his *Investigation in the laws of thought* (Boole 1854), he states that sentences consist of logical operations whose output is always either true or false. From this perspective, sentences are reduced to logical operations requiring effective values.

Importantly, Russell's view has had a considerable impact in the field of semantics, leading to the conclusion that sentences such as "the King of France is bald" or "I met a unicorn" are false and do not denote anything. However, invoking "reality" as the exclusive criterion for "denoting" is problematic, insofar as no explanation is given of what constitutes it, apart from the subjective appreciation – however reasonable – of the observer. Thus, Russell's assertion that "there is only one world, the 'real' world" (Russell [1919] 2013, 115) to justify his approach does not make the analysis more logical or objective. Moreover, even if there were unequivocal agreements on what constitutes reality, there remains the problem of subjective representations of concepts, making it impossible to truly assign the same referent. This point was already underlined by Frege, who claimed that even a simple concept will be apprehended differently depending on individuals and on the context: "A painter, a horseman, and a zoologist will probably connect different ideas with name 'Bucephalus' (Frege, 1892/2013, p. 37).

Having said this, let us now return to Russell's discussion about definite descriptions. He highlights the ambiguity of negation in the presence of definite descriptions by distinguishing two levels of negation, one applying when the description is a 'primary occurrence' and the other when the description is a 'secondary occurrence' ([1905] 2013, 110–11). When the definite description is a primary occurrence, the scope of negation applies directly to it, implying the negation of the whole sentence

as in (9b) below. However, when the definite description is a secondary occurrence, the negation applies only to the predicate, as in (9a)⁴.

- (9) The king of France is not bald.
- (9a) There is an entity which is now king of France and is not bald. (*Secondary occurrence*)
- (9b) It is false that there is an entity which is now king of France and is bald. (*Primary occurrence*)

(Russell [1905] 2013, 111)

According to Russell, the assertion made in (9a) is plainly false, because it involves a statement about a non-referring noun (*i.e.*, the king of France). However, the one made in (9b) is true because it denies the existence of a currently existing king of France.

In summary, Russell's approach focuses essentially on the logical consequences of non-referential definite descriptions. His approach focuses on the logical and formal aspects of presuppositions, excluding contextual parameters. For Russell, a definite description without a referent entails that the sentence is false. The above theoretical claims of Russell are the starting point of the Russell-Strawson debate, in which the main question revolves around the consequences of non-referential definite descriptions on the truth-conditions of the sentence. Russell's approach also marks the beginning of an essentially formal approach to presuppositions, consisting of the evaluation of the different projective behaviour of these contents. Finally, it should be noted that Russell's approach applies to a narrower field related to presuppositions than Frege's, insofar as it discards the broader construal of presuppositions presented earlier, which relate to presuppositions arising by virtue of psychological laws (*cf.* example (7) of the previous section).

⁴ For a more detailed analysis of Russell's distinction between primary and secondary occurrences of definite descriptions, see Cassin (1971).

1.1.3. *The Strawson-Russell debate*

Strawson famously challenged Russell's account of non-referential definite descriptions. Although he agrees with Russell that definite descriptions imply the existence and uniqueness of the noun, he argues that Russell wrongly concluded that a sentence such as "The king of France is bald" is false. In his perspective, Russell fails to distinguish between the sentence and the use of a sentence. He considers that sentences only provide general directions for their use and cannot be qualified as true or false until they are uttered by a speaker in a specific context (Strawson 1950, 124). Strikingly, these considerations evoke the pragmatic approach later proposed by Stalnaker (§1.3.2), for whom sentences do not presuppose anything, but it is the speaker who presupposes information.

When considering the sentence "The king of France is wise", Strawson distinguishes three possible levels of analysis, namely a) the sentence, which provides general directions for adequate use, b) the use of a sentence, namely the specific context in which it is uttered and c) the utterance of a sentence, namely the way in which it is expressed (written *vs* spoken) (Strawson 1950, 124). Strawson argues that the truth of the sentence depends on the context in which it is uttered: if the sentence took place in the context of the French monarchy, it would be true. However, in the absence of an existing king of France, the statement "The king of France is wise" would not be false, but would rather lack a truth value:

[...] When we utter the sentence without in fact mentioning anybody by the use of the phrase, "The king of France", the sentence does not cease to be significant: We simply fail to say anything true or false because we simply fail to mention anybody by this particular use of that perfectly significant phrase. (Strawson 1950, 127)⁵

⁵ This excerpt will be reconsidered later (§4.2.2), when I point out that the falsity of a presupposition does not impact the comprehension of the utterance, but rather its acceptance as being relevant (in line with the distinction proposed by Sperber et al. (2010).

Thus, for Strawson, non-referential definite descriptions merely imply that the sentence lacks a truth value. He carries on his argument by accounting for definite descriptions in fictional contexts. Strawson argues that, in such contexts, no one would even have the idea of claiming that a sentence is false because it has no referent. Therefore, a distinction should also be made between genuine and fictitious uses of sentences (Strawson 1950, 127).

Strawson's critiques of Russell's theory tend to be virulent and sometimes build a straw man regarding his claims. For example, Strawson repeatedly suggests that Russell assumes that sentences without a referent are meaningless. However, the contrast between 'meaning' and 'reference' is in fact very clear in Russell's writings. And contrary to what Strawson claims, Russell regards a sentence like "the King of France is bald" as having meaning but "[...] certainly no denotation" (Russell [1905] 2013, 107). Finally, when considering Russell's reply to Strawson, it appears that their discussions are driven by quite different research agendas: while Strawson's interests are more focused on language and enunciative contexts, Russell's ambition was to raise the discipline of philosophy to the same status of rigor as other scientific disciplines, as can be seen below:

Everybody admits that physics and chemistry and medicine each require language which is not that of everyday life. I fail to see why philosophy, alone, should be forbidden to make similar approach towards precision and accuracy (physics, chemistry, logic, *etc.*). In this respect, ambiguities and paradoxes arising from language are problematic. (Russell [1957] 2013, 138)

Thus, as I pointed out earlier, Russell considers that the absence of a referent implies that the sentence is logically false. Against this, Strawson reminds us of the importance of the enunciative context in assessing the truth-conditions of the sentence. Let us note that Strawson's research agenda is more compatible with the approach I suggest, which focuses on building a theory of information processing on the part of the addressee.

1.1.4. Conclusion

The beginnings of modern presupposition theory, with Frege, are particularly rich, as he considers both semantic presuppositions, triggered by definite descriptions, as well as other presuppositions generated by so-called psychological laws. Moreover, Frege shows a visionary approach to linguistic phenomena when he points out that truth-conditional approaches cannot account for all linguistic phenomena, especially when it comes to the effects conveyed by epic poems. These considerations are comparable to those more recently published by Sperber and Wilson (2015), who highlight the importance of accounting for non-propositional effects within a theory of ostensive-inferential communication. (§3.1.4).

The rest of the discussion about presuppositions, as it appears in the debate between Russell and Strawson, shows the extent to which presupposition theory was confined to formal and truth-conditional considerations. This was the approach that prevailed until the 1970s, when the semantic nature of these contents was challenged, and even the very existence of 'presuppositions' as a linguistic category started to be questioned. In the following section, I present the main semantic tools, inherited from Russell and Strawson, which have proved useful for identifying and conceptualizing presuppositions.

1.2.Semantic approaches

1.2.1. Presupposition as preconditions for truth value

One fundamental legacy of the Russell-Strawson debate is the idea that presuppositions are necessary preconditions for the attribution of truth value to the sentence. This has become a rarely contested premise in linguistics, from which presuppositions have been granted the status of semantic content, as opposed to pragmatic content.

The idea that presuppositions are preconditions for truth value is attributed to Strawson's *Introduction to Logical Theory* (1952), with further developments in van Fraassen (1968). The principles underlying this view are illustrated in Table 1 below:

Table 1. Presuppositions as preconditions for the truth-value of a sentence (as per van Fraassen 1968, 137).

Observation 1:

A presupposes B if and only if A is neither true or false unless B is true.

Observation 2:

Observation 1 is equivalent to saying “A presupposes B if and only if”:

- (a) If A is true then B is true.
 - (b) If A is false then B is true.
-

The first observation refers to Strawson’s claim that a presupposition failure blocks the ability to assign a truth value to the sentence (*cf.* §1.1.3.). As a reminder, Strawson gave the example of “The King of France is wise”, which is not truth evaluable if the context is inappropriate. In other words, if there is no King of France, it is impossible to say whether the sentence is true or false. The same applies, for example, in fictional contexts as in “The unicorn is white”, where the absence of a referent implies the impossibility of assigning a truth value. Thus, from the impossibility of assigning a truth value follows the consequence that presuppositions must be true in order to assess whether the sentence is true or false (*cf.* Observation 2)⁶.

Note that according to some approaches, presuppositions are even seen as necessary conditions for grammaticality. For example, Lakoff (1971) argues along the following lines:

If presuppositions do not accord with factual knowledge, cultural background, or beliefs about the world, then [the listener] may judge S to be “odd”, “strange”, “deviant”, “ungrammatical, or simply ill-formed relative to his own presuppositions about the nature of the world. (Lakoff 1971, 330)

⁶ As we saw in Section 1.1.2 , Russell's approach is different, in that he considers that the failure of a presupposition results in the sentence being false.

It is on these theoretical foundations that presuppositions have overwhelmingly been given the status of necessary contents to satisfy the logical requirements of a sentence. It is therefore considered that presuppositions cannot be cancelled without generating a logical contradiction, as shown in the example below (N.B. the asterisk signifies that the sentence is inconsistent):

(10) *The king of France is bald, *but there is no king of France.*

Furthermore, given their status of being a precondition for ascribing a truth-value, presuppositions are redundant when verbalised, as shown in sentence (11) below:

(11) ? The king of France is bald *and the king of France exists.*

Thus, formal approaches claim that presuppositions are preconditions for determining the truth conditions of the sentence. This fact would explain why presuppositions appear to be non-cancellable and redundant when verbalized.

Although these criteria will be familiar to anyone working on presuppositions, it is worth pointing out that characterizing presuppositions is more complex than it seems. First, as I have shown in discussing Frege's approach, the notion of presupposition is ambivalent between a strictly logical meaning, related to the sentence, and a psychological meaning, related to the speaker's assumptions. The way in which the concept is to be interpreted will greatly influence subsequent theorisations. Thus, it is worth noting that the phenomenon of presuppositions is likely to encompass wider occurrences, specifically when adopting the perspective of the addressee's processing of verbal information. Finally, we will see later that the allegedly non-cancellable nature of presuppositions has in fact been widely questioned in pragmatic approaches inspired by Grice. (cf. §1.3) .

1.2.2. *The family of sentence test*

The field of semantics largely contributed to the development of tests for the identification of presuppositions. Given the hybrid status of these contents, *i.e.*, both outside the meaning of the sentence yet being triggered by the sentence, it became necessary to establish identification criteria enabling to go beyond subjective intuitions.

The first test identified was the one of negation. As a reminder, Frege showed that the presupposition “someone named Kepler existed” is triggered both by the assertion (3), reported in (3’) and its negation in (4), reported in (4’)⁷:

(3’) Kepler died in misery.

(4’) Kepler did not die in misery.

Presupposition: Someone named Kepler existed.

(Frege [1892] 2013, 41)

Subsequently, other tests were developed for the identification of presuppositions. The “family of sentence” test (Cherchia and McConnell-Ginet 2000, 281) is the most commonly admitted to identify a presupposition. It consists of an embedding of the sentence under negation (as proposed by Frege), but also under interrogation, modal verbs and conditionals. To illustrate how these tests work, consider how Roberts et al. (2009) proceed to identify the presupposition “John used to smoke”, triggered by the change-of-state verb “to stop”, through different embedding operations as in (12a-d):

(12) John has **stopped** smoking. (*assertion*)

a. John hasn’t stopped smoking. (*embed under negation*)

b. Has John stopped smoking? (*embed under interrogation*)

⁷ Following Beaver (2001, 12), when repeating an example, an apostrophe will be appended to the original numbering. Therefore, the repetition of example (3) becomes (3’), and if repeated again (3’’).

- c. John might stop smoking. (*embed under a modal*)
- d. If John has stopped smoking, we don't have to provide ashtrays. (*embed in the antecedent of a conditional*)

Presupposition: John used to smoke.

The presupposition is said to “project” when it resists an entailment-cancelling operator (Simons et al. 2010, 310). As illustrated above, the presupposition that “John used to smoke” arises despite the various transformations performed on assertion (12). These operations precisely allow to distinguish presuppositions from entailments, which are sensitive to these operators. For example, consider the contrast between assertion (12') and its negation in (12a') below:

- (12') John has stopped smoking. (assertion)
 → *John is no longer a smoker.* (entailment)

- (12a') John hasn't stopped smoking. (negation)
 → *John is a smoker.* (entailment)

Thus, entailments are formally distinct from presuppositions in that they are sensitive to the transformations performed on the sentence. Note, however, that according to some approaches, presuppositions and entailments are semantically identical, namely they both correspond to “entailments”, but they provide different pragmatic instructions to the addressee, leading him to perceive the content as foregrounded (*i.e.*, as an implication) and others as backgrounded (*i.e.*, as a presupposition). These issues will be addressed later in the chapter dedicated to pragmatic approaches to presuppositions (§1.3.4).

Importantly, the projection tests for presuppositions did not enable the systematic identification of these contents. Indeed, the projection tests brought to light new issues which called into question the homogeneity of presuppositions as a linguistic class. One of them is that projection does not

only apply to presuppositions, but also to other linguistic contents. To mention just two examples, honorific pronouns and expressives both project under entailment-cancelling operators. These contents are distinct from presuppositions, in that they do not contribute, in any way, to the truth conditions of a sentence. Sentence (13) below, adapted from Simons et al. (2010, 311), illustrates the case of honorific pronoun in French, which introduce the implication that the speaker has a deferential posture towards the addressee. This idea projects despite the negation operated on the sentence in (13a). However, the deferential posture encoded by the honorific pronoun has no implication on the truth condition of the sentence. In other words, the woman referred to by the statement can or cannot come in, regardless of whether the speaker designates her with deference:

(13) Madame, vous pouvez entrer!

[Madam, you(formal) can come in!]

(13a) Madame, vous ne pouvez pas entrer!

[Madam, you(formal) cannot come in!]

The same also applies for expressives, where the attitudinal import conveyed by “that bastard” projects both with the assertion (14) and under the interrogation form (14a). Just as with honorific pronouns, assertion (14) can be true regardless of the attitude conveyed by the expressive:

(14) That bastard dumped her shortly after the baby was born.

(14a) Did that bastard dump her shortly after the baby was born?

The observation that a variety of linguistic contents – distinct from presuppositions – project under entailment-cancelling operators raises two questions: the first is whether projection is a sufficient criterion for identifying presuppositions. To this, one could answer that projection tests combined with an evaluation of the content’s implications on the truth conditions of the sentence is sufficient for identifying a presupposition.

However, as will be discussed in the next section, these tests also have the disadvantage of not applying uniformly to all presuppositional triggers, thus supporting the idea that they are not systematically reliable.

The second question, corollary to the first one, is whether presuppositions can be apprehended as a natural class. Indeed, insofar as it is difficult to establish systematic criteria for their identification, it is legitimate to ask whether presuppositions, in the formal sense, belong to a more general class of phenomena, which encompasses what one would intuitively call “presupposition”. Interestingly, this direction is considered by Simons *et al.* (2010) when examining the phenomenon of projection. In this paper, they discuss how projection applies not only to presuppositions, but also to other types of content (as illustrated above). From their perspective, projective meanings can be approached as a natural class if we place the focus on the structure of discourse. They argue that projection applies to any content which is not-at-issue, relatively to a “question under discussion” (Roberts 1996).

In a nutshell, the idea behind “not at-issue” meanings is that conversational moves all contribute to a (tacit) QUD. The answer to the QUD may be complete or partial, and it may be explicit or implicit, as illustrated below:

(15) *QUD: Which students are defending this semester?*

A: Francesco, Mary and Mark. (complete answer)

B: Francesco, and maybe some others. (partial answer)

(adapted from Simons et al. 2010, 316)

(16) *QUD: Is Avi old enough to drink?*

A: Yes, he is. (explicit answer)

B: He’s twenty-two. (implicit answer)

(adapted from Simons et al. 2010, 316)

Whenever an assertion or a question is relevant to the QUD, it will be qualified as being at-issue. In the examples above, all assertions answer the QUD. In some cases, however, assertions or questions may convey information which does not address the QUD, hence granting them the status of not at-issue contents. For example, if we reconsider question (15), recalled below (15'), we see that the assertion does more than simply answer the QUD. Indeed, answer (17) triggers the presupposition that Mark was "the least expected to be defending this semester". As for the alternative answer provided in (18), it communicates an attitude towards Mark, by referring to him indirectly as "Mister I know it all".

(15') QUD: Which students are defending this semester?

(17) Francesco, Mary and **even** Mark is defending.

At-issue content: Francesco, Mary and Mark are defending.

Not at-issue content: Mark was the least expected to be defending this semester.

(18) Francesco, Mary, and "**Mister I know it all**" is defending.

At-issue content: Francesco, Mary and Mark are defending.

Not at-issue content: Mark tends to have a pretentious attitude.

The not at-issue contents project, insofar as they remain under entailment cancelling operators. For example, the addition of a modal verb, as in "Francesco, Mary and even Mark **might** be defending" does not allow to conclude that Mark is defending, while it does preserve the presupposition that *Mark was the least expected to be defending this semester*. The same applies to example (18), where the attitude conveyed by "Mister I know it all" projects (*e.g.*, "Francesco, Mary and even "Mister I know it all" might be defending" maintains the attitude towards Mark, while canceling the implication that he will be defending).

Thus, according to Simons *et al.* (2010), “projective meaning triggers emerge as a natural class on the basis of the not at-issue status of their projective inference” (Simons *et al.* 2010, 309). Importantly, in this perspective, presuppositions are not to be considered as semantic contents forming a natural class, but rather as information fulfilling a specific function in the discourse, taking place in the conversational background. Presuppositions would thus not be strictly limited to lexical items or grammatical structure but would also relate to more general background assumptions in relation with utterances and discourse. This approach will be adopted in this dissertation, albeit with different theoretical foundations and analytical tools, stemming from Relevance theory.

As will be discussed later (§3.2.2), the tools of QUD theory and those of Relevance theory are incompatible due to distinct research agendas. While QUD theory focuses on information structure belonging to a common ground, Relevance theory seeks to provide a processing theory based on the listener’s perspective, which necessarily involves informational losses that need to be accounted for.

1.2.3. *Presupposition triggers*

Apart from identifying a set of projection tests, the field of semantics also contributed to enumerating of a wide range of presupposition triggers. The best known are listed below, for which I only mention the negation test for their identification:

(19) John knew/forgot/regrets that Mary had an affair.

(19a) John did not know/forget/regret that Mary had an affair.

Presupposition: *Mary had an affair.*

(20) I want to see *Titanic* again!

(20a) I don’t want to see *Titanic* again!

Presupposition: *I have already seen Titanic.*

(21) It's my father who ran the traffic light!

(21a) It isn't my father who ran the traffic light!

Presupposition: *Someone ran the traffic light.*

The factive verbs (Kiparsky and Kiparsky 1971) presented in (19) - (19a) emphasize the speaker's mental states (knowing, believing, forgetting, *etc.*) about a proposition presented as true, namely that "Mary had an affair". This proposition is presupposed, insofar as it resists the projection tests and it is a prerequisite for the sentence to be assigned a truth value. In (20) - (20a), the iterative particle, "again", gives the instruction that the proposition has already been true in the past, namely that the speaker has already seen the movie *Titanic*. And finally, the cleft sentence (21) - (21a) provides the instruction that the subordinate clause, namely that "someone ran the traffic light", is taken for granted and, therefore, is presented as true.

The list of presupposition triggers increases without any real possibility of ending it. For example, the following additional triggers have also been identified:

- temporal clauses preceded by "before", "after", "since", as in: "Volta participated in a scientific congress shortly before he developed the first electrical battery", which presupposes that "Volta developed the first electrical battery" (see Beaver and Condoravdi 2003 for a discussion of the possible cancellation of these presuppositions).
- manner adverbs, such as "politely", "quickly", "abruptly", as in "She politely asked him to leave", presupposing that "she asked him to leave" (Abbott 2016, 12).
- quantifiers, as in "Every nation cherishes its king", presupposing that every nation has a king (cf. Heim 1983; further discussed by Beaver and Krahmer 2001).

Beyond the above examples, other more trivial triggers operate at the logical-semantic level, namely the identification of hyperonyms to which a lexeme belongs, *e.g.*, "x is a bachelor" presupposing that "x is a young man" (Langendoen 1971, 342; Abbott 2016). In addition, some verbs, apart from

aspectual and factive ones, presuppose that certain conditions are fulfilled, as in “John passed the exam” and “Ali won”, which presuppose respectively that “John took an exam” and that “Ali participated in a competition”. Finally, stress patterns serve as natural pointers to emphasize what is relevant, as opposed to what is presupposed or taken for granted (*e.g.*, “I asked Peter to buy CARROTS”, presupposing that I asked Peter to buy SOMETHING) (Wilson and Sperber 1979; Müller 2021).

As we consider the scope of presupposed contents, it becomes increasingly unlikely that these contents can be exhaustively listed according to homogeneous criteria. Moreover, most presupposition triggers come up against a plurality of situations in which they do not project. It is the case, for example, with the quantifier in “Every nation cherishes its king”, for which the presupposition that “every nation has a king” is debatable (*cf.* Beaver and Krahmer 2001 for a discussion on quantifiers). Finally, the homogeneity of presupposition phenomena appears to be compromised when acknowledging that some projection tests do not adequately apply to some presuppositional triggers. Consider, for example, the challenge of applying the negation test to identify the presupposition “He left someone else”, in sentence (22) below, triggered by the additive particle “too”:

(22) He left her, too.

(22a) ? He didn't leave her, too.

Presupposition in (22): *He left someone else.*

Despite the difficulties described above, there is at least one criterion that brings presuppositions together, namely that they are conditions that must be true in the world for the sentence to be considered true, as suggested by Strawson (1958) and van Fraassen (1968) (*cf.* Table 1, §1.2.1). Taking another example, *cf.* (23) below, a student's false belief about Einstein would inevitably lead an examiner to consider the sentence to be false, despite the content being presupposed :

(23) Einstein presented his project at a scientific congress shortly before he developed the first electrical battery.

Presupposition: *Einstein developed the first electrical battery.*

It should be noted, however, that the truth or falsity of a presupposed content does not prevent the sentence from being understood. Indeed, an agnostic listener, upon hearing (23), would eventually form the false belief that it is true that Einstein built the first battery. The pragmatic conditions which govern presupposition accommodation shall be identified later, the main point being made here is that the comprehension of an utterance should be distinguished from its acceptance. More is said about the comprehension vs acceptance distinction in Section 4.2.

1.2.4. Conclusion

In this section I addressed different tools provided by semantics for the identification of presuppositions. I presented the family of sentence tests allowing to observe the phenomenon of presupposition projection. I also presented a list of different presupposition triggers identified in the literature. Without going into details that semantic research would present better than I can, I underlined to what extent presuppositions are difficult to grasp, despite these tools.

Indeed, the projection criterion for presuppositions appeared as being more problematic than useful insofar as it applies to other contents, such as expressives and honorific pronouns⁸. Thus, the criterion of projection applies to a more global phenomenon, namely not-at-issue contents, as opposed to contents that are part of the question under discussion (Simons et al. 2010). In conclusion to this section, I argued that it is legitimate to ask whether presuppositions belong to a more general phenomenon, which

⁸ As mentioned earlier, expressives and honorific pronouns are distinct from presuppositions, in that they do not contribute to the truth conditions of a sentence (cf. §1.2.2).

encompasses what one would intuitively call ‘presupposition’. This intuition has been followed by pragmatic approaches to presuppositions (cf. next section).

In the next section, I present the pragmatic turn of presuppositional approaches, namely research that has proposed a pragmatic analysis of the presuppositions presented above, initially defined as semantic presuppositions.

1.3. Pragmatic approaches

This section discusses early pragmatic approaches to presupposition phenomena. I present Grice's theory of implicatures, introducing more specifically his conversational maxims, the Cooperative principle and his typology of implicatures. I highlight the fine line between some implicatures identified by Grice and semantic presuppositions (§1.3.1). I then introduce Stalnaker's concept of “pragmatic presuppositions” (§1.3.2). According to his view, presuppositions are best understood as a pragmatic phenomenon corresponding to what the speaker presupposes rather than what the sentence presupposes. Next, I discuss Boër and Lycan's proposal that presuppositions correspond either to entailments or to pragmatic meanings (§1.3.3).

1.3.1. Gricean implicatures and presupposition phenomena

Grice's seminal papers (1957; 1975) marked a fundamental turning point in linguistics and communication science. They demonstrate the importance of identifying the speaker's intentions in order to understand an utterance as well as the prevalence of implicit content, namely implicatures, in verbal communication. In Grice's perspective, verbal comprehension is based not only on semantic content (*i.e.*, what is logically encoded by the sentence), but also on pragmatic meaning, reconstructed by means of assumptions about the speaker's communicative intentions and of contextual evidence.

Grice defines the total meaning of an utterance as divided into four distinct categories, namely semantic content, conventional implicatures, particularised conversational implicatures and generalised conversational implicatures, the last two categories being subtypes of conversational implicatures (cf. Grice 1978, 113)

Conversational implicatures are contextually dependent, sentence-triggered and logically cancellable. One typical example of a Gricean conversational implicature figures in the exchange below, where Mary conveys the information that she “does not know exactly where Rosemary lives” (cf. implicature below), whereas the explicit meaning does not encode this information:

(24) Paul: Where does Rosemary live?

Mary: Somewhere in Germany.

Implicature: *Mary does not know exactly where Rosemary lives.*

(adapted from Grice 1975, 51)

Implicatures are cancellable without generating a logical contradiction. For instance, the addressee would accept a cancellation as presented in (25), provided that there is no available information that the speaker is lying⁹:

(25) Paul: Where does Rosemary live?

Mary: Somewhere in Germany, *but if you want her exact address, I can give it to you...* (Cancellation of implicature in (24))

For Grice, the comprehension of conversational implicatures is driven by the use of conversational maxims (*i.e.*, Quality, Quantity, Relation, Manner, cf. Grice 1975, 45-47) as well as a presumption that the speaker makes rational contributions to the conversation, known as the “Cooperative

⁹ This *caveat* refers to issues related to « plausible deniability », as defined by Pinker et al. (2008). I discuss the question of deniability of implicit contents in the third part of the dissertation.

Principle” (Grice 1975, 45; Oswald 2010, 11). As we shall see in the following sections, Grice's theory of implicatures has inspired several pragmatic approaches to presuppositional theory, but without them clearly identifying which conversational maxim is at work for inferring a presupposition, nor accounting for the exact distinction between presuppositions and implicatures.

In *Presupposition and Conversational Implicature* (1981), Grice takes up the debate on definite descriptions between Russell and Strawson. In his perspective, definite descriptions such as "The King of France is bald" merely entail that there is only one King of France. However, in the presence of a negation, the projection of the presupposition would in fact amount to a conversational implicature.

Despite Grice's (1981) explicit positioning on the question of presuppositions – which consists in replacing the notion of presupposition by that of entailment and implicature – it is not specifically this paper that has had the greatest influence on presupposition theory. Rather, it seems that Grice's contribution to the study of presuppositions lies more in his conceptualization of conversational and conventional implicatures, as it appears in his seminal paper *Logic and Conversation* (1975).

In what follows, I describe Grice's (1975) account of implicatures which share properties with presuppositions, namely *generalized conversational implicatures* and *conventional implicatures*. These two categories are comparable to presuppositional phenomena, in that they refer to assumptions made by the speaker without *necessarily* being part of the communicative intention¹⁰.

¹⁰ Although conversational implicatures are canonically defined as always being part of the speaker's communicative intention, *generalized conversational implicatures* form an ambivalent category, which can both be intentional and at the same time escape the speaker's communicative intention, being triggered as background information. Grice even points out that generalized conversational implicatures of indefinite descriptions are sometimes inferred on the basis of “assumptions”, independently of contextual information : “The only difficult question is why it should, in certain cases, be *presumed, independently of information about particular contexts of utterance*, that specification of the closeness or remoteness of the connection between a particular person or object [...] should be likely to be of interest” (Grice 1975, 57).

Generalized conversational implicatures

Grice illustrates generalized conversational implicatures with inferences triggered by indefinite descriptions. In the example below, the use of “a woman” or “a house” triggers respectively the inferences that the woman is not his wife or his sister and that the house does not belong to him.

- (26) X is meeting a woman this evening.
→ *X will meet someone other than his wife, sister, friend, etc...* (Implicature)
- (27) X went into a house yesterday and found a tortoise [...].
→ *X went into a house that doesn't belong to him.*
(Implicature)

(Grice 1975, 56)

In the appropriate context, the implicatures presented above do not belong to the speaker's communicative intention and are therefore similar to presupposed contents which are taken for granted. For example, (26) may well serve as an answer to the question of whether X has any plan for dinner in the evening. In such context, (26) conversationally implies that “X is not free for dinner”, while triggering a cancellable background information that “*X will meet someone other than his wife, sister, friend, etc...*”. Thus, in this context, the implicature belongs to the conversational background, compared with the relevant information that X is not free tonight. The same reasoning applies to (27), where the relevant information could arguably be that X found *a turtle*, regardless of whether the house belongs to X. Additionally, generalized conversational implicatures project despite their embedding under an entailment cancelling operator. For example, by turning the above assertions into a question (*e.g.*, “Is X meeting a woman tonight?”; “Did X go to a house and find a turtle?”), the inferences remain preserved. Thus, generalized conversational implicatures exhibit properties comparable to presuppositions in their projective behavior as well as in the

fact that they can be assimilated to information that escapes the communicative intention of the speaker.

However, unlike presuppositions, generalized conversational implicatures are logically cancellable, as illustrated below:

(26a) X is meeting a woman this evening but I forgot whether it will be his mother or his sister. (Cancellation of implicature (26))

(27a) X went into a house yesterday and found a tortoise, actually it was in his own house that he found one! (Cancellation of implicature (27))

(Müller 2024)

Based on the above, generalized conversational implicatures cannot be regarded as preconditions for the attribution of truth conditions to the sentence. However, these contents can be inferred independently of the speaker's communicative intention. Thus, these contents are rather akin to presuppositions in a broader sense, which would be inferred on the basis of contextual assumptions.

Conventional implicatures

Conventional implicatures are best known for being close to presuppositions, although Potts (2005, 32–36), in particular, provides a series of arguments for distinguishing these two categories. Grice illustrates the phenomenon with sentences (28) and (29) below:

(28) She is poor, but she is honest. (Grice and White 1961, 127)
→ *There is a contrast between being poor and being honest.*

(28a) She is poor, and she is honest.

(29) He is an Englishman; he is, therefore, brave.

→ *His being brave is a consequence of his being an Englishman.*

While (28) and (28a) share the same truth-conditions, only (28) is perceived as derogatory, due to the discourse connector ‘but’ which brings a contrast between “being poor” and “being honest”. According to Grice, the contrast is not strictly semantically encoded, but is rather conventionally inferred on the basis of the discourse connector "but". He applies the same reasoning for utterance (29), where ‘therefore’ is said to trigger the conventional implicature that “*his being brave is a consequence of his being an Englishman*”.

Grice points out that conventional implicatures are not part of the speaker’s communicative intention, although they are triggered by specific words (Grice 1975, 45). Therefore, conventional implicatures are the closest to presuppositions because they are triggered by the sentence while escaping the genuine meaning of the utterance. Moreover, conventional implicatures cannot be cancelled without generating an inconsistency. This last point is illustrated below:

(30) *She is poor, but she is honest... but I do not mean that there is a contrast between being poor and being honest!

The above example shows an inconsistency that can be assimilated to the criterion of non-cancelability for presuppositions. It therefore seems that we are dealing here with a phenomenon which is equivalent to that of presuppositions, although using a different terminology. For Grice (1975, 45), the above examples are “implicatures”, and not presuppositions, because they are triggered on the basis of assumptions that are specific to conversational norms¹¹.

¹¹ It should be noted that the category of conventional implicatures has been criticized on several occasions, in particular because it contradicts the very notion of ‘implicatures’, according to which they should be related to the communicative intention of the speaker. It is for this reason, among others, that some have proposed to account for conventional implicatures only in terms of presuppositions (cf. Karttunen and Peters 1979). For further discussions on the problem of conventional implicatures, see

1.3.2. Pragmatic presuppositions

The concept of *pragmatic presupposition* comes from Stalnaker's work. His approach to presuppositions aimed to provide a natural explanation for the projection problem:

The pragmatic account makes it possible to explain some particular facts about presuppositions in terms of general maxims of rational communication rather than in terms of complicated *ad hoc* hypotheses about the semantics of particular words and particular kinds of constructions. (Stalnaker [1973] 1999, 48)

This approach is reminiscent of Grice's logic of conversation, based on conversational maxims and on a rational Cooperative principle (Grice 1975). In Stalnaker's perspective, sentences do not presuppose anything, it is rather the speaker who takes some information for granted. Presuppositions should therefore be considered as a pragmatic phenomenon. Let us note, however, that although they are labelled 'pragmatic', Stalnaker's presuppositions remain the same as those considered in the previous sections, namely triggered locally by a lexeme or a grammatical structure. I therefore address this phenomenon in the chapter devoted to 'semantic' presuppositions.

Stalnaker's approach comprises two distinct definitions, one of which appeared in *Presuppositions* (1973), the other appearing in later works, namely *Pragmatic Presupposition* ([1973] 1999) and *Common Ground* (2002). These two definitions are presented below, borrowing the terminology proposed by Simons (2003, 254-257), which precisely accounts for these differences.

Stalnaker's Dispositional Definition of Presuppositions

Bach's (1999) seminal article "The Myth of Conventional Implicatures" and Potts (2004; 2007; 2015)

Stalnaker (1973) argues that presuppositions should be explained in terms of facts about users of sentences, namely their beliefs, intentions and expectations, thus setting aside the semantic tools previously used for the analysis of the projection of presuppositions. Furthermore, he argues that presuppositions amount to a propositional attitude, namely the one of “accepting something to be true” (Stalnaker 1973, 450). Presuppositions are thereby defined as taken for granted and are expected, in conversational settings, to be recognized as such. However, Stalnaker (1973) underlines that the speaker does not need to genuinely believe the truth of the presupposition, hence the idea of them being a “disposition to believe”. Furthermore, a presupposition does not need to be shared by the listener. As it appears below, it is sufficient for the speaker to assume that the listener will recognize that the speaker takes the truth of the presupposition for granted:

A speaker presupposes that P at a given moment in a conversation just in case he is **disposed to act**, in his linguistic behaviour, **as if he takes the truth of P for granted**, and as if he assumes that his audience recognizes that he is doing so. (Stalnaker 1973, 448, *my emphasis*)

As Simons (2003, 255) points out, a pretense approach makes it possible to account, firstly, for the fact that speakers do not necessarily have to believe in the truth of the presupposition. Secondly, it also allows to account for contexts where a presupposition is not necessarily shared between the speaker and the addressee. Conceiving presuppositions as merely signaling the speaker’s propositional attitude or ‘disposition to act’ as if the content was true allows to account for informative presuppositions, which may sometimes be used to fulfil strategic purposes, as exemplified below:

(31) A: Jennifer is certainly an attractive woman.

B: Yes, her husband thinks so too. (Stalnaker 1973, 449)

In the exchange above, speaker B presupposes that speaker A is not single, by referring to “her husband”. In this way, he provides a subtle response,

which informs indirectly speaker A that the comment was not appropriate, given Jennifer's marital status¹².

Pragmatic presuppositions are defined as entailing contextual constraints. Namely, they impose assumptions related to the appropriate use of a specific utterances¹³ (Stalnaker 1973, 454). However, Stalnaker does not yet explore context constraints, acknowledging the programmatic nature of these initial considerations on presuppositions (Stalnaker 1974, 456).

Stalnaker's Common Ground definition

Stalnaker ([1973] 1999) adopts another definition of presuppositions, this time leaving aside the speaker's disposition to act as if believed the presupposition. He argues that a proposition becomes a presupposition as soon as the speaker assumes or believes it, just as he assumes or believes that the addressee will share the same belief.

The strongest argument in favour of Stalnaker's pragmatic approach is the observation that presuppositions can vary radically depending on the beliefs attributed to the speaker. This can be illustrated by the example below, first discussed by Langendoen (1971):

(32) My cousin isn't a boy anymore.

Presupposition 1: *My cousin is a male.*

Presupposition 2: *My cousin is young.*

(Langendoen 1971, 343, Stalnaker 1974/99, 53-54)

¹² Such informative uses of presuppositions have subsequently been qualified as strategic, insofar as they make it possible to avoid a direct challenge by the addressee, because the content is presented as belonging to the conversational background. These questions are further developed in the last part of the thesis (§5.2.1).

¹³ In Stalnaker's words: "If presupposition requirements are defined in terms of pragmatic presupposition sets as I have suggested, then they may be seen as one kind of constraint among others which the use of a sentence imposes on the presumed background assumptions of the context of use of that sentence." (Stalnaker 1974, 454).

The sentence above is ambiguous: according to a first reading, (32) conversationally implies that the cousin has grown up, based on the information that he “isn’t a [little] boy anymore”. This first reading of the sentence presupposes that the speaker’s cousin is a male (Presupposition 1). On the other hand, (32) can also mean that the cousin has undergone an operation to change sex, if one infers that negating “a boy” amounts to designating the other gender category (i.e., a girl). Under this reading, the sentence presupposes that the cousin is still young (Presupposition 2). These observations suggest that presuppositions are merely a pragmatic phenomenon, varying according to what the addressee assumes the speaker presupposes when he speaks.

Later developments stemming from Stalnaker’s theory gave rise to formal semantic approaches for which presuppositions entail constraints on the conversational context, where context is defined along the lines described below:

The presumed background information – the set of presuppositions which in part defines linguistic context – naturally imposes constraints on what can reasonably or appropriately be said in that context. (Stalnaker 1974/99, 53)

Context constraints are indirectly related to the felicity conditions for presupposition accommodation, to which I will return later (§5.1.3). In a nutshell, it is argued that when the addressee is unaware of the truth of a presupposition, some conditions can predict whether that presupposition will be integrated without any prior discussion.

The Gricean heritage of Stalnaker’s approach

Overall, Stalnaker places the speaker’s beliefs at the heart of his concept of pragmatic presuppositions. Interestingly, the layers of beliefs which he identifies mirror those presented in Grice’s (1957) definition of non-natural meanings, as illustrated in Table 2 below:

Table 2. The concept of mutual knowledge, as per Grice (1957) and Stalnaker (1973).

Grice's definition of Meaning_{NN} :

“U meant_{NN} something by uttering x” is true iff, for some audience A, U uttered x intending:

- 1) A to produce a particular response r.
- 2) A to think (recognize) that U intends (1).
- 3) A to fulfil (1) on the basis of his fulfilment of (2).

(Grice 1957, 383–84)

Stalnaker's definition of pragmatic presupposition:

A proposition *P* is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that *P*, assumes or believes that his addressee assumes or believes that *P*, and assumes or believes that his addressee recognizes that he is making these assumptions, or has these beliefs.

(Stalnaker 1973, 449, my emphasis)

The Gricean heritage of Stalnaker's approach is even more explicit in a more recent paper, in which he describes the importance of the common ground for any act of communication:

One thing, according to Grice, that is distinctive about speaker meaning [...] is a kind of openness or transparency of the action: when speakers mean things, they act with the expectation that their intentions to communicate are mutually recognized. This idea leads naturally to a notion of common ground – the mutually recognized shared information in a situation in which an act of trying to communicate takes place. (Stalnaker 2002, 704)

Stalnaker's approach is clearly rooted in the pragmatic turn initiated by Grice. It incorporates the idea of mutual recognition of content as belonging to the common ground. However, as we have seen, Stalnaker has two distinct conceptions of pragmatic presuppositions: the first involves a disposition to believe in the truth of the presupposition, which entails fewer contextual constraints. The second definition leaves out the disposition to believe, focusing instead on the constraints imposed by the use of a pragmatic presupposition.

I argued that Stalnaker's second definition raises problems, insofar as the speaker can never be entirely certain that his content is mutually shared. Thus, the concept of mutual knowledge constitutes a fundamental epistemological question, which has been widely discussed in the context of Relevance theory, and which will be presented in more detail in the second part of the dissertation (§3.1.2).

1.3.3. The Myth of semantic presupposition

Boër and Lycan (1976) mark a clear break with semantic approaches to presupposition theory, qualifying this category as a myth. They argue that presuppositions belong either to entailments or to conversational implicatures (*as per* Grice 1975). With regard to Stalnaker's pragmatic presuppositions (§1.3.2), they argue that this category responds to a correct intuition that some presuppositions solicit pragmatic inferences, while stressing that the very notion of 'presupposition' is not necessary to account for such phenomena. Furthermore, Boër and Lycan underline that studies within Stalnaker's framework raise the problem of not clearly distinguishing between pragmatic and semantic presuppositions, at the risk of confusing two distinct phenomena. This is shown by the following considerations made by Karttunen, used as an argument by Boër and Lycan (1973):

[...] we may even forget about the distinction between semantic and pragmatic presuppositions. What is said about one kind of

presupposition will apply to the other as well (I hope). (Karttunen 1973, 171 cited in Boër and Lycan 1976, 4)

In the above, Karttunen argues that Stalnaker's approach leads to some confusion as to whether semantic or pragmatic presuppositions should still be distinguished. In his view, it is not clear whether what Stalnaker says about pragmatic presuppositions also applies to semantic presuppositions. If the two phenomena are the same, then it should be possible to explain them by the same mechanisms. But in such a case, it would be necessary to choose whether presuppositions are semantic or pragmatic, as Boër and Lycan rightly point out.

For Boër and Lycan, theories about presupposition have so far made the mistake of including under the same label phenomena that belong either to the semantic or the pragmatic domain. They therefore attempt to solve this problem by abandoning the concept of presupposition, and by exploiting pre-existing notions, namely those of entailments and implicatures.

Below are some examples of how Boër and Lycan categorise presuppositions. They consider presuppositions to be respectively (a) entailments or (b) pragmatic inferences:

(A) Presuppositions as entailments

Non-restrictive relative clauses

Boër and Lycan argue that non-restrictive relative clauses merely trigger an entailment. To support their claim, they show that (33) entails the conjunction of the two propositions stated below. The underlined contents highlight what is traditionally considered to be the presupposition trigger as well as the presupposition:

(33) Dick, who is an expert on Austin, loves the Bonzo Dog Band.

→ Dick is an expert on Austin and Dick loves the Bonzo Dog Band. (Entailment)

(Boër and Lycan 1976, 15)

Boër and Lycan underline that the truth conditions of utterance (33) are those of the conjunction of the two propositions a) “Dick is an expert on Austin” and b) “Dick loves the Bonzo Dog Band”. Therefore, the negation of (33) should logically cancel entailment a) “Dick is an expert on Austin”, contrary to what is predicted in presupposition theory. However, Boër and Lycan argue that the negation of (33) tends to be falsely translated in the form (34) below, which necessitates entailment a) in (33). The reason why negation is misrepresented would be due to lay intuitions, leading people to "deny that [relative clauses] are asserted by the sentence or by the speaker who utters it" (Boër and Lycan 1976, 15), whereas the content is in fact entailed by the sentence. The illusion of a presupposition projection arises precisely from a misrepresentation of the negation of utterance (33), taking the form (34) below:

(34) Dick, who is an expert on Austin, **does not** love the Bonzo Dog Band.

→ Dick is an expert on Austin and Dick does not love the Bonzo Dog Band. (Entailment)

(Boër and Lycan 1976, 15-20)

However, Boër and Lycan argue that with an accurate representation of the denial of utterance (33), the entailment ends up being cancelled, which discards a presupposition view of non-restrictive relative clauses. In their perspective, an accurate denial of (33) takes the form of (33a) below, which allows for two possible readings depending on the scope of the negation. The first reading preserves the entailment thereby giving the illusion of presupposition projection (35), and the second reading implies the cancellation of the entailment (36):

- (33a) **It is not the case** that Dick, who is an expert on Austin loves the Bonzo Band.
- (35) Dick is an expert on Austin and Dick **does not** love the Bonzo Dog Band. (Entailment preserved)
- (36) **It is not the case that Dick both** is an expert on Austin and loves the Bonzo Dog Band. (Entailment cancelled)

(Boër and Lycan 1976, 16)

The remaining question is why listeners tend to interpret (33a) as internal (35), instead of external as in (36). For Boër and Lycan, reading preferences of negative sentences depend on Gricean maxims. They argue that listeners favour the internal negation in the absence of evidence that both conjuncts are not true together, based on the Maxim of Quality, namely “Do not say that for which you lack adequate evidence” (Grice 1975, 46). Boër and Lycan pursue their analysis invoking some rather laborious explanations of the conversational principles involved, making the hypothesis of mental dialects favoring one form of negation over another (*cf.* Boër and Lycan 1976, 18-19). Although the conversational principles involved remain somewhat obscure, the key element of their approach is their assertive claim that presuppositions merely correspond to entailments and that the interpretation of negative sentences lies in “Gricean considerations of conversational implicature, not in the semantic realm at all.” (Boër and Lycan 1976, 18).

Thereafter, Boër and Lycan apply a similar analysis to cleft constructions, factive verbs and also existential presuppositions, which are presented below. In all cases, the so-called “presupposition triggers” and “presupposed contents” are underlined.

Cleft sentences

Traditionally, cleft structures “It is X who did Y” as well as their negation “It is not X who did Y” are considered to presuppose Y. As with non-

restrictive relative clauses, Boër and Lycan argue that cleft sentences entail the conjunction of two propositions. In example (37) below, the cleft sentence entails a) *someone caught the thief* and b) *John caught the thief*:

(37) It was John who caught the thief.

→ Someone caught the thief and *John caught the thief*.

(Entailment)

(Boër and Lycan 1976, 21)

Boër and Lycan argue that the negation of (37), presented in (37a) is wrongly reduced to the meaning described in (38), which corresponds to an internal negation:

(37a) It wasn't John who caught the thief.

(38) $(\exists x)$ [Caught (x, the thief) & \sim (John= x)].

(Boër and Lycan 1976, 21)

However, Boër and Lycan argue that a more accurate negation of (37) in natural language would take the form (39), that reveals more efficiently two possible interpretations of negation, the first one being internal as in (38), and the second being external, as illustrated in (40):

(39) It is not the case that it was John who caught the thief.

(40) $\sim (\exists x)$ [Caught (x, the thief) & (John= x)].

(Boër and Lycan 1976, 21)

Thus, the reason for the erroneous belief that cleft structures are presupposition triggers would stem from the fact that people interpret (39) as being an internal negation, whereas it can also allow for an external negation. For Boër and Lycan, when the addressee hears (39), he imagines that the speaker had reasons *not to say* (41) below, which would have

otherwise been a much simpler way of denying the entailment (or presupposition) that “someone caught the thief”.

(41) The thief has not been caught.

(Boër and Lycan 1976, 22)

Therefore, if the speaker knows (41) to be true, then the less informative utterance (39) would be betraying the Gricean maxim of Quality, in particular the sub-maxim according to which one should "not say what [one] believe[s] to be false" (Grice 1975, 46).

Factive verbs

Factive verbs (e.g., *to know / remember / understand / forget X, etc.*) are generally defined as presuppositional triggers, where X is considered as true. These presuppositions involve the description of the speaker's mental state on the basis of which the truth of the complement is inferred. For this reason, the demonstration differs somewhat from cleft structures and non-restrictive relative clauses. Indeed, the structure “X knows that Y”, is rephrased in the form of the two conjunct propositions: “Y is true and X believes Y on the basis of adequate evidence”, as illustrated below:

(42) Irv knows that Sam is a Martian.

→ Sam is a Martian and Irv believes on the basis of adequate evidence that Sam is a Martian. (Entailment)

(Boër and Lycan 1976, 25)

Boër and Lycan point out that if "Sam is a Martian" is false, then (42) is false, but the negative sentence in (42a) below would become true:

(42a) Irv doesn't know that Sam is a Martian.

Thus, factive verbs would entail, and not presuppose, according to the authors, the truth of the following clause, to the extent that it is cancellable (cf. Boër and Lycan 1976, 25).

However, the interpretation of the negation of factive verbs would follow Gricean conversational rules, which would explain why we get a presupposition reading of such sentences. According to Boër and Lycan, three possible inferences drawn from (42a), namely (42b) – (43d):

(42b) *The speaker may have adequate evidence for the falsity of the proposition “Sam is a Martian”.*

(42c) *The speaker may have adequate evidence for the falsity of the proposition “Irv believes on the basis of adequate evidence that Sam is a Martian”.*

(42d) *The speaker may have insufficient specific evidence concerning whether “Sam is a Martian” or whether “Irv believes on the basis of adequate evidence that Sam is a Martian”.*

(Boër and Lycan 1976, 26)

Boër and Lycan continue their analysis of sentence (42a), invoking Grice's maxim of Quality, according to which it is forbidden to say substantially less than one is in a position to say (Grice 1975, 46). They consider that if the speaker were entitled to deny "Sam is a Martian", it would be more appropriate to do so explicitly, and certainly not under the form (42a). So, for these reasons, the addressee assumes that the entailment is maintained, but merely on conversational grounds, not logical ones¹⁴.

Existential presuppositions

¹⁴ Note that Boër and Lycan apply the same reasoning for counter-factives, which entail the falsity of the complement (e.g., “John pretended he’s a doctor”, entailing that “John is not a doctor”).

Taking up Frege's seminal example of definite descriptions as presuppositional triggers, Boër and Lycan argue that they merely imply the existence of the referent. According to them, "X is Y" and "X is not Y" both entail that "X exists", emphasizing here also that the negative statement is ambiguous:

(43) The present king of France is bald.

→ *There is a present King of France and he is bald.*

(Entailment)

(43a) The present king of France is not bald.

(44) There is a present King of France who is non-bald.

(Entailment preserved)

(45) There is no present King of France. (Entailment cancelled)

(Boër and Lycan 1976, 47-48)

The negative sentence (43a) has two possible readings, namely (44) and (45). Here, again, Boër and Lycan argue that the addressee tends to interpret (43a) as an equivalent of (44), due to conversational maxims. Such a representation does not do justice to the fact that the negative sentence is ambiguous, thereby invalidating the assumption that the content is presupposed.

In summary, Boër and Lycan consider that all the above examples involve entailments, not presuppositions. When dealing with negative sentences, conversational principles could explain why the scope of negation is applied internally rather than metalinguistically. However, Boër and Lycan's approach remains questionable because of its lack of systematicity with regard to the conversational principles applied. Although the Gricean maxim of Quality is often invoked, Boër and Lycan sometimes need to resort to more complex hypotheses, notably referring to "mental dialects" for the interpretation of the negation of non-restrictive relative clauses. The non-uniformity of their explanations is therefore a theoretical limitation.

We shall see that the same limitations apply to the explanations they provide for presuppositions as pragmatic inferences.

(B) Presuppositions as pragmatic inferences

Theoretical implications

Boër and Lycan identify other types of presuppositions that merely correspond to pragmatic inferences. This is the case for what they call "theoretical implications", which are produced on the basis of observations of actions, falsely assumed to be logical consequences. They point out that sentence (46) "John jumped off the roof" is wrongly thought to entail "John fell", whereas it is only a theoretical implication¹⁵:

(46) John jumped off the roof.
→ John fell. (Inference)

(Boër and Lycan 1976, 11)

Indeed, (46) would logically be compatible with a situation where John remained clinging to the roof after having jumped. Therefore, the idea that "John fell" is not an entailment of (46), but rather an inference based on world knowledge. This analysis is reminiscent of Carston's (2002) account of inferences applied to the explicit layer of utterance meaning (*i.e.*, explicatures). While examining utterance (47) below, she argues that the full recovery of the speaker's intended meaning relies on the inference spelled out below. Importantly, the explicature¹⁶ appears to be cancellable, which lends support to the view that they are pragmatically inferred, as illustrated in (47a):

¹⁵ It should be noted that the content "John fell" does not project under negation, which rules out the hypothesis of a presupposition. However, the negation test is not the focus of Boër and Lycan's considerations in the section dedicated to "theoretical implications".

¹⁶ More is said about explicatures in the chapter dedicated to Relevance theory (§3.1.3).

(47) He ran to the edge of the cliff and jumped.

→ *He ran to the edge of the cliff and jumped [over the edge of the cliff].* (Explicature)

(47a) He ran to the edge of the cliff and jumped (up and down) but stayed on the top of the cliff. (Explicature cancellation)

(Carston 2002, 138)

To the extent that the content is cancellable without generating a logical contradiction, the phenomenon can indeed be characterized as a pragmatic inference.

Act implicating

Finally, Boër and Lycan point out some conclusions which can be drawn from specific speech acts (Austin 1962; Searle 1965; 1969). For instance, they argue that promises stage the intention to accomplish a certain action (*i.e.*, hence the term implicating "act"), whereas the relationship between the speech act and the intention is based only on conventions of use:

(48) I (hereby) promise to leave.

(49) The utterer of (48) intends to leave. (Inference)

(Boër and Lycan 1976, 12)

Utterance (48) brings no necessity for the speaker to genuinely intend to keep his promise. Rather, it is by convention that (48) is considered equivalent to (49). Note that these considerations are directly inspired by Austin and Searle's Speech Act theory, without providing a theory as complete as theirs.

Indeed, Speech Act theory distinguishes three types of linguistic acts, namely "Locutionary acts" which correspond to the grammatical and

referential properties of an utterance; "Illocutionary acts" corresponding to the action that is accomplished by the fact of uttering something (asserting, questioning, promising, *etc.*); and "Perlocutionary acts" corresponding to the eventual non-linguistic goals achieved via an utterance (persuade, convince, frighten, *etc.*) (Austin 1962; Searle 1965; 1969; Zufferey and Moeschler 2012, 18). In addition, it is argued that speech acts generate expectations on a social level, regarding some prerequisites for the speech act to be regarded as appropriate, referred to as "felicity conditions". Thus, for example, Austin pointed out that when a speaker utters "I promise" when he has no intention of doing what he promises, this transgresses the felicity conditions of the sentence (Austin 1962, p.40)¹⁷.

Later, I will show that the notion of the speech act is of interest in a cognitive approach, viewed in terms of the social expectations that trigger "discursive" presuppositions (*cf.* §2.2.3). Indeed, we shall see that felicity conditions can be compared to presuppositions, insofar as they are triggered by the whole sentence (just like an implicature), without being part of the speaker's intended meaning (which distinguishes them from mere implicatures).

In conclusion, Boër and Lycan's approach constitutes an iconic opposition to the classical approaches to presuppositions. However, as mentioned above, it has the limitation of lacking systematicity in the explanations provided on the disambiguation of negative sentences. It should also be noted that the presuppositions which are labelled as "pragmatic inferences" include a wide range of explanations, from the use of world knowledge to the application of Speech Act theory.

1.3.4. Presuppositions as ordered entailments.

Presuppositions conceived as ordered entailments (Wilson and Sperber 1979) build on reflections presented in Wilson (1974). Her thesis argues

¹⁷ For further discussion of the differences between Austin and Searle, see Levinson (1980).

that presuppositions essentially correspond to entailments, supplemented by pragmatic instructions which guide the processing of negative sentences, favouring a presupposition reading¹⁸.

Wilson's (1974) thesis is notable for demonstrating the limitations of truth-conditional approaches to presupposition-like phenomena, such as Gricean conventional implicatures. For instance, she compares (50) with (51), whose differences cannot be captured by truth-conditional analyses:

(50) John is not here.

(51) John is not here yet.

Truth-condition for (50) and (51): *John is not here.*

Wilson points out that (51) communicates, in addition to the fact that "John is not here", that "John is expected to come soon", which is a conventional implicature triggered by "yet". This latter content is not part of the sentence's truth-conditions, but it nonetheless commits the speaker. The conventional implicature triggered by "yet" may be a commitment directly made by the speaker or it may also be attributed to a third party, as in (52) below:

(52) I have not resigned yet and I have no intention of doing so.

In the above, "yet" conveys the conventional implicature that "I intend to resign soon". However, the implicature is incompatible with the conjunct proposition that "I have no intention of retiring". Therefore, based on the contradiction between the two conjunct propositions, the addressee infers that the conventional implicature conveyed by "yet" is attributed to a third party who expects the speaker to retire soon.

Wilson (1974) argues that meaning routinely goes beyond truth-conditional information, as illustrated by the conventional implicatures above. It is crucial to take them into account, insofar as the speaker commits to these contents (or attributes commitments to a third party). Thus, in

¹⁸ See Boër and Lycan (1976), in the previous section and also Kempson (1975) for similar approaches.

Wilson's perspective, meaning is the combination of both logical and non-logical implications, which would be evaluated separately:

The meaning [...] is the sum of the two types of semantic implication, but a truth-value is assigned only on the basis of the truth-conditions: the non-logical implication is separately evaluated, and the hearer is free to agree or disagree with it while still judging [the sentence] to be true. (Wilson 1974, 182)

The non-logical implications mentioned above refer in particular to the speaker's commitment to a conventional implicature. According to Wilson, conventional implicatures are evaluated separately from truth conditions. Furthermore, Wilson argues that conventional implicatures give the listener the freedom to agree or disagree with the content for which a commitment is made. Importantly, Wilson introduces an essential notion relating to presuppositions from a pragmatic perspective, namely that verbal communication involves an implicit signalling of responsibility for the communicated content, as well as a tacit promise to take responsibility for the reliability of the information. The processes by which the addressee retrieves these contents are made explicit in the later context of Sperber and Wilson's (1987a) Relevance theory, as well as in the theory of Epistemic Vigilance (Sperber et al. 2010). Interestingly, comparable considerations of speaker commitment appear in other linguistic traditions, as in Ducrot (1984), for whom presuppositions involve a shared responsibility between speaker and addressee (*cf.* next section).

Returning to approaches which predate Relevance theory, Wilson and Sperber (1979) pursue Wilson's (1974) idea that an adequate approach to presuppositions is to account for their non-truth-conditional effects. They begin by rejecting the hypothesis that presuppositions correspond to Gricean implicatures, which received quite some attention following the works of Stalnaker, as well as Boër and Lycan. To do so, they compare two propositions sharing the same truth-conditions but which, however, generate different presuppositions (or implicatures), as illustrated below:

(53) It is Peter who is married to Sarah.

← *Someone is married to Sarah.*

(54) It is Sarah that Peter is married to.

← *Peter is married to someone.*

(Wilson and Sperber 1979, 300)

Wilson and Sperber point out that, in a Gricean framework, two semantically identical sentences should generate identical conversational implicatures. When considering the Gricean maxims of brevity and perspicuity, they argue that utterance (53) and (54) do not differ sufficiently to explain the production of two distinct implicatures¹⁹. However, when carefully examining the above presuppositions, they differ despite an identical semantic meaning²⁰, which discredits the hypothesis that they could be conversational implicatures.

Thus, Wilson and Sperber contend that approaching presuppositions as conventional or conversational implicatures is not convincing. Instead, they argue that presuppositions are entailments, which receive specific pragmatic instructions. Furthermore, they point out that the field of semantics should be able to account for a hierarchy between entailments in order to explain foreground and background effects. In their perspective, presuppositions correspond to lower entailments, which are perceived as

¹⁹ « As long as [the two utterances] are treated as semantically identical, it is hard to see how they could bring about different violations of the maxims of relevance and informativeness. Indeed, for Grice, two semantically identical sentences must always give rise to identical conversational implicatures unless they differ rather dramatically in length or ease of comprehension, so that they differ in their violations of the two other maxims concerning brevity and perspicuity. » (Wilson and Sperber 1979, 301).

²⁰ For Wilson and Sperber (1979, 300), the two utterances have an identical semantic meaning because they share the same truth-conditions. They both require that a) Someone is married to Sarah, and b) Peter is married to someone. However, these two sentences vary only on foreground and background effects that are not semantically encoded, according to a standard truth conditional semantics.

background information. Lower entailments contrast with higher entailments which are focalized. However, despite them being backgrounded, lower entailments remain crucial for the relevance of an utterance, as explained below:

The interpretation of an utterance will [...] involve some method of picking out and bringing to the forefront of attention the pragmatically most important entailments, on which the general relevance of the sentence depends. (Wilson and Sperber 1979, 304)

Without being relevant in itself, [the lower entailment] will be a necessary condition for establishing relevance²¹. (*Ibid.*, p.319)

Furthermore, beyond semantic and syntactic triggers, Wilson and Sperber emphasize the robustness of stress patterns, which outweigh other presuppositional triggers:

(55) YOU'VE eaten all my apples.
 ← *Someone's eaten my apples.*

(55a) You've eaten all my APPLES.
 ← *You've eaten something.*

(Wilson and Sperber 1979, 316-317)

Stress pattern appears to “override syntactic or lexical effect[s]” (Wilson and Sperber 1979, 310). This suggests that presuppositions may not be a strictly linguistic phenomenon, but may respond to a cognitive need to sort out the relevance of information, regardless of the specific “tool” exploited. Following this idea, I argue in Müller (2021, 47–48) that stress patterns correspond to a natural highlighting device that effectively guides

²¹ Thomason (1990) makes a similar point about presuppositions, which he calls “background implicatures”, saying the following: « A background implicature [...] may be the most important and newsworthy information that is conveyed by an utterance » (Thomason 1990, 352).

interpretive inferences²². These latter considerations will be reviewed in more detail in the second part of this thesis (§3.2.3).

1.3.5. *Ducrot's polyphony theory*

Ducrot approaches presuppositions from a discursive point of view. In his framework, language use involves semantic and rhetorical layers structured as follows: semantic content is made of an asserted *vs* presupposed information (“*posé vs présumé*”), and rhetorical content is made of implicatures (referred to as “*sous-entendu*”). Although presuppositions are implicitly conveyed, Ducrot argues that they are ‘immediate implicits’ belonging to semantic meaning.

In his theory of polyphony, Ducrot distinguishes different levels of speaker commitment depending on the type of content involved. Asserted contents fully commit the speaker, while implicit ones are on the listener’s behalf. As far as presuppositions are concerned, they have an ambivalent status, as can be seen below:

[...] si le posé est ce que j'affirme en tant que locuteur, si le sous-entendu est ce que je laisse conclure à mon auditeur, le présumé est ce que je présente comme commun aux deux personnages du dialogue, comme l'objet d'une complicité fondamentale qui lie entre eux les participants à l'acte de communication.

[[...] if the verbalized is what I assert as a speaker, if the implied is what I allow my listener to conclude, the presupposition is what I present as common to the two characters in the dialogue, as the object of a fundamental complicity that binds together the participants in the act of communication.]

(Ducrot 1984, 20, *my translation*)

²² Note that Jackendoff (1972) has shown that stress patterns are not only indicators affecting presupposed contents, but they can also affect the truth-conditions of a sentence.

According to this perspective, presuppositions are mixed contents: they are semantic, in that they are inherent to the meaning of the sentence, but they are also pragmatic, being a discourse object for which the responsibility is presented as shared between the speaker and the addressee. Ducrot also alludes to potential deceptive uses of presuppositions, claiming that the speaker may try to share the responsibility with the listener “by hiding what he says under the appearance of a shared belief” (Ducrot 1984, 21)²³. Moreover, Ducrot points out that presuppositions bring about conversational constraints that compel the addressee to accept the content as true (Ducrot 1972). (The conversational constraints related to presuppositions are further developed in the second part of this dissertation, *cf.* §3.2.3).

Ducrot's examples of presuppositions are mainly limited to the classics, supported by the projection tests of semantic approaches (*cf.* §1.2.3). The interest of his work lies more in the analysis he provides of them. He argues that an utterance can be perfectly understood, despite the absence of any real consideration of the presupposition. For example, in utterance (56) below, he claims that the assertion “*Jacques is a smoker*” is understood regardless of the truth of the presupposition “*Jacques used to smoke*”:

(56) Jacques is still smoking.

Presupposition: *Jacques used to smoke.*

(Ducrot 1984, 17-18, *my translation*)

In Ducrot's perspective, even though the presupposition is inherent to the meaning of the statement, being unaware of it does not prevent the addressee from understanding the asserted content. In his own words, “the utterance [...] can be understood and accepted even if the presupposition is

²³ Similar considerations can be found in Stalnaker (1998) and von Stechow's (2000) discussion concerning inappropriate uses of presuppositions (§5.1.3).

not accepted" (Ducrot 1984, 20, *my translation*). Thus, the function of presupposition would lie more in the commitment cues it conveys, allowing the speaker to share his responsibility with a community to which he belongs. However, with regard to example (56) above, Ducrot expresses the following reservation, namely that the speaker cannot completely absolve himself from having communicated the presupposition:

[...] si mon interlocuteur peut me prouver que Jacques n'a jamais fumé, je n'ai aucun moyen de dégager ma responsabilité, et il me sera bien difficile de ne pas reconnaître ma bourde.

[[...] if my interlocutor can prove me that Jacques never smoked, I have no way of discharging my responsibility, and it will be very difficult for me not to acknowledge my mistake.]

(Ducrot 1984, 20, *my translation*)

Thus, although the commitment of presupposed contents is presented as shared between the speaker and his audience, Ducrot emphasizes that it is not possible for the speaker to retract having communicated such contents²⁴. This is partly due to the formal properties of semantic presuppositions, which cannot be cancelled without generating a logical contradiction (*cf.* §1.2.1). Nonetheless, it is important to distinguish the question of the truth conditions of the sentence with the one of utterance comprehension. As we shall see later in Sperber and Wilson's *Beyond Speaker's Meaning* (2015), utterance comprehension cannot be reduced to truth-evaluable propositions. In many cases, the relevant content lies more in non-propositional effects (*cf.* §3.1.4).

In summary, Ducrot sets out some interesting avenues for the analysis of presuppositions, particularly from the point of view of the speaker's commitment, converging with Wilson's (1974) observations presented in the previous section. The attribution of the speaker's commitment appears

²⁴ Note that this issue will be further investigated later, when addressing the question of the deniability of presuppositions in verbal communication (§5.2.2).

to be a fundamental type of inference, relating to the degree to which the speaker is perceived as responsible for having communicated a content and to what extent he is responsible for its accuracy. In Ducrot's perspective, presuppositions are specifically interesting insofar as they present information as belonging, symbolically, to a community to which the speaker belongs, thus leaving potential leeway in taking responsibility for these contents. These considerations of course foreshadow later approaches to the links between presupposition and manipulation (*cf.* §5.2).

1.3.6. Kleiber's oppositions to Ducrot

Kleiber (2012) presents a critique of Ducrot's distinction between asserted *vs* presupposed content. He builds his arguments on the example "Pierre has stopped smoking" and breaks it down as follows:

(57) Pierre has stopped smoking.

Assertion: Pierre does not currently smoke.

Presupposition: Pierre used to smoke.

Kleiber argues that within Ducrot's account, the assertion "*Pierre does not currently smoke*" would be an inference based on the presupposition "*Pierre used to smoke*" and the initial statement "*Pierre has stopped smoking*". However, Kleiber claims that such an analysis generates a contradiction, as the assertion would both correspond to the semantic meaning of the initial statement and to an inference: "What is really asserted by the initial statement thus becomes in such an analysis a simple inference. Which, to say the least, is a bit ironic!" (Kleiber 2012, 26, *my translation*).

At this point, it should be noted that Kleiber's challenge to Ducrot raises a false problem. Indeed, even if the intended assertion was derived by an inference, this would not in itself be a problem, given that pragmatic inferences can apply to both the implicit and the explicit layer of communication (§3.1.3). Moreover, we saw in the previous section that it is

possible to conceive presuppositions as being semantically triggered but also receiving the pragmatic instruction to be relayed in the background.

In any case, Kleiber provides an alternative approach to presuppositions which consists in distinguishing “presuppositions as content” from “presuppositions as inference”. In the example below, he argues that the presupposition "Peter was wearing a coat" comes directly from the verb "to take off" which triggers lexically a presuppositional content. It is only from this point that the addressee would produce a presupposed inference in the form of a proposition, namely that "Peter was wearing a coat".

(58) Peter took off his coat.

Presupposed content: “to take off” requires that the argument is “on” or “worn by”.

Presupposed inference: Peter was wearing a coat.

Thus, for Kleiber, the presuppositions commonly referred to are in fact the result of an inference, based on a lexical presupposition. He argues that this distinction allows to explain situations in which presuppositions are blocked by negation, as in the following example:

(59) Fred does not regret that Doris is leaving, given that Doris is not leaving.

For Kleiber, the above statement triggers the presupposition of content "to regret that P", which requires that P is true. However, the presupposition as inference, taking the form of the proposition "Doris is leaving", would be explicitly blocked by the proposition “Doris is not leaving”.

Importantly, such an approach is problematic with respect to other cases of metalinguistic negation which do not involve presuppositions. For example, in the utterance below, it seems unconvincing to assume that the negation blocks an inference that would otherwise have been produced by the lexical item “impolite”:

(60) He is not impolite, he is rude!

Following Kleiber's proposal, one should analyze the above utterance as triggering an elementary content based on the lexical item "impolite". This content would then produce an inference taking the form of the proposition "He is polite". This inference would be blocked right after by the assertion "He is rude", thereby cancelling the proposition "He is polite". However, such an analysis seems particularly costly for the addressee and, therefore, unconvincing compared to more common explanations of metalinguistic negation. Indeed, it seems more efficient to process such examples as involving two possible readings of negation, an internal negation reading and a metalinguistic negation reading. The addressee would interpret the scope of the negation according to the relevant clues at hand. In the above example, the addressee will favor a metalinguistic interpretation of the negation based on the contradiction it would otherwise generate. From this perspective, the above negation does not cancel the proposition "He is polite" but invites the addressee to reconsider the extent to which the lexical item should be considered. In other words, it refers to the maximum degree of impoliteness, which even requires the use of another term (*i.e.*, being "rude").

In conclusion, Kleiber's approach appears to be at odds with the approaches seen earlier, according to which presuppositions are entailments, with an ambiguous reading in negative sentences, allowing both internal and external negation. Furthermore, the distinction between presuppositions as content *vs* presuppositions as inference only seems to add complexity to the comprehension processes handled by the addressee. Therefore, I will not go any further in the direction he suggests.

1.3.7. Conclusion

This section was dedicated to semantic presuppositions from a pragmatic point of view. The types of contents presented remained the same as those classically addressed by semantics, namely presupposition triggered

locally, by a lexical item or grammatical structure. First, I introduced Grice's concept of conventional and conversational implicatures. We have thus seen to what extent the phenomenon of presuppositions can be compared to Grice's implicatures. In particular, I highlighted Grice's conventional implicatures, which share many of the properties of presuppositional phenomena, since they cannot be cancelled without creating an inconsistency and are redundant to verbalization. However, as Wilson (1974) points out, conventional implicatures escape truth-conditional descriptions of a sentence (*cf.* contrast between "John is not here" and "John is not here yet"). On the other hand, I have shown that conversational implicatures remain quite distinct from presuppositions in that they are cancellable and not redundant to verbalization.

I then introduced Stalnaker's approach, which constitutes a turning point in presupposition theory. Indeed, his approach consists of a shift in perspective, focusing more on what the speaker presupposes rather than on what the sentence presupposes as an abstract entity. This perspective led to the identification of at least two possible presuppositions within a single utterance (*e.g.*, "My cousin isn't a boy anymore", which either presupposes that "my cousin is a male" or that "my cousin is young"). However, I pointed out the limitations of Stalnaker's approach, being that semantic and pragmatic presuppositions are taken interchangeably, raising the question of whether introducing the new notion of "pragmatic presupposition" is necessary.

The following two approaches considered, namely Boër and Lycan as well as Wilson and Sperber's, are situated between semantics and pragmatics. Both approaches first posit that most presuppositional phenomena are mere entailments. The reason why entailments are preserved under the scope of negation is attributed to pragmatic reasons. Both approaches highlight the interest of using Grice's conversational maxims to explain such phenomena.

The notion of speaker commitment was also introduced when discussing both Wilson (1974) and Ducrot. Wilson stresses that a strict truth-conditional approach does not account for the communicative effects presuppositions convey. Ducrot, on the other hand, seeks to account for the

way in which the speaker is committed to different types of contents he communicates, arguing that presuppositions are presented as a shared responsibility between the speaker and the community he belongs to.

Finally, I argued that Kleiber's distinction between presupposition as content and presupposition as inference is not promising, mainly because a confirmation of his hypotheses would imply higher processing costs.

1.4. Experimental approaches

This section summarizes the main issues that have been the subject of experimental research on the processing of presuppositions. First, I present how experimental approaches assess the semantic *vs* pragmatic nature of presuppositions (§1.4.1). I then turn to the question of whether presuppositions can be divided between mandatory *vs* optional triggers (§1.4.2). Finally, I discuss experimental research on the acquisition of presupposition (§1.4.3).

As a preliminary remark, it should be noted that experimental research on presuppositions has only recently taken off. One should therefore remain cautious regarding the conclusions that can be drawn from its findings. Moreover, as Schwarz (2015) emphasises, theoretical approaches to presuppositions do not always make clear propositions about the cognitive processes involved in processing such contents, thereby raising an additional challenge in their experimental study. However, in this respect, the works conducted by Domaneschi and colleagues have largely contributed to translating the cognitive processes which can be assumed to be involved in the processing of presuppositions (Domaneschi 2016; Domaneschi and Di Paola 2018; Domaneschi et al. 2018). This is why the following section is essentially based on their work.

With regard to the methods used, experimental research on presuppositions has mainly been based on measures of reading time as an indicator of cognitive costs. Most research involves self-paced reading and eye-tracking tasks. The overarching assumption is that reading times reflects the amount of cognitive efforts (Liversedge, Paterson, and Pickering

1998; Rayner 1998; 2009). That is to say, the longer participants look at a specific region, the costlier it is assumed to be. Some studies explored other methodologies, such as the measure of cognitive efforts in terms of memory capacity under varying levels of cognitive load (Neys and Schaeken 2007; Marty, Chemla, and Spector 2013; Dieussaert et al. 2011). According to this latter technique, it is assumed that the participant under a high cognitive load will process utterances superficially, which will favour the memorization of semantic content over pragmatic ones, due to the higher processing cost of the latter contents. Finally, some studies have measured neural activity (ERP) while participant would process presuppositions. This technique can be used to measure the cognitive load in information processing as well as to target more precise questions relating to anaphora resolution (Masia et al. 2017; Domaneschi et al. 2018).

The next section includes some considerations on the accommodation of presuppositions, namely contexts in which the presupposition is unknown to the participant, as illustrated below. Indeed, the semantic or pragmatic nature of presuppositions is difficult to study only in contexts where presuppositions are satisfied, namely when the presupposition is congruent with a preceding context. Consider the two classical experimental conditions, contrasting presupposition satisfaction (61) vs presupposition accommodation (62):

- (61) In Paolo's office, there used to be **a very bad-tempered designer**. [...] Due to overstaffing problems, about a month ago, **the graphic designer** was made redundant. (Satisfaction condition)
- (62) In Paolo's office there are many employees. [...] Due to overstaffing problems, about a month ago, **the graphic designer** was made redundant. (Accommodation condition)

(Domaneschi et al. 2018, 31)

The methodological interest of comparing presupposition satisfaction *vs* presupposition accommodation lies in the fact that it allows a comparison of identical sentences, measuring only the processing difficulties linked to the presupposition trigger. As Domaneschi and Di Paola (2018) point out, the processing ease of presuppositions depends above all on the type of information available in the context. Thus, experimental studies use essentially three conditions for the study of presupposition processing, namely presupposition satisfaction, presupposition falsification²⁵ and presupposition accommodation.

It should be noted, however, that questions relating to accommodation processes associated with potential manipulative effects will be dealt with in the third part of this dissertation.

1.4.1. Semantic or pragmatic presuppositions?

Given the abundance of theoretical debates on the semantic or pragmatic essence of presuppositions, much hope went into experimental approaches to finally settle this question and classify the different types of presupposition triggers. As far as the semantic or pragmatic nature of presuppositions is concerned, there are two opposing theoretical traditions, from which the following predictions can be drawn:

Semantic view of presuppositions

Dynamic semantic approaches (Heim 1982; Chierchia 1995; Beaver 2001) consider presuppositions as semantically encoded. According to this framework, they set conditions on context updates. Dynamic approaches predict that presuppositions will be processed immediately. Domaneschi and Di Paola (2018) offer a more precise analysis, following Heim's Context Change Semantics (CCS), predicting that the addressee first checks whether

²⁵ Presupposition can be falsified in two ways: a) when the criteria required by the presupposition are not met, b) when the presupposed content is inconsistent with the information provided earlier in the discourse (*cf.* Reinecke 2020, 63).

the presupposition is entailed by the context. Then, if the presupposition is not entailed by the context, the addressee would engage in an updating process (Heim 1983). Domaneschi and Di Paola distinguish two experimental observations which would support a semantic presupposition hypothesis :

- a) **A slow-down on the presupposition trigger:** in contexts which require a presupposition accommodation, an immediate delay is expected to occur on the presupposition trigger.

- b) **A slow-down on the presupposition trigger and on the computation point:** in contexts requiring a presupposition accommodation, a processing delay is expected to occur on the presupposition trigger and the on the computation point (see example below). Such observation would be supportive of a two-stage processing of presupposition, where the participant first identifies the presupposition failure and then updates the context.

More specifically, in a statement such as "Mark has given up smoking", the triggering point would be the change-of-state verb (*i.e.*, "to give up") and the computation point would be "smoking". According to Domaneschi and Di Paola, the computation point corresponds to the point "where the content of the presupposition is computed and where it becomes fully available to the hearer" (Domaneschi and Di Paola 2018, 488). Thus, a confirmation of Heim's CCS model would require the presence of the two slowing-down points mentioned above.

Pragmatic view of presupposition processing

Pragmatic accounts consider that presuppositions are processed by means of pragmatic reasoning, in the same way as scalar inferences (Schwarz 2015a, 13) or conversational implicatures (Simons 2001; Capone 2017). These approaches expect delays to occur *post hoc* – only once the utterance has been fully processed. Thus, for an utterance such as "Mark has stopped

smoking”, there would be no processing delays observed on specific regions across different conditions (satisfaction *vs* accommodation), but only once the whole sentence has been processed.

Experimental findings

Domaneschi and Di Paola (2018) designed an innovative experiment about the processing of presuppositions, in that it proposes a word-by-word self-paced reading study, making it possible to identify the locus of each increase in processing costs. In this way, they go beyond Haviland and Clark (1974), who famously demonstrated the effects of context in the processing of presuppositions, but only at the sentence level. In addition, Domaneschi and Di Paola’s study tested several presupposition triggers, thus making it possible to establish initial comparative analyses.

Domaneschi and Di Paola’s findings suggests that presuppositions are semantic contents, based on the observation that they are processed immediately at the lexical level. Moreover, their results reveal, with several presupposition triggers, that processing slowdowns occur on two key regions, namely on the trigger and on the computation point. This lends support to the view that presupposition processing occurs incrementally, with a first slowdown due to the presupposition failure and a second due to context update requirements. These results are consistent with other studies that have shown that presuppositions are processed online (Schwarz 2007; 2015b; Schwarz and Tiemann 2017; Singh et al. 2016). However, their study also reveals disparities across different presupposition triggers, once again highlighting the heterogeneity of this category.

Thus, at this early stage, experimental data favor the idea that presuppositions are semantic contents, due to the processing delays observed at the lexical level. Domaneschi and Di Paola highlight the importance of applying word-by-word analyses to target the specific location of contextual updates involved in presuppositions accommodation. In particular, this type of approach removes the ambiguity raised by measurements based on complete sentences, as it appears in the

seminal work by Haviland and Clark (1974). However, despite such methodological adjustments, Schwarz (2015) points out that it is not yet possible, at this stage, to rule out the hypothesis that presuppositions are still subject to pragmatic inferences that would not be observable with the methods currently applied.

1.4.2. Mandatory vs optional triggers.

Glanzberg (2005) argues in favour of categorising presupposition triggers according to their contribution to the truth value of a sentence. He distinguishes between mandatory and optional presupposition triggers based on the following arguments:

- Mandatory triggers are necessary to assign a truth value to a sentence. For instance, when uttering “John regrets having voted for Bush”, the factive verb “regret” is mandatory to assess whether John’s attitude towards the presupposed fact that “John voted for Bush”. In the event that one learns that he was “happy” to have voted for Bush (instead of regretting it), the initial statement would turn out to be false (Glanzberg 2005, 369). Thus, for Glanzberg, factive verbs must be taken into account to attribute a truth value to the sentence.
- Optional triggers have no direct impact on the truth value of the sentence. This is the case with focus-sensitive particles, as in "Even John solved the problem", which presupposes that it was unexpected that "John solved the problem". As Wilson (1974) had already shown regarding the conventional implicature triggered by "yet" in "John is not here yet", truth conditions are not affected by focus-sensitive particles (cf. §1.3.4). Thus, in Glanzberg's perspective, "even" is optional for the identification of the truth conditions of the sentence.

Glanzberg’s distinction between mandatory and optional triggers has been addressed experimentally by Domaneschi et al. (2014), applying the method of processing and memorizing presuppositions under varying

levels of cognitive load. Mandatory triggers were expected to involve fewer memory errors than optional triggers, inasmuch as the former category is taken to be necessarily processed to assign a truth value to the sentence. Interestingly, Domaneschi and colleagues found some trends supporting the view that a distinction should be made between mandatory and optional triggers. However, they also found some intermediary triggers, namely some triggers that were mandatory only under low cognitive load, but optional under higher cognitive load. Their results can be summarized as follows:

- A) **Mandatory triggers** (processed most of the time): definite descriptions (*e.g.*, “The king of France”) and factive verbs (*e.g.*, “to regret”).
- B) **Optional triggers** (processed less frequently): focus-sensitive particles (*e.g.*, “even”) and iteratives (*e.g.*, “again”).
- C) **Intermediary triggers** (processed most of the time under low cognitive load and less frequently under higher cognitive load): change of state verbs (*e.g.*, “to stop”).

Although these categorisations provide some insights regarding the processing of presuppositions, it should be emphasised that the results need further replication in order to be taken into consideration. On the other hand, it should be noted that the fact that a presupposition trigger is mandatory with regard to the truth conditions of the sentence says little about the quality of information processing. Indeed, as studies in psychology have shown, despite definite descriptions being listed as mandatory triggers, they are also found to be correlated with systematic errors produced by the participants (Bredart and Modolo 1988; Reder and Kusbit 1991; Loftus and Zanni 1975). This last point will be discussed at greater length in the chapter dedicated to the manipulative effects of presuppositions (§5.2).

1.4.3. *Presupposition acquisition*

The study of the acquisition of presuppositions provides insights into the cognitive skills required for their processing. Several experiments have been inspired by methodologies applied to the study of scalar inferences, because of the similar operations that seem to take place at the lexical level. With respect to scalar inferences, developmental studies have shown that children are more likely to favour a logical reading over a pragmatic one. For example, when seeing a picture with a bear that has eaten "all the candy" in the cupboard, a child will accept the statement "the bear ate *some* of the candy" as true, because this reading is entailed by the proposition "the bear ate all the candy". However, adults will consider this description as false, because "some" triggers a scalar inference, namely "the bear did not eat all the candy", which is incompatible with the logical reading. (Noveck 2001; 2004; Pouscoulous et al. 2007).

Similarly, Bill et al. (2016) compare the processing of presuppositions with scalar inferences, following recent proposals that the same mechanisms are exploited to generate both types of inference (Chemla 2009; Romoli 2012; 2014). As an example, they compare scalar inferences (63) and (64) with an inference that would be produced on the basis of the presupposition triggered by the verb in (65):

- (63) a. **Some** of the giraffes have scarves.
b. **Not all** of the giraffes have scarves.
- (64) a. **Not all** of the giraffes have scarves.
b. **Some** of the giraffes have scarves.
- (65) a. The bear **didn't win** the race.
b. The bear **participated** in the race.

The aim of this study was to assess the extent to which the inference produced in (65b) is generated only by adults, in a similar way to what is observed for scalar inferences. Here, one would expect to observe, among children, that the assertion "The bear didn't win the race" does not necessarily imply that the bear participated in the race. To determine

whether children compute presuppositions in a way which can be compared to a scalar inference, they presented the sentence (66) to the children, confronting it with the following contextual image in (67), which shows the bear in the kitchen while the other animals were taking part in the race:

(66) The bear didn't win the race.

(67) Context:



Bill et al. (2016) predicted that children would tend to accept (66) in a context where the bear did not participate in the race, as depicted in (67), whereas adults would tend to reject it. However, Bill et al.'s results suggest that presuppositions do not follow the same acquisitional patterns as those of scalar inferences. Children aged between 4 and 5 were found to interpret (66) as implying that the bear had taken part in the race, which was not systematically the case for adults. Thus, the results reveal a pattern somewhat reversed from that of scalar inferences, where adults suspend the interpretation of the presupposition, possibly because of the ambiguity of the scope of negation. Arguably, the utterance "the bear didn't win the race" can be understood either as "The bear took part in the race but didn't win" (internal negation), or as b) "The bear didn't win the race because he didn't take part in it in the first place" (external negation)²⁶.

²⁶ One could ask here whether the theoretical premises of the experiment are correct: indeed, it could be argued that it is in fact more costly to apply a metalinguistic negation favouring the interpretation that "The bear

Other studies have looked at the link between Theory of Mind²⁷ and the processing of presuppositions involving factive verbs (*e.g.*, “to know”, “to regret”). In a more conclusive way than for the scalar inference hypothesis, Dudley et al.(2014) suggest that some children as young as 3 years old are able to differentiate the factive verb 'to know' from the non-factive verb 'to believe'. Their study consisted in asking children to find hidden toys in one of two boxes, using cues provided by a puppet, which were communicated to them by means of an attitude report (either factive or non-factive). According to the authors, their results suggest that early representations of the factive 'know' are not presuppositional, perhaps due to insufficient mind-reading skills. It would therefore be later, through the refinement of their pragmatic skills, that children would master the presuppositional interpretation.

By way of conclusion, it should be noted that studies on the acquisition of presuppositions constitute the least developed area of experimental research on these contents. Consequently, further studies would be essential to identify the cognitive skills involved in the different triggers. Thus, as Schwarz points out, the developmental study of these contents is currently a priority in experimental research on presuppositions (Schwarz 2015a, 29). In the second part of this thesis, I propose some hypotheses regarding the acquisition of presuppositions, based on tools derived from Relevance theory (§4.1.1).

1.4.4. Conclusion

Experimental approaches have shown great creativity in trying to assess the essence of presuppositions, namely whether these contents are semantic or

didn't participate in the race". From this perspective, the findings that children preferred the interpretation "The bear participated in the race." is consistent with the findings about scalar inferences.

²⁷ Theory of Mind refers to the ability to attribute mental states to other individuals. This skill is involved in the interpretation of the speaker's intended meaning and is, for example, fundamental in the interpretation of ironic contents (Spotorno et al. 2012; Spotorno and Noveck 2014).

pragmatic. However, the various studies confirm the idea that presuppositions constitute a heterogeneous category, on the basis of the differences in processing costs relative to each trigger. Moreover, although there seems to be a consensus that presuppositions are semantic, Schwarz points out that a pragmatic hypothesis cannot be excluded at this stage.

As far as the distinction between optional and mandatory triggers is concerned, I have argued that it is informative only at the level of truth conditions, without taking into account the pragmatic effects of these contents, nor the processing bias attributed to them in the field of experimental psychology.

Finally, the study of the acquisition of presuppositions, which raises the question of the cognitive skills they require, revealed two things: while the hypothesis that presuppositions correspond to scalar inferences did not seem to be supported, the hypothesis that they call for mind-reading skills proved promising, at least for factive verbs. However, since acquisitional studies are still in their infancy, it is advisable to remain cautious about the conclusions that can be drawn from them.

To sum up, experimental approaches are unfortunately unable, at this stage, to provide answers to the theoretical questions raised. On the contrary, they seem to confirm the extent to which presuppositions constitute a heterogeneous class, almost impossible to grasp as an entity. However, I will argue that following a relevance-theoretic approach, such variations in costs are not problematic in accounting for presuppositional effects from the addressee's perspective.

Chapter 2. Discursive presuppositions

2.0. Introduction

Discursive presuppositions, as defined by de Saussure (2013), are pragmatic contents which are triggered globally, namely by the sentence. One crucial property of these types of meanings is that they serve as preconditions for the relevance of an utterance. Thus, these contents formally correspond to implicatures but are relayed to the conversational background. They contrast with semantic presuppositions which are triggered locally, by a lexical item or a grammatical structure.

The concept of “discursive presuppositions” stems from some fundamental principles found in Relevance theory (Sperber and Wilson 1987a; Wilson and Sperber 2004). Relevance theory builds on the work of Grice, with a research agenda focused on ostensive-inferential communication. It is also referred to as being a “cognitive pragmatic” framework, because it focuses on the study of the cognitive underpinnings of the attribution of meaning. I will focus, at this stage, only on what is useful for understanding discursive presuppositions, namely the presumption of relevance (§2.1.1), implicated premises and the weak *vs* strong implicature distinction (§2.1.2), and their more recent distinction between determinate and indeterminate meanings (§2.1.3). Note that Relevance theory will be presented in more detail in the next part of this dissertation.

Finally, I suggest some tools which help the identification of discursive presuppositions which I call “the Alien’s perspective” (§2.2.1). This will contribute to the distinction of three levels of discursive presuppositions (§2.2.2 - §2.2.3). I then show that discursive presuppositions should be distinguished from mere implicatures (§2.2.4) and from implicated premises (§2.2.5).

2.1.Key principles in Relevance theory

2.1.1. *The presumption of relevance*

Relevance theory seeks to account for ostensive and inferential communication, arguing against Grice's (1957) idea that communication involves a mutual recognition of the speaker's communicative intention. It distinguishes two levels of communication, namely the informative intention of the speaker (i.e., the information he seeks to convey) and the communicative intention of the speaker (i.e., the desire to convey information). From the perspective of Relevance theory, the speaker presents his communicative intention clearly and overtly, triggering an inferential process in the addressee. This process is aimed at reconstructing the informative content the speaker wished to communicate.

Importantly, Relevance theory is grounded in evolutionary psychology²⁸. In this perspective, no cognitive skill is free. The emergence and stabilisation of a trait within a species is expected to ultimately benefit its survival. In other words, a trait will typically be selected when the trade-off between the costs and benefits is positive. So, for the addressee, understanding an utterance involves processing costs that must be compensated by a benefit in order to justify these costs. Relevance theory considers that the benefits of producing interpretative inferences consist in obtaining cognitive effects, namely by acquiring useful information, reinforcing or revising a previous belief (Wilson and Sperber 2004, 608). From the addressee's perspective, the speaker has a tacit responsibility of providing information which deserves a cognitive investment. According to Sperber and Wilson, for communication to be worthwhile, an utterance necessarily communicates its own *presumption of relevance*.

²⁸ Evolutionary psychology approaches psychology from a biological perspective: each psychological trait (language, emotions, trust *vs* vigilance, etc.) is defined as supported by the brain, which is itself the product of different specialized modules (Fodor 1983). Furthermore, psychological traits are seen as a "product of the evolutionary process" (Barkow, Cosmides, and Tooby 1995, 7), which emerge as adaptations resulting from selective pressures.

The presumption of relevance, assumed for each utterance, makes it possible to capture, among other problems, tautologies or ironic utterances, for which a literal interpretation would be uninformative (and therefore not worth processing). Consider, for example, the two utterances below:

(68) A man is a man.

(69) *Alexandre informs Clara that he is moving into a five-room apartment all to himself. Clara replies:*

Do you think you will have enough room?

(Raeber, 2011, p. 41, *my translation*)

Although tautologies have no informative value – at the level of literal meaning – they are nevertheless commonly used in verbal communication. When faced with a tautology, the presumption of relevance attributed to the utterance will make it possible to speculate on the communicative intention of the speaker, using the utterance as evidence of his informative intention. The addressee will try to extract useful information from it, such as the speaker's condescending attitude towards men (*i.e.*, the attitude is condescending insofar as it is not even necessary for the speaker to justify his point of view). Note that the communicated effects of this utterance remain vague and indeterminate, making it impossible to provide an exhaustive description. As for the ironic utterance in (69), its apparent lack of relevance lies in the fact of asking a question for which the answer seems obvious (Raeber 2011, 41). It would be absurd for Clara to genuinely ask Alexandre whether he will have enough space, *on his own*, in a five-room flat. Thus, the interpretation which achieves most cognitive effects is not the literal one (namely a genuine question), but rather an ironic question, by which the speaker represents a thought and communicates a dissociative attitude towards this content²⁹. In this case, the dissociative attitude lies

²⁹ The dissociative attitude is grasped by means of complex inferences, involving the addressee's ability to attribute mental states to others (cf. Wimmer and Perner 1983). The attitude can range from complicit mockery to sarcasm.

precisely in the fact that it is, in itself, not relevant to ask whether Alexander will have enough room in his five-room apartment.

As illustrated above, the presumption of relevance is crucial for going beyond the literal meaning which would otherwise make little sense in context. Moreover, I will show below that the presumption of relevance is precisely what triggers the identification of discursive presuppositions.

2.1.2. Implicated premises and weak vs strong implicatures

Verbal comprehension, as defined by Sperber and Wilson, involves the production of inferences generated both by the presumption of relevance of an utterance as well as the reconstruction of an appropriate context to guide interpretive inferences. Thus, the context is conceived as dynamic, insofar as the addressee reconstructs it on the basis of information made available and on *ad hoc* hypotheses. This contrasts with Grice's theory, which presented the context as given. Furthermore, the context of an utterance is based on a certain number of implicit premises without which the implicatures would not be inferred (Sperber and Wilson 1987a, 37).

In example (70) below, B's utterance seeks to answer the question of whether Smith has a girlfriend. On the explicit level of meaning, B's answer does not provide any information regarding the question under discussion (*i.e.*, whether Smith has a girlfriend). However, the presumption of relevance encourages the addressee to draw additional inferences in order to obtain useful information with regard to the question raised. In this context, the implicated premise that "*having a girlfriend is a good reason to travel to New York*" allows the addressee to draw the implicature that "Smith might have a girlfriend in New York":

(70) A: Smith doesn't seem to have a girlfriend these days.

B: He has been paying a lot of visits to New York recently.

Implicated premise: *having a girlfriend is a good reason to travel to New York.*

Implicature: *Smith might have a girlfriend in New York.*

(adapted from Grice 1989, 32)

Implicated premises allow the addressee to infer the speaker's communicative intention, namely the implicature in the above example. I will show later that implicated premises have been assimilated to certain types of presuppositions – those which I will refer to as "discursive" (*as per* de Saussure 2013). However, implicated premises should be distinguished from discursive presuppositions because they fulfil distinct pragmatic functions (§2.2.5).

Relevance theory also makes a distinction between strong and weak implicatures. Strong implicatures require little effort to be understood and can be expressed in a single proposition. For example, in the exchange below, B's response strongly suggests that Mary is angry based on shared knowledge that angry people may give the silent treatment:

(71) A: Do you think Mary is upset?

B: She hasn't spoken a word for days!

Implicature: *Mary is very upset.*

The above implicature corresponds to the speaker's communicative intention and can easily be paraphrased into a single proposition. One of the reasons for this is that it answers a question requiring a simple yes/no answer, in response to which the speaker agrees to provide straightforward information, thereby requiring relatively few efforts to be understood.

Conversely, weak implicatures may require more processing effort and cannot be paraphrased in a single proposition. The interest of weak implicatures lies in the richness of the cognitive effects they carry, since they allow the coexistence of a multitude of possible implicatures (Sperber and Wilson 2015, 123; Wilson and Sperber 2004, 621). Weak implicatures

can be illustrated by the so-called "poetic" effects of metaphorical expressions. Sperber and Wilson (2015) give the example of Shakespeare's phrase, 'Juliet is the sun', uttered by Romeo, which communicates a multitude of meanings that cannot be paraphrased in a single proposition. The multitude of possible implicatures is motivated in particular by the interpretive richness stemming from the concept of 'sun', as explained below:

Romeo means that Juliet is the warmth of his world; that his day begins with her; that only in her nourishment can he grow. And his declaration suggests that the moon, which other lovers use as emblem of their love, is merely her reflected light, and dead in comparison, and so on. ... The 'and so on' which ends [the] example of paraphrase is significant. It registers what William Empson calls 'the pregnancy of metaphors', the burgeoning of meaning in them.

(Cavell 1976 cited in Sperber and Wilson 2015, 122)

Importantly, weak implicatures do not allow to decide whether an implicit meaning would prevail over another. As illustrated above, all possible interpretations coexist, without necessarily implying the exclusion of an interpretation. This will have implications for the addressee's perception of the speaker's commitments to these contents (*cf.* § 4.0.3.). In addition, I will later show that such vague implicatures can be related to presuppositions in the way they relate to background knowledge, justifying the relevance of an utterance.

2.1.3. Determinate and indeterminate meanings

In *Beyond Speaker's Meaning* (2015), Sperber and Wilson argue that pragmatic research has essentially been limited to the study of determinate meanings, assessed in terms of truth-conditions. Similarly to Frege ([1892] 2013) as well as to Wilson (1974), they point out that meanings conveyed by verbal communication cannot be limited to this conception (*cf.* Chapter 1). They argue that communication goes beyond determinate, truth-

evaluable propositions, and they both point out that verbal communication does not involve the duplication of a specific thought from one mind to another. In cases of vague communication, the only result that can be achieved is what Sperber and Wilson call a “cognitive alignment” (Sperber and Wilson 2015, 147), where the speaker succeeds in inducing a cognitive change in the addressee, making him more disposed to draw certain inferences later on³⁰.

Typical examples of indeterminate effects are found in poetic effects, as illustrated in the previous section (*i.e.*, *Juliet is the sun*). Sperber and Wilson also argue that indeterminate meanings can be derived from acts of 'showing', as in the act of showing a picture (Sperber and Wilson 2015, 124). Indeterminate effects are defined as follows in Relevance theory:

- different audiences paraphrase them in rather different ways;
- no finite paraphrase captures all their nuances;
- they are often described as ‘open-ended’;
- they typically involve the activation of perceptual, emotional or sensorimotor mechanisms.

(Wilson and Carston 2019, 32)

As it is argued by Sperber and Wilson (2015), an exhaustive theory of verbal communication should account for these contents, insofar as they are likely to have significant effects on the addressee’s representation of the speaker’s intended meaning. In the next section, I show the relationship between discursive presuppositions and such indeterminate meanings. I also highlight how discursive presuppositions relate to the conversational background.

³⁰ Similar considerations can be found in Beaver and Stanley (2023, 188), in their distinction between meaning as content *vs* meaning as resonance. The second definition, which they adopt, considers that the “function of language is not to transfer packets of information, but to establish connection.”

2.2. Identifying discursive presuppositions

Some phenomena, related to discursive presuppositions, have been discussed in Frege's seminal work. As a reminder, Frege points out the existence of presuppositions in a broader sense than those triggered by definite descriptions (*cf.* “The king of France is bald”), which emerge by virtue of psychological laws. He illustrates these presuppositions with the statement recalled below:

- (7') Napoleon, who recognized the danger to his right flank, himself led his guards against the enemy position. (Frege [1892] 2013, 44)

Frege points out the presence of two conjunct propositions, namely that a) *Napoleon himself led his guards against the enemy position* and b) *Napoleon recognized the danger to his right flank*. Importantly, Frege also points out that (7') triggers another thought, namely that it was precisely the recognition of the danger that made Napoleon lead the guards to the enemy position (Frege [1892] 2013, 44). This latter content corresponds to Frege's broad construal of presuppositions: they are comparable to semantic presuppositions, in that they are triggered by the assertion while being external to the thought expressed. However, they differ from semantic presuppositions in that they do not contribute to the truth conditions of the sentence.

Another concept, close to what will be called “discursive presuppositions”, is proposed by Boër and Lycan (1976). They point out that most work on presuppositions has focused on declarative sentences, leaving aside interrogatives and imperatives, from which presuppositional information can also be extracted. They provide the following examples:

- (72) a. Shut the door!
b. The door is not already shut.
- (73) a. Have you stopped beating your wife?

b. You used to beat your wife.

(Boër and Lycan 1976, 43)

Boër and Lycan (1976, 42-46) argue that the meaning effects triggered by these examples cannot be captured in terms of truth conditions. Consequently, formal analyses applied to presuppositions cannot be used here. Boër and Lycan argue that imperatives can only be considered as offering the possibility of being *obeyed* or *disobeyed*. As for WH-questions, they argue that they should be analyzed in terms of *correct* or *incorrect* answers. In any case, what unifies presuppositions (72b) and (72b) above is the fact that their falsity would imply a lack of relevance of the initial utterances (72a) and (73a). This observation is particularly striking in the conversational exchange below (74), where the negation of the presupposed content, presented in B's utterance, is equivalent to calling into question the entire initial utterance:

(74) A: Have you stopped beating your wife?

B: No, I haven't *stopped*... for I never started!

(Boër and Lycan 1976, 44)

More recently in pragmatic research, Capone (2017) argued that questions contain the specificity of presupposing, conversationally, that they are motivated by specific reasons. He illustrates this point with the example below:

(75) Is there butter in this cake?

Presupposition: *the speaker follows a special diet.*

(adapted from Capone 2017, 27)

In the example above, the addressee will assume that the reason why the speaker asks whether there is butter in the cake is motivated, for example, by the fact that he's following a specific diet (low calories, vegan, *etc.*). For

Capone, questions routinely trigger a “speaker-meant” presupposition that there is a reason for asking them.

According to Capone (2017), examples such as (75) above are just the tip of the iceberg, probably hiding many more to be discovered and discussed. In the same spirit, Simons (2005) underlines the importance of better understanding the role of implicit contents serving as relevance establishers:

The idea of propositions serving as relevance establishers must be given more substance – enough substance that it will be possible to determine the predictions made by the account about the expected presuppositions of particular utterances. (Simons 2005, 23)

In the light of the above, the concept of “discursive presuppositions” (de Saussure 2013), which I introduce here, should appear as a theoretical requisite, responding to the need to capture presuppositions which are entirely pragmatic³¹.

Discursive presuppositions refer to a pragmatic phenomenon captured by de Saussure (2013; 2014; 2016). These contents correspond to weak implicatures belonging to the conversational background, contributing to the relevance of the utterance. To illustrate the concept, de Saussure discusses several implicatures serving as relevance establishers, as in the following example:

- (76) Do you accept the vote proposal to ban the construction of minarets?
- a. There is a relevant number of minarets actually in place or projected.
 - b. Minarets could modify national landscapes.
 - c. Minarets are a threat of some type.

(adapted from de Saussure 2013, 187)

³¹ See also Rigotti & Rocci (2001), Rigotti (2005), Rocci (2005), which constitute comparable pragmatic approaches to the notion of presuppositions.

De Saussure argues that utterance (76) triggers implicit contents which help to justify the relevance of the utterance. In other words, if one removed the implicit contents (76a-c) above, it would be difficult to understand why such a proposal would be put to the vote. If minarets were not dangerous, and if there were no plans to build them anyway, why should people be asked to vote on this issue? According to de Saussure (2013), these background contents allow for powerful manipulative effects in political contexts, to which I shall return in the third part of this dissertation.

Overall, discursive presuppositions can be distinguished from semantic presuppositions on the basis of the characteristic features shown in Table 3 below:

Table 3. Key distinctive criteria for semantic and discursive presuppositions.

	Semantic presuppositions	Discursive presuppositions
Backgrounded	+	+
Foregrounded	-	-
Truth conditional	+	-
Non truth conditional	-	+
Locally triggered	+	-
Globally triggered	-	+
Strongly communicated	+	-
Weakly communicated	-	+

As illustrated above, the key characteristic uniting semantic and discursive presuppositions is the fact that they present themselves as backgrounded. The other criteria, by contrast, show significant differences between the two categories. First, semantic presuppositions are preconditions for assigning a truth value, whereas discursive presuppositions are not. In addition, presuppositions are locally triggered, either by the lexicon or by a specific syntactic structure, which is not the case for discursive presuppositions, which rely on the whole sentence and the context (like implicatures). Finally, discursive presuppositions are more weakly communicated than

semantic presuppositions, both by virtue of their global trigger and because they do not belong to the speaker's communicative intention. Therefore, the key element that brings these two contents together lies in the fact that they present themselves as backgrounded. I will show to what extent this supports the argument for a similar processing on the part of the addressee (*cf.* Part II).

In what follows, I provide a tool to help identifying discursive presuppositions, which I call the “alien’s perspective”. Adopting this perspective makes it possible to distinguish three different levels of discursive presupposition, depending on the use of encyclopedic knowledge of concepts (*cf.* first vs. second order discursive presupposition, *cf.* §2.2.2), as well as on information related to social roles or hierarchies justifying specific utterances (§2.2.3). I then discuss the distinctive criteria between discursive presuppositions and implicatures (§2.2.4), as well as between discursive presuppositions and implicated premises (§2.2.5). Finally, before concluding this section, I summarize the essential properties of semantic and discursive presuppositions.

2.2.1. The alien’s perspective

To the extent that discursive presuppositions correspond to weak implicatures relayed to the conversational background, it may be difficult for the analyst to identify them. To facilitate the task, I propose a method which I call the “Alien’s perspective”, which consists in adopting the point of view of a newcomer on Earth. Such an approach resonates with epistemological approaches adopted in anthropology³², which consists in making what is “familiar” seem “strange” to the observer (Galibert 2004).

³² I'd like to thank Thierry Raeber for highlighting the proximity of Alien's perspective with anthropological methodologies. Although they do not claim to be based on a specific methodology, research in lexical pragmatics has succeeded in revealing the pervasiveness of pragmatic inferences thanks to their ability to remain agnostic with regard to what is generally considered normal or expected. In this sense, the Alien's perspective is in line with these approaches.

In the present case, the alien would be endowed with a basic grammatical competence, but would be ignorant of our social and legal practices. Thus, from his perspective, an utterance would not only provide information about the speaker's communicative intention, but it would also provide substantial information regarding background assumptions which contribute to the relevance of an utterance.

Utterance (77) below is a good example to start with. Faced with an instruction prohibiting the carrying of weapons, it is necessary to distinguish the practical *consequences* of not being allowed to carry a gun in the mentioned area from the *background assumptions* on which the prohibition is based. The background assumptions justifying the relevance of the utterance are illustrated with (77a-e) below:

- (77) Guns are not allowed during the parent's meeting.
 - a. Guns could be allowed during the parent's meeting.
 - b. Guns may be allowed in other parent's meeting.
 - c. Guns are undesirable during the parent's meeting.
 - d. Guns could make people feel unsafe during the parent's meeting.
 - e. Guns are dangerous during the parent's meeting.

(adapted from de Saussure 2013, 179)

The above inferences are called discursive presuppositions, insofar as they relate to background information while being triggered by the sentence as a whole (*nota bene*: the formal criteria for their identification are given in section §2.2.4 and §2.2.5). However, one could object to the idea that they are sentence-triggered, arguing that these inferences depend on specific lexical items. More precisely, it could be argued that the presupposition about the dangerousness of guns is triggered both by the encyclopedic knowledge related to guns and by the prohibition posited (*i.e.*, “guns are *not allowed*”).

There are, indeed, pragmatic reasons to infer that prohibited objects could be dangerous. However, it should be emphasized here that the

concept of “dangerousness” remains cancellable. For example, when the noun phrase “guns” is substituted with "children" as proposed below, the prohibition cannot plausibly be attributed to a risk of children being dangerous. In this new context, it will be assumed that the reason they are not allowed to participate is, for instance, that they are likely to disrupt the parent’s meeting (78d) or that the schedule is not compatible with the children's bedtime (78e).

- (78) Kids are not allowed during the parent’s meeting.
- a. Kids could be allowed during the parent’s meeting.
 - b. Kids may be allowed in other parent’s meeting.
 - c. Kids are undesirable during the parent’s meeting.
 - d. Kids may disrupt the parent’s meeting.
 - e. Kids should be in bed during the parent’s meeting.

The above shows that there are general inferences, which are comparable between (77a-c) and (78a-c), and specific inferences, as in (77d-e) and (78d-e), which are related to the encyclopedic information linked to the concepts used. It therefore seems reasonable to distinguish two classes of discursive presuppositions, one being general, and the other more specific. In the next section, I argue that these two types of discursive presuppositions can be distinguished depending on whether they solicit encyclopedic knowledge about concepts³³.

³³ In a first version, I proposed that encyclopedic knowledge applied to nouns, as I kept in mind the risk of confusion with some semantic presupposition triggers, such as with aspectual verbs (e.g., « John quit smoking », presupposing that he used to smoke). However, on the basis of a comment made by Andrea Rocci, I now propose that discursive presuppositions will be either general or specific, depending on whether they call on encyclopedic knowledge linked to concepts. This makes it possible to account for specific discursive presuppositions triggered by encyclopedic knowledge linked to verbs, as in "Students are not allowed to **celebrate** graduations on this floor", where « celebrate » will have different representations depending on the culture (example given by Andrea Rocci). This proposal of course opens up the vast linguistic, cognitive and philosophical question of what a concept really is. However, semantic concepts arguably have an elementary basis, as can be seen for other cognitive skill, which gains in complexity in the course of development (Spelke 1991; Spelke et al. 1992).

The interest of adopting an alien's perspective is not only to reveal contents which contribute to the relevance of an utterance, but also to highlight what kind of information an utterance provides to the addressee in an almost subliminal way. For example, the alien would also be able to draw conclusions related to gender stereotypes based on utterances like (79) below:

- (79) Men are as clever as women.
- a. Women are clever. (semantic presupposition)
 - b. Men could be less clever than women. (discursive presupposition)
 - c. There are reasons to believe that men are less clever than women. (discursive presupposition)

(adapted from Müller 2018)

While processing the foreground assertion (*i.e.*, men are clever) as well as the semantic presupposition (*i.e.*, women are clever), the alien would also retrieve information about social hierarchies assumed by the speaker. Indeed, the fact that a speaker undertakes to emphasize that “men are as clever as women” answers a question which is tacitly accepted as relevant, namely that men could be less intelligent than women (79b) or that there are, at least, reasons to believe that they might be less intelligent than women (79c).

The same considerations apply to more complex sentences, wherein an alien would be able to understand, as background information to the slogan (80), that the question of immigration divides the Swiss population, on the basis of the hyperbole "everyone", and also because of the apparent need to encourage the population to express their opinion, suggesting that it is subject to some censorship :

(80) Switzerland can no longer open its doors to everyone. Just say it. Be true to your opinion.³⁴

a. Up to now, Switzerland opened its doors to everyone. (semantic presupposition)

b. There are reasons to encourage people to express their opinion about immigration. (discursive presupposition)

c. People do not feel entitled to express their opinion about immigration. (discursive presupposition)

d. People, who are against immigration, may feel guilty about their opinion.

(UDC political campaign slogan)

The above list of discursive presuppositions is of course not exhaustive. However, it is important to emphasize the significance of the background information that the alien would be able to infer in the absence of specific knowledge of the debate under discussion. More practically, upon reading the above statement, the alien would rightly understand that he is not necessarily welcome in Switzerland, although this is not part of the explicit meaning of this political slogan. Thus, discursive presuppositions do not only contribute to the relevance of an utterance, they also contribute to the implicit communication of beliefs about social hierarchies and systems of values.

2.2.2. First-order and second-order discursive presuppositions

The Alien perspective highlights an obvious principle from a pragmatic point of view. The more contextual information one possesses, the more accurate inferences can be drawn. In particular, this will enable greater confidence in inferring not only the speaker's intended meaning, but also the background contextual information that justifies the production of such

³⁴ The original version of this slogan is formulated as follows: “La Suisse ne peut plus ouvrir ses portes à tout le monde. Dis-le seulement. Reste fidèle à ton avis.” (cf. <https://judc.ch/>).

an utterance. In this way, the enumeration of these three different orders of discursive presuppositions reflects the accumulation of knowledge required to understand certain discursive presuppositions. The interest in breaking them down in this way lies above all in highlighting some pragmatic content that would otherwise go unnoticed. It also raises the question of a possible division that could be reflected in the acquisition of these contents. Finally, it should be noted that these three levels are not schematic, nor do they claim to be exhaustive.

The first two types of discursive presupposition refer to the speaker's presumed prior beliefs that justify his statement. They are distinguished by whether or not they solicit specific encyclopedic knowledge related to the concepts concerned. With regard to such issues, Capone (2017) argues that nouns have been surprisingly neglected as fundamental presuppositional triggers:

Cannot a word like ‘umbrella’ be a trigger? Given that so far we have seen that not only verbs but also connectives can be presuppositional triggers, there is no reason why NPs cannot be (in fact, referential presuppositions are usually triggered by the use of proper names). (Capone 2017, 27)

Distinguishing between first-order and second-order discursive presuppositions will help us understand the similarities and differences mentioned above concerning examples (77) and (78), which are recalled in Table 4 below:

Table 4. First-order and second order discursive presuppositions.

Utterance	Guns are not allowed during the parent’s meeting.	Kids are not allowed during the parent’s meeting.
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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">First-order discursive presupposition</p>	<p>(a)Guns could be allowed during the parent’s meeting.</p> <p>(b)Guns may be allowed in other parent’s meeting.</p> <p>(c)Guns are undesirable during the parent’s meeting.</p>	<p>(a)Kids could be allowed during the parent’s meeting.</p> <p>(b)Kids may be allowed in other parent’s meeting.</p> <p>(c)Kids are undesirable during the parent’s meeting.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Second-order discursive presupposition</p>	<p>(d)Guns could make people feel unsafe during the parent’s meeting.</p> <p>(e)Guns are dangerous during the parent’s meeting.</p>	<p>(d)Kids may disrupt the parent’s meeting.</p> <p>(e)Kids should be in bed during the parent’s meeting.</p>

One way of identifying first-order discursive presuppositions consists in replacing words by non-words in the initial statement, as illustrated below:

- (81) Hubblelops are prohibited here.
- a. Hubblelops could be allowed here.
 - b. Hubblelops may be allowed elsewhere.
 - c. Hubblelops are not desirable here.

In (81), only the first-order discursive presuppositions can be identified, due to the absence of specific knowledge about what the prohibition applies to. As I suggested above, as soon as the addressee knows more about what the prohibition applies to, he will produce more specific assumptions, enabling to understand and accept the utterance as relevant, whether it is

because of the dangerousness of guns, or because of the turbulent behavior of children.

As illustrated above, the substitution of words by non-words reveals elementary discursive presuppositions. That is, the inferences that could be produced independently of encyclopedic knowledge linked to the concepts involved in the utterance. In this latter sense, discursive presuppositions derived in the absence of encyclopedic knowledge are first-order. In a second stage, the addressee will draw inferences on the basis of encyclopedic knowledge, enabling him to contribute to relevance in more specific ways. The boundary is, of course, theoretical, having essentially an analytical purpose. The aim is above all to highlight first-order inferences that may be fundamental in acquisitional contexts. Second-order inferences, on the other hand, highlight contents with stronger cultural variability³⁵.

2.2.3. Third-order discursive presuppositions

Third-order discursive presuppositions concern assumptions about hierarchical or social norms enabling the performance of speech acts (Austin 1962; Searle 1969), which are comparable to “preparatory conditions” in Speech Act theory (Green 2020). Speech act theory emphasizes that one cannot simply declare a couple to be married in front of the church without being a priest in the first place. In this sense, the utterance “I now pronounce you husband and wife” presupposes, in a pragmatic sense, conditions of use for the utterance to be appropriate or effective. Another example is when a speaker gives an order, which will only be accepted if it adequately responds to the social hierarchy at stake. This is why a child cannot felicitously command his parents to “go to their room” or to “go back to work”.

³⁵ In this respect, Elly Ifantidou pointed out to me that the example involving the carrying of guns could well generate different inferences. For instance, in the US, guns could make some people feel safe during the parents' meetings. With such encyclopedic information about guns, the second-order discursive presuppositions would of course be different.

From the point of view of an alien seeking to make sense of utterances he is exposed to, he will exploit verbal cues to make assumptions about the social hierarchies underlying the performance and acceptance of a certain speech act. In the exchange below, the alien would assume a subordinate relationship between the speaker and the addressee, based on the imperative mood:

(82) Forget about going out next Friday!

Whereas a statement such as (82) almost trivially presupposes a subordinate relationship in a parent-adolescent conversational exchange, the very same statement would yield more cognitive effects if it were uttered within a married couple, suggesting a dysfunctional submissive relationship. These inferences will be called "third-order discursive presuppositions", insofar as they constitute preconditions for the relevance of a speech act: in other words, the content risks being challenged by the addressee as misplaced or unacceptable, in the same way as one would challenge a semantic presupposition that turns out to be false (cf. §5.1.3).

Although all three levels of presupposition constitute preconditions for the relevance and acceptance of an utterance, third-order presuppositions are specific in that they are oriented towards conditions of use based on social norms, whereas the others relate more to prior beliefs, attributable to the speaker, that motivate the production of an utterance. Third-order discursive presuppositions are thus more related to what can be inferred about the speaker and the addressee from what has been uttered (e.g., an order, a piece of advice, a question, etc.). Thus, taking up the examples discussed above, third-order discourse presuppositions would emerge as a function of who is saying it and to whom:

(77') *Shortly before the parent's meeting, a 6-year-old girl warns her mother:*

Guns are not allowed during the parent's meeting.

(78') *A new employee reminds her employer, knowing he is attending a parent's meeting:*

Children are not allowed during the parent's meeting.

In (77'), the third-order discursive presupposition would be that the 6-year-old girl is in a position, one that is generally expected of an adult, to remind her parent of the rules. The parent's acceptance of the utterance would provide information about social norms, such as the fact that it may be acceptable for the adult to receive organizational reminders from her child. In utterance (78'), the employer receives advice from a new employee, which is obviously somewhat incongruous by most Western social standards. However, from an alien's perspective, we learn that such an enunciative act is acceptable.

Third-order discursive presuppositions are sometimes exploited for specific communicative purposes. For example, the exchange below is a humorous illustration of mansplaining³⁶, which by definition involves a transgression of social hierarchies. In this context, TV presenter Jimmy Kimmel (JK) gives a condescending speech to US presidential candidate Hilary Clinton (HC):

(83) JK: Are you familiar with mansplaining? You know what that is?

HC: That's when a man explains something to a woman in a patronizing way.

JK: Actually, it's when a man explains something to a woman in a condescending way. But you were close.³⁷

³⁶ In this example, the audience understands that the context of the talk show typically favours a humorous interpretation of contents. In the exchange between Jimmy Kimmel and Hilary Clinton, we understand the ironic dimension, as it represents a typical (and exaggerated) situation of mansplaining, inviting a dissociative attitude towards such kind of conversational exchange.

³⁷ *Jimmy Kimmel Live*, ABC, March 24, 2016, URL: <https://www.youtube.com/watch?v=j2wBpYT6Zlo>.

Here, Jimmy Kimmel stages a mansplaining situation, where he takes the liberty of explaining to Hilary Clinton a subject on which she is more experienced. The act of giving non-solicited explanations or advice presupposes a subordinate relationship, in which Jimmy Kimmel would be more competent than Hillary Clinton.

The inferences produced on the basis of the felicity conditions of speech acts have a particular place in the approach proposed by Beaver and Stanley (2023), who also argue that they correspond to presuppositions in a pragmatic sense. In their view, presuppositions can be seen as carrying a 'resonance' establishing a connection between people, similar to the notion of 'cognitive alignment' found in Sperber and Wilson (2015). This conception contrasts with formal approaches, which reduce presuppositions to propositional content. They put forward the notion of 'presuppositional resonance', which emerges even in the most basic acts of communication. As they point out below, every act of communication presupposes a practice with its own resonance:

[...] the most important resonances for us are those attached not to individual habits, but to community practices. Practices of drinking cocoa may carry resonances of cold winter nights or of spiritual connection to ancestors, depending on the community that practices them.

A falling apple recalls Newton, where a bite of the apple evokes Eve, Snow White, or Steve Jobs. (Beaver and Stanley 2023, 188-189)

Thus, for Beaver and Stanley, felicity conditions of a speech act reflect communicative practices that have their own history (Beaver and Stanley 2023, 193). This is precisely the direction I am taking, in the designation of third-order discursive presuppositions. However, for the sake of consistency in the approach I suggest, a distinction should be made between the background inferences that contribute to the relevance of the speech act, and the many inferences that can be produced on the basis of a

concepts, which are related to the speaker's prior beliefs which justify his utterance³⁸.

2.2.4. *Discursive presuppositions vs implicatures*

Discursive presuppositions formally correspond to implicatures, in that they are implicit and triggered by the sentence. The only difference between them is their pragmatic function: while implicatures correspond to the communicative intention of the speaker, discursive presuppositions correspond to background information, contributing to the relevance of the utterance. Importantly, discursive presuppositions can coexist with implicatures, as shown in example (84) below:

- (84) Here we sell legal cannabis.
- a. Some people / shops sell illegal cannabis. (Discursive presupposition)
 - b. Buy cannabis here, and not elsewhere! (Implicature)

(Müller 2021, 50)

Both implicatures and discursive presuppositions have the property of being cancellable, as illustrated below:

- (85) Here we sell legal cannabis, *but no one* sells illegal cannabis anyway! (cancellation of discursive presupposition in (84))

- (86) Here we sell legal cannabis, but I'd recommend buying it from the United States. (cancellation of implicature in (84))

As far as the cancellation of the discursive presupposition is concerned, it should be noted that it seems to require the adverb "anyway" to make the

³⁸ Macagno (2016) also proposes to consider presuppositions in terms of speech acts.

cancellation felicitous. For the addressee, it seems strange that the speaker should specify that he sells *legal* cannabis when no illegal version of cannabis is available.

Importantly, the pragmatic function of implicit contents – whether it is an implicature or a discursive presupposition – depends on the context. In some cases, the line between an implicature and a discursive presupposition can be difficult to draw, as can be seen from the example below:

- (87) I took the umbrella.
- a. There is no longer an umbrella at home.
 - b. It is raining/ it might rain outside³⁹.

(adapted from Marmaridou 2000, 123)

Depending on the context, the speaker may well utter (87) with the aim of communicating to the addressee both that there is no umbrella left at home and that it is likely to rain. However, if the question under discussion is clearly whether it is raining, the utterance "I took the umbrella" only communicates that it is likely to rain outside, as illustrated below:

- (88) A: Is it going to rain today?
B: I took the umbrella.
Implicature: It might rain outside.
Discursive presupposition: There is no longer an umbrella at home.

Finally, in a context where there is obviously only one umbrella available at home, the utterance would allow the speaker to implicitly communicate that there are no more at home while also allowing the addressee to infer

³⁹ Capone (2017, 26) underlines that this inference varies also depending on the cultural context: "In Asian culture, where umbrellas can be (also) used to protect oneself from the scorching sun, the presupposition may be a disjunction (there is a chance that it will rains or that there will be a scorching sun)".

that the reason why he is saying this is because it might be raining outside (discursive presupposition):

(89) *Context: there is only one umbrella left at home.*

Speaker A: Just so you know, I took the umbrella.

Implicature: There is no longer an umbrella at home.

Discursive presupposition: It is raining/ it might rain outside.

Thus, taking up the distinctions proposed by de Saussure (2013), discursive presuppositions are distinguished from implicatures primarily in their pragmatic function, as illustrated in Table 5 below. In one case, strong implicatures are overtly presented as intended by the speaker, in the same way as the asserted content. The contents which were overtly conveyed as manifest should be distinguished from the conversational background, which includes both semantic and discursive presuppositions.

Table 5. *Discursive presuppositions vs implicatures, as per de Saussure (2013, 181).*

	Overtly conveyed as manifest contents	Conversational background
Semantic	Propositional content (e.g., Here we sell legal cannabis.)	Semantic presuppositions (e.g., There exists legal cannabis.)
Pragmatic	(Strong) implicatures (e.g., Buy cannabis here, and not elsewhere.)	Discursive presuppositions (e.g., Some people / shops sell illegal cannabis.)

2.2.5. *Discursive presuppositions vs implicated premisses*

In Müller (2021), I underline that a clear distinction between implicated premisses and discursive presuppositions can sometimes be difficult to make. In many examples, which I discuss below, implicated premisses perfectly meet the requirements of discursive presuppositions – namely, they are triggered by the sentence, they can be cancelled, and they relate to general background assumptions serving as relevance establishers. However, implicated premisses and discursive presuppositions can be singled out by means of two criteria:

“Criterion One: Implicated premisses are **fully determinate**, whereas discursive presuppositions correspond to **arrays of propositions**;

Criterion Two: While implicated premisses contribute to the **comprehension of an utterance** (as they allow to derive an Implicature), discursive presuppositions contribute to the **acceptance of an utterance**, because they serve as preconditions to its relevance”.

(Müller 2021, 51)

Criterion One relates to Sperber and Wilson's (2015) contrast between determinate and indeterminate propositions (§2.1.3). Among the examples of discursive presuppositions which have been discussed so far, it should be emphasized that they are not limited to a single clearly defined proposition. Indeed, they correspond to assumptions which the addressee will construct to attribute relevance to an utterance. The addressee will infer first-order discursive presuppositions, but may also go beyond these contents, inferring second and third-order discursive presuppositions. Thus, discursive presuppositions form an open-ended class of implicit, weakly communicated contents.

With regard to Criterion Two, it refers to Sperber et al. 's (2010) distinction between the *comprehension* and the *acceptance* of an utterance. This one relates to the human ability to first adopt a stance of trust (to

comprehend utterances) before filtering the information through their epistemic vigilance module to eventually accept the utterance. I will further discuss this distinction in the second part of the dissertation.

One notable article highlighting similarities between discursive presuppositions and implicated premises is Simons (2005), many considerations of which are rediscussed by Mazzarella and Domaneschi (2018). In "Presuppositions and Relevance" (2005), Simons highlights the importance of implicit contents being spontaneously activated to contribute to the relevance of an utterance. The contents she refers to are comparable to the discursive presuppositions in question, in that they are both implicit and contribute to the relevance of an utterance. However, I wish to emphasize here that discursive presuppositions are not limited to the function of implicated premise, contrary to Simons' proposal.

Simons first discusses an example from Grice, recalled below, to show the extent to which some pragmatic contents are triggered by the sentence, even though they are not part of the speaker's intended meaning:

- (70') A: Smith doesn't seem to have a girlfriend these days.
B: He has been paying a lot of visits to New York recently.

Implicated premise: having a girlfriend is a good reason to travel to New York.

Implicature: Smith might have a girlfriend in New York.

(Simons 2005, 329)

She points out that the implicature cannot be understood by the addressee without the construction of an implicated assumption that stipulates a link between "going to New York" and "having a girlfriend":

[...] perhaps, the proposition that a person who has a girlfriend somewhere travels there frequently; or that many people have long-distance relationships, and these involve frequent trips to the same

place. If A can work out that B is making this supposition, then she can immediately see the relevance of B's response to her remark. (Simons 2005, 1)

Thus, the addressee would produce background inferences, namely presuppositions in a pragmatic sense, to recover the speaker's intended meaning. Such presuppositions would act as a pragmatic device performing the function of implicated premises allowing to infer the speaker's intended meaning (*i.e.*, the implicature).

Simons discusses other examples of implicated premises and evaluates to what extent they exhibit similar behaviours as presuppositions when applying the projection tests. For instance, she compares the implicated premise of the assertion (90) with its negative counterpart (90a):

(90) Ann: Are we going on a picnic?

Bud: It's raining.

Implicated premise: when it rains, it is not a good idea to go on a picnic.

Implicature: We should cancel the picnic.

(Simons 2005, 22)

(90a) Ann: Are we going on a picnic?

Bud: It's not raining.

Implicated premise: when it rains, it is not a good idea to go on a picnic.

Implicature: There's nothing to stop us from going on a picnic.

(Simons 2005, 22)

In the above, the implicated premise remains intact in the affirmative as well as in the negative sentence. Simons goes on to show that the implicated

premise would project even if speaker B provided an answer with an epistemic modal (90b), a question (90c) or a conditional (90d):

(90b) It might be raining.

(90c) Is it raining?

(90d) If it rains, maybe we'll go to the movies.

Implicated premise: when it rains, it is not a good idea to go on a picnic.

(Simons 2005, 23)

Although the implicated premise remains through the various projection tests, Simons argues that these contents are distinct from semantic presuppositions:

In none of these cases, I think, would we want to say that the implicature projects from the embedded clause. Rather, we would want to say that **each utterance gives rise to the same implicated assumption:** one and the same background assumption serves in each case to relate Ann's question to Bud's indirect response. Of course, on my view, this implicated premise, which is required to establish the relevance of the utterance, simply is a presupposition. (Simons 2005, 23, *my emphasis*)

In the terminology I propose, the inferences designated by Simons (2005) are 2nd-order discursive presuppositions, insofar as they exploit encyclopedic knowledge relating to specific concepts, namely the desirability and possibility of having a picnic when it is raining outside. The key difference between Simons' approach and mine lies in the function performed by discursive presuppositions. In Simons' approach, these contents perform a specific function, namely to be an implicit premise serving to draw an implicature. However, in my perspective, discursive

presuppositions can emerge without performing the function of an implicit premise. This is notably the case in the example involving the umbrella, where the speaker utters “I took the umbrella” to communicate that there are no more umbrellas at home. In this context, the discursive presupposition that “it could rain” still arises, without any participation in the inference of the implicature. Thus, discursive and semantic presuppositions can be used to infer an implicature, but without it being their necessary function.

2.2.6. Conclusion

Discursive presuppositions are entirely pragmatic contents, which are distinct from Stalnaker's notion of pragmatic presupposition. As we have seen, Stalnaker's approach is concerned with so-called "semantic presuppositions" but argues for a pragmatic origin explaining the projection of these contents. As he says, it is not the sentence that presupposes something, but the speaker who presupposes contents when he produces an utterance.

Discursive presuppositions correspond formally to implicatures, but differ in their pragmatic function: while conversational implicatures relate to the communicative intention of the speaker, discursive presuppositions contribute to the relevance of an utterance. Thus, discursive presuppositions share with semantic presuppositions the fact of being background information while being crucial for the relevance of the utterance. In this respect, I recall here what Wilson and Sperber (1979) say about lower entailments (*i.e.*, semantic presuppositions):

Without being relevant in itself, [the lower entailment] will be a necessary condition for establishing relevance. (Wilson and Sperber 1979, 319)

The above comments are in line with the approach I propose, which consists in conceiving semantic and discursive presuppositions in a unified way,

specifically taking into account the perspective of the addressee and the way he attributes relevance to the verbal contents.

This chapter also allowed to distinguish three levels of discursive presuppositions which I recall below:

- First-order discursive presuppositions are inferences produced regardless of specific encyclopedic knowledge about concepts. One way to identify them is to replace a word in the utterance with a non-word, thereby revealing the most elementary discursive presuppositions (cf. “Hubblelops are prohibited here”, which presupposes that “Hubblelops could / may be allowed here or elsewhere” and that “Hubblelops are not desirable”).
- Second-order discursive presuppositions are background inferences that contribute to the relevance of the utterance. They exploit encyclopedic knowledge about concepts (“Guns / Kids are not allowed during the parent’s meeting”, which presupposes either that Guns are *dangerous* or that Kids may *disrupt the parent’s meeting*).
- Third-order discursive presuppositions concern background inferences about the social norms or hierarchical roles allowing the performance of specific speech acts. Crucially, the sentence “Guns are not allowed during the parents meeting” will trigger different presuppositions depending on social expectations attributed to the speaker and the listener. I also discussed utterances involving unsolicited orders or explanations, which presuppose a subordinate relation between the speaker and the addressee.

Discursive presuppositions have also been distinguished from implicatures as well as implicated premises. Although a discursive presupposition can perform the function of an implicated premise, it is not limited to this alone. Moreover, whereas implicated premises correspond to determinate propositions, discursive presuppositions are indeterminate and open-ended.

Overall, discursive presuppositions share common features with semantic presuppositions in that they constitute a "precondition", either for the relevance of the utterance or for the possibility to assign truth conditions to the sentence. Moreover, both contents are perceived as belonging to the conversational background.

In what follows, I will argue that these two types of meanings both contribute to the acceptance of an utterance as a content worth processing.

**PART II: PRESUPPOSITION EFFECTS, RELEVANCE
AND ACCEPTANCE**

“I am not strange. I am just not normal.”

– Salvador Dali

Overview

In this part, I examine presuppositions from the point of view of Relevance theory. According to this approach, presuppositions are not conceived as a linguistic category as such, but as a pragmatic effect, hence the terminological change "presupposition effect".

Chapter 3 presents the key notions from Relevance theory for understanding presupposition effects. I discuss in detail the relevance-guided comprehension heuristic, which will in turn provide explanations as to how the listener processes such contents. In addition, we will see to what extent Relevance theory discards a fundamental premise of many approaches to presuppositions, according to which presuppositions require to be mutually shared by the speaker and his addressee.

Chapter 4 is devoted to the distinction between the comprehension and the acceptance of an utterance, which is derived from the Epistemic Vigilance hypothesis (Sperber et al. 2010). On the basis of this distinction, I argue that presuppositions, both semantic and discursive, can be conceived as a unified phenomenon contributing to the acceptance of an utterance, rather than to its comprehension. I go on to present a developmental hypothesis of presuppositions, according to which they would first be primary inferences, relevant for the child, which would then be relayed to the conversational background as a consequence of habituation. In a second stage, once the primary inferences become genuine presupposition effects, these contents would serve more as a prerequisite for the acceptance of an utterance.

Finally, the last part of Chapter 4 presents some settings in which presuppositions bypass the epistemic vigilance of the addressee. Such situations present a dilemma, namely that these contents would contribute to the acceptance of an utterance, while sometimes allowing obviously false information to come through. The resolution of this dilemma will be addressed in the third (and final) part of the dissertation.

Chapter 3. Presuppositions in Relevance theory

3.0. Introduction

Relevance theory has given very little attention to the question of presuppositions. This seems to be due to the firm position taken by its founders, namely in Wilson (1974) and Wilson and Sperber (1979), who claim that this category merely corresponds to entailments. However, Wilson and Sperber (1979) also emphasized the importance of pragmatic instructions which are responsible for relaying these entailments in the background, although without going into the details of how they work. Thus, in its founding works, Relevance theory accounts for such pragmatic instructions only in terms of “presupposition effects”, emphasizing that their function is to allow the addressee to save cognitive effort.

Here, I argue that presuppositions deserve to be reconsidered, particularly in the light of Sperber and Wilson's (2015) recent contributions on the variety of meanings involved in verbal communication, as well as in the light of the Epistemic Vigilance hypothesis, which argues for a distinction between the comprehension and the acceptance of an utterance.

This chapter is structured as follows: first, I emphasise the benefits of adopting the theoretical framework of Relevance theory, because it focuses on the attribution of meaning from the perspective of the addressee. This makes it possible to set aside a prescriptive approach to presuppositions, in favour of an approach that highlights the underlying mechanisms involved in processing presuppositions (§3.1.1). I then return to Sperber and Wilson's concept of mutual manifestness, which introduces nuances that I believe are important with regard to the processing of presuppositions. This concept differs from that of 'common ground' proposed by Stalnaker (§3.1.2). I then distinguish mutual manifestness from the relevance-theoretic concept of salience, which shows that some components of the same verbal stimulus may be more or less accessible to the addressee, despite it being presented in a way that is visible to both the speaker and the addressee (§3.1.3). Finally, I present the fundamental questions

addressed in Relevance theory with respect to Sperber and Wilson's (2015) *Beyond Speaker's Meaning*.

In a second stage, I introduce how presupposition effects are addressed in Relevance theory, as background implications (§3.2.1). I then argue that presupposition effects are specifically triggered by the presumption of relevance spontaneously attributed to utterances. Then follows a discussion of the incompatibility of the concept of relevance, as conceived by Sperber and Wilson, and that found in the QUD approach (§3.2.2). Finally, I show how presupposition effects can be conceived in the light of Sperber and Wilson (2015), reminding for the necessity of adding a third dimension to their diagram, namely a continuum between more and less ostensive meanings, as I initially suggested in Müller (2021) (§3.2.3).

3.1. The relevance-guided comprehension heuristic

The concept of “relevance” is defined by Sperber and Wilson as a trade-off between cognitive efforts and cognitive effects. Relevance can be achieved by spending few efforts on a mildly informative content or by spending more effort to obtain more cognitive effects.

Relevance theory distinguishes two principles of relevance, namely a *cognitive* principle and a *communicative* principle. The cognitive principle of relevance applies to human cognition, which is geared towards the *maximization* of relevance. As for the communicative principle, it characterizes utterances as communicating their own presumption of *optimal* relevance. Under these terms, an utterance will achieve varying degrees of relevance, depending on the trade-off between effort and effect.

Despite its apparent simplicity, the cognitive principle of relevance should be understood in a specific setting. First, as we will see below, Relevance theory adopts the perspective of the addressee, with a focus on the cognitive processes involved in verbal comprehension. Second, relevance is defined as a cognitive heuristic, triggered by stimuli which were made mutually manifest between the speaker and the addressee. It is specifically the mutual manifestness of the stimulus which guides the

inferences for the recovery of the speaker's communicative intention. Finally, Sperber and Wilson (2015) argue that verbal stimuli should not be isolated from other types of meanings, such as natural meanings (*as per* Grice 1957) encoded by gestures or the tone of voice, as well as non-propositional meanings conveyed by attitudinal or poetic effects.

3.1.1. Adopting the perspective of the addressee

Relevance theory adopts the perspective of the addressee to account for the cognitive processes responsible for verbal comprehension. This approach has the advantage of ruling out a prescriptive approach, which would articulate social rules that speakers should observe when performing a communicative act. Despite a potential interest of highlighting social practices, prescriptive approaches do not allow to understand the cognitive underpinnings of verbal comprehension.

Relevance theory marks a break with Grice's approach, whose conversational maxims reveal a somewhat prescriptive dimension of verbal communication. In Müller (2024), I underline that Grice's (1975) theory of Conversation articulates rules that must be observed to ensure successful communication. Based on the excerpt below, I emphasise the extent to which these rules are conceived as a social construct, thereby creating a conflict with the idea of a cognitive basis for verbal comprehension:

[...] it is just a well-recognized empirical fact that people DO behave in these ways; they have **learned** to do so in childhood and not lost the habit of doing so. (Grice 1975, 48, *my emphasis*).

Adopting the perspective of the addressee is not only a matter of the analyst's *point of view*. It responds to the fundamental assumptions to which Relevance theory subscribes: for Sperber and Wilson (1987a), pragmatic contents are processed by innate cognitive mechanisms that enable humans to effectively sort through the many stimuli to which they are exposed. In this sense, Relevance theory stands in the continuation of

the major turn initiated by Chomsky (1957), who defined language competence as a cognitive and innate capacity (cf. Methodology section).

Relevance theory proved to be an advantageous theoretical framework because it presented hypotheses for distinct pragmatic phenomena, such as metaphor and irony, which were experimentally testable. For example, while both metaphor and irony were seen as a transgression of the Quality maxim by Grice (1975, 53), Relevance theory argued that irony calls for specific cognitive skills, namely a sophisticated Theory of Mind, which is not necessary for metaphor processing⁴⁰. This hypothesis has been confirmed by developmental observations (Pouscoulous et al. 2007; Pouscoulous 2011), as well as in populations with dysfunctional mind-reading capacities (MacKay and Shaw 2004; Wang et al. 2006), and in brain imaging experiments on neurotypical adults.

As we will see, the founding works of Relevance theory (Sperber and Wilson 1987a) give little space to presuppositions. They are seen as mere implications that convey specific pragmatic effects. It is only recently that relevance-theoretic approaches devoted more attention to presuppositions, discussing their implications on the identification of speaker commitment (Reboul 2017; Mazzarella et al. 2018; Mazzarella and Domaneschi 2018) and on manipulative effects (L. de Saussure and Oswald 2009; Lombardi Vallauri and Masia 2018; Müller 2018; 2020). In this chapter, the framework of Relevance theory will be shown to be effective in accounting for presupposition effects, especially in the light of recent contributions

⁴⁰ To be more specific, Theory of Mind involves metarepresentatives skills, consisting of the ability to attribute to others intentions and beliefs distinct from one's own. Rudimentary competences of Theory of Mind have been observed as early as 15 months (Onishi and Baillargeon 2005; Surian, Caldi, and Sperber 2007), although it was originally observed at age 4 (Wimmer and Perner 1983). However, Relevance theory distinguishes different levels of metarepresentation in language processing, arguing that fourth-order metarepresentations are fundamental to the processing of any utterance (Sperber 1994, 197; Sperber and Wilson 2002, 11; Müller 2024) while irony would mobilize skills going beyond this fourth order (Sperber 1994, 197), hence the wording “sophisticated Theory of Mind”. In Grice's case, an elementary form of Theory of Mind can be found, though he does not refer to them in this way, in his qualification of the addressee's assumptions about the speaker's intentions. However, Grice does not go beyond a fourth order of metarepresentation, and he makes no distinction between the different metarepresentational skills involved between metaphor and irony.

made within this framework, namely Sperber and Wilson (2015) on non-propositional meanings and Sperber et al. (2010) on Epistemic Vigilance.

3.1.2. *Mutual manifestness*

The concept of “mutual manifestness” in Relevance theory addresses the issues raised by the 'mutual knowledge' or 'common ground' hypothesis. According to Searle (2002, 704), the common ground hypothesis emerged directly from Grice's (1957) definition of non-natural meaning, which he defines as based on a mutual recognition of the speaker's communicative intention⁴¹. However, according to Sperber and Wilson (1986/95, 38), the concept of common ground (or mutual knowledge) is “a philosopher's construct with no close counterpart in reality”. Moreover, this notion inevitably leads to an infinite regress, where an endless number of verifications would be needed to ensure that the communicative intention is recognised.

One could argue that the distinction between mutual manifestness and common ground is essentially a terminological one. Indeed, in their original work, Sperber and Wilson point out that the concept of common ground proposed by Lewis (1969, 56) is “roughly equivalent to [their] mutual manifestness” (Sperber and Wilson 1987, 284, note 29). However, the key point of disagreement for Sperber and Wilson (including in their 2015 paper), lies in what they consider to be, in the Gricean approach, an idealized conception of communication, where speaker and addressee would seek to do everything possible to avoid misunderstandings. This point, taken from Sperber and Wilson's seminal work, is explained below:

Many pragmatists have [...] argued that mutual knowledge is not a reality but 'an ideal people strive for because they ... want 'to avoid misunderstanding whenever possible' (Clark and Marshall 1981:

⁴¹ Stalnaker (2002, 701) suggests that the origin of the notion of common ground, referring to the basic information presumed to be shared by speaker and listener, comes from Grice, but in one of the later papers resulting from the William James Lectures (*cf.* Grice 1989).

27). Now while it is true that people sometimes go to great lengths to avoid misunderstanding, such efforts are the exception and not the rule. (Sperber and Wilson 1987a, 18–19)

Thus, Sperber and Wilson emphasize the impossibility of achieving true certainty in communication contexts, and especially that this is not a problem in most communicative contexts, which are intended to be optimal, not perfect.

Relevance theory emphasizes that communication cannot guarantee absolute certainty of contextual assumptions, and this is precisely the reason why communication also includes many failed attempts (Sperber and Wilson 1987b, 704). Later, in their 2015 work, Sperber and Wilson argue that communication does not involve the duplication of a thought from a speaker to his addressee. Instead, speakers provide a cognitive import, whose content does not always have a propositional counterpart: « What is aimed [...] is a degree of cognitive alignment, not a duplication of precise contents » (Sperber and Wilson 2015, 147).

In the light of the above, one cannot assume that a communicated content is part of a genuine “common ground” between the speaker and the listener. Instead, a communicative intention is made mutually manifest between the speaker and the addressee, but each of them has a different perception of the verbal stimulus according to their own subjectivity. Ultimately, once the communicative intention has been made mutually manifest, the listener will seek to retrieve the speaker's informative intention, which is embedded in the speaker's communicative intention, as described in Table 6 below:

Table 6. Ostensive-inferential communication.

Informative intention: “To make manifest or more manifest to the audience a set of assumptions I”.

Communicative intention: “To make mutually manifest to audience and communicator that the communicator has his informative intention”.

(Sperber & Wilson 1986/95: 58, 60-61)

Relevance theory's concept of 'mutual knowledge' and Stalnaker's widely popularized 'common ground' for pragmatic presuppositions (cf. §1.3.2) share a similar genesis: both approaches owe their heritage to Grice and share the ambition of providing a theory of conversational phenomena. They also both contend that the speaker and addressee have expectations of relevance about verbal stimuli (cf. Stalnaker 2002, 702). However, Relevance theory is singular in its insistence that it is genuinely impossible to achieve certainty about the interlocutor's beliefs. This framework defines verbal communication as *optimal*, emphasizing that the goal of communication is to reach sufficient cognitive effects for the listener, which may lead to an incomplete representation of the speaker's informative intention. On the other hand, Stalnaker's framework appears to be closer to Grice's in its ambition to identify formal rules governing the speaker's conversational choices, focusing the 'common ground'.

Additionally, Relevance theory, unlike Stalnaker's approach, focuses on the cognitive underpinnings that guide the processing of ostensive behaviors. It emphasizes that a given utterance may convey different types of meanings which can be more or less salient to the addressee. As mentioned earlier (§1.2.4), presuppositions are considered by Sperber and Wilson's as playing with foreground and background implications, which are considered to be processed differently. This is incompatible with Stalnaker's framework, which views the processing of presuppositions in a way quite similar to Grice's conversational implicatures. For instance, Stalnaker (2002) sees the processing of presuppositions as the inference of an implicit content, namely what the speaker presupposes, which in turn needs to be integrated into the common ground, as illustrated below :

(91) Context: *Bob, referring to Alice's daughter.*

Bob: How old is he?

Pragmatic presupposition: Bob thinks Alice's daughter is a boy.

(Stalnaker 2002, 717)

In the above example, Stalnaker explains that Alice could well decide to accept the pragmatic presupposition as such, and update the common ground with the pragmatic presupposition. Stalnaker pursues his analysis, pointing out that the speaker sometimes actively adjusts the presupposition based on some beliefs he knows to be incorrect on the part of the addressee. This would be the case, for example, if Alice had decided to refer to her daughter using the pronoun "he" so as not to challenge the addressee's prior beliefs. In this way, Stalnaker's conception of the common ground is comparable to that of an external observer, who updates the context accounting for each participant's respective beliefs.

Stalnaker's analysis of utterance (91) above is reminiscent of the debate between Searle (1965) and Grice (1969) about the difference between semantic meaning and meaning_{NN} (cf. Grice 1957). One of Grice's examples involves a setting where a learner of French would wrongly assume that a certain utterance *x* means "Help yourself to some cake". The addressee, a native speaker of French, upon realizing that sentence *x* is mistakenly taken to mean "Help yourself to some cake", would adapt to the non-native speaker and utter sentence *x* to ensure that he gets his piece of cake (cf. Grice 1969, 162-163). Thus, Stalnaker, in line with Grice's concerns, views the processing of presuppositions in a similar way to conversational implicatures.

3.1.3. Inferential comprehension and salience

As soon as a verbal stimulus has been made mutually manifest, the content goes through a certain number of inferential steps to recover the speaker's intended meaning. This process is defined as a "heuristic", echoing the intuitive and superficial decision-making processes documented in economics and psychology (Tversky and Kahneman 1974; Kahneman 2011; Gigerenzer 2008; Pohl 2004). Thus, verbal comprehension is not claimed to be exhaustive or rational but is, by definition, made of imperfections, such as processing information superficially, namely ignoring contents that are not easily accessible for the addressee. As indicated in Table 7 below, the processing of verbal stimuli stops when sufficient cognitive effects have been acquired.

Table 7. The relevance-guided comprehension heuristic

-
- a) Follow a path of least effort in computing cognitive effects: Test interpretive hypotheses (disambiguation, reference resolutions, implicatures, etc.) in order of accessibility.
 - b) Stop when your expectations of relevance are satisfied.

(Wilson & Sperber, 2008, 613)

In Relevance theory, interpretive inferences take on a more important role than in the framework initially posed by Grice, which essentially covered conversational implicatures. It distinguishes two levels of pragmatic inferences, namely implicatures and explicatures, where the latter operate on lexical meaning. Utterances (92) and (93) are examples of contents involving an *explicature*, independently of whether an implicature is inferred:

(92) I have a TEMPERATURE*. (Sperber and Wilson 2012, 106)

(93) That book PUTS ME TO SLEEP *. (Wilson 2003, 286)

In order to achieve relevance, utterance (92) needs to be narrowed down to a specific kind of temperature the speaker has, otherwise it would be tautological (*i.e.*, every organism has a certain temperature)⁴². In this context, TEMPERATURE* refers to one that is higher than usual. As for utterance (93), the concept SLEEP* has to be broadened to achieve more cognitive effects: in this context, sleeping is assimilated to that of lacking interest, thereby allowing for the feeling of needing to sleep. Thus, from this new perspective, the inferences produced for verbal comprehension occupy a significant place, covering both the classical conversational implicatures as well as the pragmatic modulations operated for the recovery of the explicit and truth-evaluable meanings.

Relevance theory clearly shows that the Gricean conception of "what is said" only provides rudimentary information which does not always allow to identify the truth-conditions of a sentence. This is shown in particular by Carston (2002), reiterated by Carton and Hall (2012) below:

(94) Max: How was the party? Did it go well?

Amy: There wasn't enough drinks and everyone left early.

*Amy: There wasn't enough **alcoholic drinks to satisfy the people at [the party]_i and so everyone who came to [the party]_i left [it]_i early.***

(Carston and Hall 2012, 47–48)

Regarding the above, one might ask whether Amy's proposition would remain true if there had been no alcohol but plenty of water. The pragmatic inference above guides us to the conclusion that the drinks refer, narrowly, to alcoholic drinks. So, as we can see above, pragmatic inferences are much more pervasive than initially suggested by Grice, extending to the adjustments of lexical content.

⁴² Andrea Rocci pointed out to me that this utterance would not work in the same way in Italian, as it encodes the lexical content differently. One would say "Ho la febbre", where "febbre" already refers to a body temperature that is higher than normal.

Now, with respect to more general considerations regarding the relevance-guided comprehension heuristic, two points should be stressed here: first, interpretative hypotheses follow an “order of accessibility”. This means that the relevance-guided heuristic first picks up salient information in order to save cognitive efforts. The less salient the content, the less likely it is to be processed. Secondly, salience varies in degrees within the linguistic structure, with foreground and background effects (*i.e.*, prosody, presupposition triggers, etc.), as well as with the degree of accessibility of contextual assumptions (*e.g.*, the quality of the encyclopedic knowledge of the addressee, memory, etc.).

Importantly, Sperber and Wilson (2015) emphasise the extent to which the inferential comprehension heuristic does not proceed solely through logical steps to assign meaning to an utterance. In their perspective, the production of inferences do not always involve a “step-by-step derivations of explicit conclusions from explicit premises” (Sperber and Wilson 2015, 137). We shall see later that this new conception of inference opens up the possibility of accounting for presupposition effects, which are not limited to single and truth evaluable propositions, serving as implicated premises for the recovery of an implicature.

3.1.4. Beyond speaker’s meaning

Recent developments in Relevance theory paid particular attention to 'non-propositional' meanings, which have the characteristic of not being paraphrasable by a finite set of propositions (Sperber and Wilson, 2015). In particular, the focus is set on poetic and 'emotional effects' communicated by an utterance (*cf.* Wharton 2016; Wilson; 2018; Wilson and Carston, 2019). These recent approaches reflect the need to account for the vast interpretive possibilities of verbal and non-verbal communication.

Sperber and Wilson (2015) present the diagram in Figure 1 below arguing that most research within the Gricean framework has focused only on truth-evaluable propositional contents (vicinity of 1), which constitutes

only a fraction of the range of possible communicative effects. They point out that an exhaustive theory of communication should account for other instances of communication which figure in the diagram. For instance, an utterance such as “You didn't come last night” can be communicated in different ways: it can be stated in somehow neutral tone of voice, locating the utterance in vicinity 1. In this case, the content is straightforward and can be evaluated as being true or false. However, the utterance can also be accompanied with an aggressive tone of voice or displaying a sad facial expression, for which the emotional component is not truth evaluable (vicinity 4 and 7). Furthermore, the very same content can be communicated poetically. Consider, for instance, the contrast between “You didn't come last night” and "Last night was haunted by the memory of your perfume". The utterance can also be communicated ironically, in a context where the addressee has come but was obviously absent-minded. Poetic and ironic effects would therefore situate meaning within the vicinity 2 and 3, given the array of propositions conveyed.

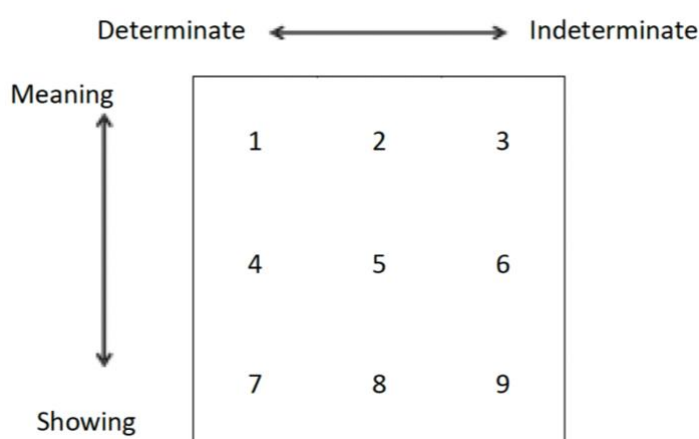


Figure 1. Sperber and Wilson's (2015) showing-meaning continuum.

According to this new approach, communication is not defined as involving intended 'meanings', but rather an intended 'import'. Moreover, the different elements communicated will appear to the addressee with varying degrees of salience for which the speaker can only hope for a cognitive alignment, and not an actual duplication of content from his brain to that

of the addressee. The broadening of the notion of meaning and the idea that communication implies, at best, a cognitive alignment, will be fundamental in the approach I propose for the accommodation of presuppositions, presented in the third part. This allows for accommodation to encompass both semantic and discursive presuppositions, without requiring the addressee to exhaustively recover all the meanings that are taken for granted.

3.1.5. Conclusion

This section introduced the founding principles of Relevance theory, in particular those which differ from Grice's approach. I underlined the interest of Relevance theory in the way it focuses on the perspective of the addressee, discarding a prescriptive approach and anchoring the theory in a cognitive understanding, heir to the major turn initiated by Chomsky. Relevance theory assumes that the addressee has a pragmatic competence to interpret verbal stimuli. The pragmatic competence is supported by a relevance-guided comprehension heuristic, which processes utterance following their order of accessibility. The heuristic is responsible for inferring implicatures, as well as for broadening or narrowing lexical contents at the explicit level (*i.e.*, explicature).

Relevance theory also differs from Grice in the way it defines the shared knowledge between the speaker and the addressee. While Grice suggests the idea of a "common ground" allowing the addressee to recover the speaker's communicative intention, Sperber and Wilson point out the contradictions that this notion raises and argue that nothing can truly be shared between the speaker and the addressee in communicative contexts. Instead, they argue that verbal stimuli are communicated ostensively, so that the communicative intention is recognised as mutually manifest between the speaker and the addressee, thereby triggering the inferential process to recover the speaker's informative intention. I also emphasized the importance of distinguishing between the concept of manifestness and salience, the latter being the degree of accessibility of a linguistic content as

a function of its inherent structure. Salience can also relate to the accessibility of contextual assumptions, which depend, for instance, on the encyclopedic knowledge of the addressee.

Finally, I presented the most recent contributions in Relevance theory which seek to account for non-propositional meanings in verbal communication. I showed to what extent a content can be conveyed differently, using varying effects on the showing-meaning continuum, as well as on the determinate-indeterminate continuum.

3.2. Presupposition effects

Sperber and Wilson use the term of “presupposition effects” to refer to semantic presuppositions. They thus emphasise their initial position (Wilson and Sperber 1979) according to which these contents are mere entailments which are pragmatically related to the conversational background. Below, I present the way in which Relevance theory accounts for presuppositions in terms of foreground and background implications (§3.2.1). Next, I discuss the “presumption of relevance” stemming from Relevance theory and argue that semantic and discursive presuppositions are triggered by it. I then stress that the concept of relevance should be clearly distinguished from that introduced in Roberts' (2012) QUD model (§3.2.2). Finally, I present how presuppositions can be accounted for in light of Sperber and Wilson (2015). In continuation of what I propose in Müller (2021), I argue that the showing-meaning continuum requires a third dimension to account for presupposition effects, namely that of more or less ostensive meanings (§3.2.3).

3.2.1. Foreground and Background implications

Relevance theory holds that presuppositions can be qualified as higher-level explicatures, which are defined as information about the speaker's attitude or the type of speech act applied to the proposition (Sperber and Wilson 1987a, 179–81; Carston 2002, 10–11). In particular, it is their

resistance to the illocutionary force that motivates their qualification as higher-level explicatures. Indeed, we have seen earlier that presuppositions project despite negation or other transformations performed on the sentence (§1.2.2).

Note that presupposition effects are to be distinguished from Grice's conventional implicatures based on discourse markers such as “but” (*e.g.*, “She is poor, but she is honest”). Although such discourse markers are also considered to be higher-level explicatures in Relevance theory, they seem to be better described as ‘procedural meanings’ (Blakemore 1987; 1989; Wilson 2011; 2016). According to Blakemore, “but” encodes a procedure which constrains the relevance of the proposition introduced⁴³. In this sense, “but” makes it easier to process the foreground of the utterance and is therefore distinct from presuppositions which are relevant inasmuch as they allow the addressee to pay little attention to *background information*. It is also important to note that the conventional implicature triggered by “but” is also distinct from discursive presuppositions insofar as they are cancellable, whereas conventional implicatures are not.

As far as the communicative contribution of presuppositions is concerned, Sperber and Wilson claim that they contribute to relevance by restricting the domain of research. They do so by signalling to the addressee that the content is relatively less important than those discussed in the foreground. According to Sperber and Wilson, presupposition effects would allow to save processing efforts, as illustrated by the contrast between the two utterances below:

(95) Bill's twin sister lives in Berlin.

(96) Bill has a twin sister who lives in Berlin.

(Sperber and Wilson 1987, 202)

⁴³ In Relevance theory, meanings arising from a discourse connector such as “but” constrain the interpretation of the utterance at the level of explicit meaning. This contrasts with so-called ‘conceptual’ meanings, which contribute to the truth-conditions of the sentence.

Although these two utterances share the same truth-conditions, (95) focuses on the fact that Bill has a twin sister while (96) presupposes it, thereby presenting this information as belonging to the conversational background. In this way, presupposition effects play on foreground and background effects: foreground implications (*i.e.*, asserted contents and strong implicatures) target the speaker's communicative intention and they contribute to relevance by producing cognitive effects. On the other hand, background implications are not presented as the speaker's communicative intention, but they contribute to relevance by saving processing efforts⁴⁴. As illustrated above, the presupposition that Bill has a twin sister in (99) is not intended to answer the question of what Bill *has* (*i.e.*, whether he has a sister), but rather what Bill's sister *does*. While the addressee processes the information that constitutes the conversational foreground, he also infers the contents which contribute to the relevance of the question, based on the presumption of relevance.

3.2.2. Presumption of relevance and the Question Under Discussion

Roberts' (2012) Question Under Discussion model (henceforth QUD model), views discourse as a game model. The context is seen as being a scoreboard organised around questions being discussed by the participants. In this framework, each participant is seen as able to identify what is common to each speaker and decides to make 'relevant' contributions to the common ground. The roots stemming from Stalnaker's concept of common ground are explicit in the excerpt below:

We take the aims or goals of a language game, as already noted, to be to come to agree on the way things are in the world. Using Stalnaker's notion of the common ground (the set of propositions

⁴⁴ Of course, this assumption is valid as long as the presupposed content does not catch the addressee's attention. In this respect, consider von Stechow's (2000) discussion about the felicity conditions of presupposition accommodation, in which he argues that some presuppositions will be spontaneously perceived as infelicitous by the addressee (cf. §5.1.3).

which the interlocutors in a discourse behave as if they all hold to be true, with a proposition realized technically as a set of possible worlds) and related context set (the intersection of the common ground, the set of worlds where all the propositions in the common ground are true), our goal is to reduce the context set to a singleton set, the actual world. (Roberts 2012, 614)

In light of the above, Roberts defines relevance in a radically different way from what is understood in Relevance theory. In her view, a content is relevant only if it actually contributes to an issue being discussed, as presented in Table 8 below:

Table 8. Roberts' (2012) definition of relevance.

“A requirement of Relevance is satisfied by an utterance (whether an assertion, a question or a suggestion) iff it addresses the question under discussion.”

(Roberts 2012, 611)

Thus, in the QUD framework, relevance does not apply to the cognitive effects obtained following the processing of a verbal stimulus, defined by Relevance theory as being part of a continuum of more or less relevant information. On the contrary, the QUD model defines relevance as a binary concept, where a content will or will not answer a question previously asked in the context. As soon as a verbal contribution falls outside the QUD, the content will be considered as non-relevant.

The QUD model's definition of relevance is directly applicable to the notion of presupposition. Roberts argues that presuppositions are not relevant⁴⁵ with respect to the question under discussion, specifically because they are

⁴⁵ Note that Roberts (2012, 621, footnote 14) herself comments on the differences she perceives between her own conception of relevance and that proposed by Sperber and Wilson (1987).

redundant with respect to what is entailed by the context or what is explicitly stated as belonging to the common ground (Roberts 2012, 627). In other contributions based on Roberts' model, it is also said that presuppositions are "not at issue" (Potts 2005; Simons et al. 2010; Chen, Thalmann, and Antomo 2022).

In the QUD model, presuppositions are said to be inferred based on the structure of the discourse (Beaver et al. 2017, 267). This approach is also in line with some of the assumptions presented by Hamblin's (1970) concept of 'commitment stores', according to which speakers construct a memory of commitments⁴⁶. To illustrate how presuppositions are inferred on the basis of the discourse, Beaver et al. (2017) present a conversational exchange in which the stress pattern responds congruently to an explicit question raised by the first speaker:

(97) Context: *A wedding photographer was taking pictures of Mary and her family.*

A: Who smiled?

B: [Mary]_F smiled⁴⁷.

Beaver et al. (2017, 268)

In the example above, the QUD is explicitly stated by A, where "Who smiled" presupposes that "someone smiled" and brings to the foreground the question of knowing precisely who smiled. In this sense, B answers adequately A's question. Furthermore, the emphasis placed on "Mary" also presupposes that "someone smiled", thereby being redundant with respect to the question under discussion. The presupposed content can therefore be derived from the question asked (*i.e.* "Who smiled?") and the parts of the answer that do not answer the question under discussion. In their own

⁴⁶ In Müller (2020), I argue against the idea that addressees keep track of commitment stores. For instance, I show that a relevance-theoretic approach (*as per* Oswald 2016) is better equipped to account for specific argumentative fallacies than approaches based on 'commitment stores' (Hamblin 1970; Walton and Krabbe 1995).

⁴⁷ Beaver et al. (2017) label the focus-marked constituent with the subscript « F ».

words, “[p]rojective inferences involve the information in an utterance that does not address the QUD” (Beaver et al. 2017, 267). However, if B had instead uttered "Mary [smiled]_F", this would presuppose that "Mary did something (not necessarily smiling)", which would be incongruous with the QUD proposed by speaker A. In this second configuration, the presupposition would not satisfy the redundancy requirements as to what belongs to the common ground, and would require an update of the context.

Although this theoretical framework proposes a convincing theory of how the speaker can choose to presuppose content, it presents an idealization of conversational contexts that is incompatible with the research questions raised by Relevance theory. As we have seen earlier, Relevance theory seeks to provide a processing theory of verbal communication, within which presuppositions do not necessarily need to be updated by the addressee. In this regard, I shall discuss later some famous cognitive illusions involving presuppositions for which the addressee adjusts the lexical content, without necessarily forming a new belief (§6.2.3).

Thus, it is important to distinguish between the two notions of relevance presented above, namely that of Roberts (2012) and that of Relevance theory. In the present work, I adopt the notion of Relevance theory, which conceives relevance as the result of the processing of a verbal stimulus that has been made mutually manifest between the speaker and the addressee. As far as presuppositions are concerned, participants in a discussion are seen by Relevance theory as building interpretative hypotheses that vary from one individual to another, often presenting a difference between what the speaker takes for granted and what the addressee will infer.

3.2.3. Presuppositions effects, beyond and within speaker's meaning

In Müller (2021), I present presupposition effects as a unified phenomenon, situated within a continuum of more or less ostensive content. Picking up

on Sperber and Wilson's (2015) discussion, I argue that the diagram they propose requires the addition of a third dimension in order to account for presupposition effects (*cf.* Figure 1 presented earlier).

Two arguments are central to my view. First, both semantic and pragmatic presuppositions share the fact that they cannot be directly challenged without interrupting the natural flow of a discussion. Indeed, as the two examples below illustrate, the questioning of a presupposition needs to be identified as such by a discourse marker. This point has already been made by von Stechow (2004) with regard to "semantic" presuppositions, for which he identifies the "Hey Wait a minute" test as a means of highlighting such content and making the challenge felicitous. Below, I show the extent to which semantic (98) and discursive presuppositions (99) cannot be called into question without this being made mutually manifest.

(98) A: Did the regime attack the civilians with chemical weapons again?

B1: *No (*i.e.*, the regime never attacked the civilians in the first place)!

B2: No (*i.e.*, the regime hasn't attacked the civilians again).

B3: Hey, wait a minute! What regime are you talking about? I didn't know some civilians had been attacked with chemical weapons in the first place!

(Müller 2018, 10)

(99) A: Are women as clever as men?

B1: *No (*i.e.*, there is no reason to believe that women are less intelligent than men).

B2: No (*i.e.*, women are not as clever as men).

B3: Hey, wait a minute! Are there reasons to believe that women are less intelligent than men?

As illustrated above, both semantic and discursive presuppositions share the property of being backgrounded, making them impossible to question directly.

The second criterion I use to argue that these contents are less ostensive is the fact that presuppositions are correlated with systematic epistemic errors. These errors are attested by various experiments in the field of psychology. To mention just one, Loftus and Zanni (1975) showed that the use of definite articles, as opposed to indefinite ones, can bias the memory reconstruction of a given event. In their experiment, participants are invited to watch a video of a car driving through a city. Once they have finished watching the video, they are asked to answer a questionnaire containing the following question:

(100) Did you see the broken light?

(101) Did you see a broken light?

Importantly, the participants had not seen a broken traffic light in the video in any experimental condition. However, they appeared to be significantly more likely to answer that they had seen a broken light when the question contained a definite article than when it contained an indefinite one. Thus, participants unconsciously integrated the presupposed information, namely that “there was a broken light in the video”. Such subliminal effects appear to be less strong when the presupposed information is brought to the forefront, as attested in an experimental version of the Moses Illusion, which asks the trick question below:

(102) How many animals of each kind did Moses take on the Ark?

Presupposition: Moses took animals on the Ark.

When presented in this way, participants failed to spot the error, namely that it was Noah and not Moses who took the animals from the Ark. However, when the error is placed in the focus of a cleft sentence, as in (103), Bredard and Modolo (1988) were able to show that the error was significantly less likely to occur than when it is placed in the background, as in utterance (104):

(103) It was Moses who took two animals of each kind on the Ark.

(104)It was two animals of each kind that Moses took on the Ark.

(Bredart and Modolo 1988)

Based on the correlation between epistemic errors and the structure of the utterance, it is reasonable to argue that presupposition effects should be represented as being less ostensively conveyed. Following on from Sperber and Wilson (2015), I argue that these contents require a third dimension within their diagram, namely that of more or less ostensive contents, as illustrated in Figure 2 below.

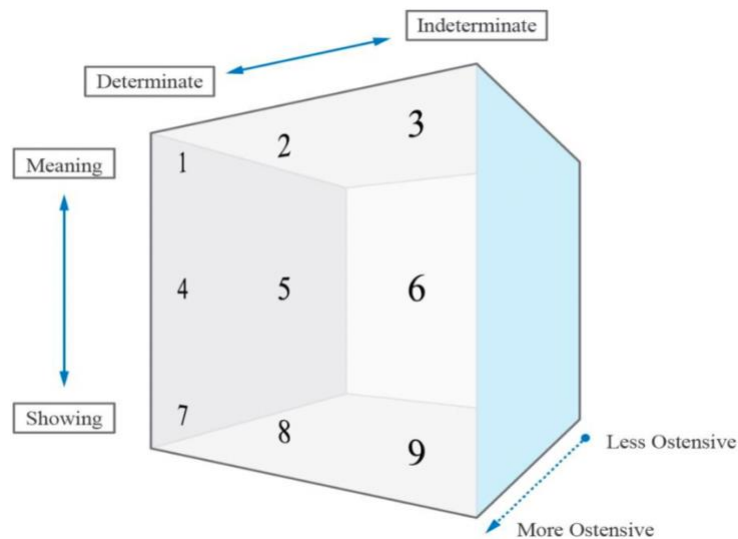


Figure 2. Presupposition effects within the ostensive – less ostensive continuum, as per Müller (2021).

It should be noted that the addition of this third dimension was inspired by earlier works by Wharton, who initially proposed the addition of a third dimension to account for emotional effects in communication, which themselves could be more or less ostensive (Wharton 2003; Wharton and Strey 2019). As far as presupposition effects are concerned, I argue in Müller (2021) that, while being relatively less ostensive, these contents can also be more or less determinate, as illustrated earlier in relation to the distinction between semantic and discursive presuppositions. As we have

seen, semantic presuppositions are determinate, whereas discursive presuppositions are indeterminate. Furthermore, I stress that presuppositions also vary within the showing meaning continuum, insofar as presuppositions triggered by intonation belong to an act of showing, whereas presuppositions triggered strictly by linguistic markers belong to acts of meaning.

3.2.4. Conclusion

This section was devoted to the way in which Relevance theory accounts for presupposition effects. First, I emphasized the importance of the perspective adopted in Relevance theory, namely that of the addressee, which makes it possible to rule out a prescriptive approach to presuppositions, leaving only the descriptive dimension of the way in which the addressee constructs his interpretative hypotheses (cf. §3.1.1).

Next, I argued against the idea of a common ground, found in Grice's (1957) conception of "mutual knowledge" and later in the works of Stalnaker. I suggested that Relevance theory offers a more realistic view of utterance processing in its idea that the speaker merely seeks to make his communicative intention mutually manifest, without being able to offer any guarantee of successful communication. Importantly, recent developments in cognitive pragmatics insist that it is not possible to achieve a duplication of thought from the speaker to the addressee; the only thing that can be aimed for is cognitive alignment. Thus, it is precisely on this point that Relevance theory disagrees with Gricean approaches (Grice and Stalnaker), since the latter assume that successful communication implies that the speaker and the listener come to believe the same thing. This is clearly not the case in Sperber and Wilson's (2015) approach.

I then showed the extent to which interpretative inferences are important for the processing of utterances. Inferences apply not only to the recovery of conversational implicatures, but also to the explicit content intended by the speaker (*i.e.*, "explicatures"). The inferences follow an order of accessibility of the available pieces of evidence, depending on the relative

salience of each contextual hypothesis. I therefore emphasized the distinction between the notion of mutual manifestness and that of salience. Although a communicative intention has been made mutually manifest, the various elements useful for the reconstruction of meaning (encyclopedic knowledge, linguistic structure, etc.) will be more or less obvious or salient for the addressee.

Finally, I pointed out the most recent contribution made in Relevance theory, namely Sperber and Wilson's (2015) account about contents that go beyond the Gricean construal of non-natural meaning. I underlined the importance of indeterminate contents as well as showing acts to provide a more complete account of ostensive and inferential communication.

In a second stage, I showed more precisely how Relevance theory deals with presupposition effects. I emphasized that presuppositions are not conceived as a linguistic category as such, but rather as a pragmatic effect that relays implications to the conversational background. In other words, presuppositions play on foreground and background effects. I subsequently argued that semantic and discursive presuppositions can be considered as a homogenous category insofar as these contents both contribute to establishing the relevance of an utterance.

I then discussed the concept of relevance as addressed in Roberts' (2012) QUD model, highlighting the differences between this model and that of Relevance theory: while the former defines relevance as a content contributing to the question under discussion, the latter conceives relevance as the output of the ostensive-inferential comprehension heuristic. Furthermore, whereas the QUD model approaches relevance as a binary concept, Relevance theory conceives it as a continuum of more or less significant cognitive effects. Finally, the QUD model argues that presuppositions are not relevant with respect to what constitutes the QUD, whereas Relevance theory says that they contribute to relevance by allowing the addressee to save cognitive efforts.

Finally, I showed how presupposition effects can be conceived in light of the recent work of Sperber and Wilson (2015). I argued that, in order to account for presupposition effects, a dimension is missing in the showing-

meaning diagram, namely that of ostension. Based on the discursive constraints they impose (*i.e.*, the fact that they cannot be directly challenged) as well as on their correlation with epistemic errors, it appears to be more appropriate to account for presupposition effects through a third dimension of ostensive and less ostensive meanings, which can themselves be located within the showing-meaning continuum and within the determinate-indeterminate continuum.

Chapter 4. Presuppositions, comprehension and acceptance

4.0. Introduction

In the previous section, I argued that presupposition effects are triggered by the presumption of relevance conveyed by each utterance. Here, I argue that the truth of a presupposition contributes more to the acceptance of an utterance than to its comprehension *per se*, following the distinction proposed by Sperber et al. (2010).

Sperber et al.'s (2010) Epistemic vigilance hypothesis is based on the observation that communication involves an inherent asymmetry of goals between the speaker and the listener: while the speaker's goal is to produce an effect in a given audience, the addressee seeks reliable and useful information. More than often, both have divergent interests, especially when the speaker is tempted to "produce an effect, regardless of whether [what he says] is true or false" (Sperber et al. 2010, 360).

Based on this asymmetry, Sperber and colleagues hypothesise different defensive mechanisms by which communication could be made sufficiently reliable to ensure its stabilisation within the species. These mechanisms include the addressee's ability to distinguish between the benevolence and competence of the speaker, as well as an ability to understand an utterance before eventually accepting it as a reliable or relevant content. We shall see to what extent the notion of Epistemic Vigilance has contributed to new pragmatic approaches to the question of how the addressee attributes commitments to the speaker in verbal communication.

In order to grasp the distinction between comprehension and acceptance, I first present the fundamental articulations of the Epistemic Vigilance hypothesis from which this distinction is derived (§4.1). In a second step, I discuss more precisely the link between presupposition effects and the distinction comprehension *vs* acceptance distinction (§4.2).

4.1. Fundamental concepts in the Epistemic Vigilance hypothesis

4.1.1. *Speaker competence vs benevolence*

Epistemic Vigilance postulates a filtering of the reliability of the communicated information, by means of a spontaneous evaluation of the competence and benevolence of the speaker. The competence and the benevolence of the speaker is assessed by verbal and non-verbal cues. When processing utterances, the addressee assesses the extent to which the speaker is a novice or an expert based on indicators which include lexical accuracy, coherence of discourse and the speaker's ability to make relevant contributions. Nevertheless, some paradoxes have been identified, such as the “guru effect” (Sperber 2010), where the speaker communicates obscure information that is considered relevant. Sperber illustrates this bias with several famous quotes that are often judged to be of great intellectual import, while ironically being extremely difficult to truly understand. For example, he mentions the following quote by Jean-Paul Sartres: “Consciousness is a being, the nature of which is to be conscious of the nothingness of its being” (Sperber 2010, 588). Sperber then provides the following analysis of such quotes, based on the tools of Relevance theory:

Still, the very effort required tends to be seen as an indication of high relevance and to favour interpretations consistent with this indication. If they cannot come to any clear and plausible interpretation, readers may nevertheless seek fragmentary and tentative interpretive hypotheses that go in the expected direction. Even if these statements remain hopelessly opaque, **readers may take their very opacity as evidence of their depth.** (Sperber 2010, 588, *my emphasis*)

As explained above, the attribution of competence to the speaker is intertwined with the relevance-guided comprehension heuristic: the more cognitive effects an utterance produces, the more competent the speaker

will be considered by the addressee. However, the background knowledge related to the speaker (namely, the speaker's reputation in terms of competence and benevolence) will affect the addressee's initial motivation to put in the necessary effort to process the utterance. Thus, the very fact that a quote is presented as coming from an eminent philosopher conveys, as it is the case above, a stronger presumption of relevance.

As for the speaker's benevolence, it is assessed by means of the available contextual information and, more fundamentally, by the overall accuracy of previously communicated contents by the speaker. Therefore, the truthfulness of previous utterances contributes to establishing a good reputation, which in turn motivates the addressee to make the necessary effort to attribute relevance to the utterance. In addition, the perceived benevolence of the speaker weighs in the interpretive charity of implicit contents, as illustrated below:

(105)Context: *Hans has engaged in a violent dispute over the separation of marital property and openly wants to deprive his ex-partner of all family assets.*

Hans: Thank you for what you have already given back to me.

Implicature: *You have not given me back all my belongings and this case is not over yet.*

(106)Context: *Hans seeks to comfort his ex-roommate about the return of his belongings.*

Hans: Thank you for what you have already given back to me.

Implicature: *I sincerely thank you for the effort put in giving back to me most of my belongings.*

In the above, the attribution of benevolence to the speaker weighs on the way in which meaning is attributed to the communicated content. In a

hostile context as presented in example (105), one would tend to interpret the expression of gratitude as sarcasm and to understand the use of the word 'already' as a form of implicit threat. However, if the speaker is perceived as benevolent, as in (106), the speaker's gratitude will come across as sincere and the eventual implicature will be consistent with the explicit content.

Overall, the Epistemic Vigilance hypothesis has had a significant impact in various fields, from developmental psychology to pragmatics. The idea that verbal contents are filtered according to the competence and benevolence of the speaker has also been used to enrich theories of argumentation, particularly when it comes to assessing implicit contents. For example, Oswald and Lewiński (2013; 2014) apply these distinctions to their analysis of the straw man fallacy, whereby the addressee attributes a content to the original speaker that he did not intend to convey. They show that the addressee can be more or less charitable in the derivation of implicit contents, ranging from entirely plausible implicatures to implicatures that are fallacious distortions. In their view, the more benevolent and competent the speaker is perceived to be, the more interpretative charity will be shown towards the speaker. Similarly, I argue that epistemic vigilance will have consequences for how semantic or discursive presuppositions will be processed, specifically when they need to be accommodated by addressee (cf.6.2).

4.1.2. Comprehension vs acceptance

Sperber et al. (2010, 367-368) argue that Epistemic Vigilance mechanisms involve an ability to distinguish between understanding and accepting an utterance. Specifically, they argue that the presumption of relevance communicated by utterances involves a stance of trust to first understand the communicative intention of the speaker. It is only in a second step that the addressee chooses whether to accept the utterance as trustworthy (Sperber et al. 2010, 368). In the light of this distinction, the relevance-

comprehension heuristic strictly applies to the recovery of the speaker's communicative intention and not on whether the content is trustworthy:

We claim that, whether he ends up accepting it or not, the hearer interprets the speaker as asserting a proposition that would be relevant enough to him provided that he accepted it. (Sperber et al. 2010, 368)

This claim is in line with earlier considerations held by Sperber (1994), where he articulates the metarepresentational capacities involved in verbal communication. He emphasizes the ease with which listeners routinely master complex degrees of metarepresentation – as in irony – and also argues that a listener can easily adopt a sophisticated posture towards an utterance, consisting in understanding that the speaker may not necessarily be sharing the same extra-linguistic goals. Thus, the addressee's Epistemic Vigilance mechanisms are intertwined with the ability to attribute mental states to others.

However, Sperber et al. (2010, 376-377) distinguish the metarepresentational capacities involved in the recovery of implicit meaning from those involved in the acceptance of an utterance. They point out that the addressee is perfectly capable of producing the reasoning necessary to recover an implicature intended by the speaker, while deciding not to accept the reasoning as valid. They present the Gricean example (70”), discussed in Chapter 2, and argue that even if the addressee understands the reasoning leading to the implicature, he has the possibility to reject it:

- (70”) A: Smith doesn't seem to have a girlfriend these days.
 B: He has been paying a lot of visits to New York recently.

In the conversational exchange above, speaker B implicitly claims that having a girlfriend in New York is a good reason to visit New York often. The utterance therefore implicitly states that speaker B thinks speaker A

has a girlfriend. Even if speaker A is able to understand B's reasoning, he has the option of contradicting it and thus rejecting the content B has presented as relevant.

The addressee's Epistemic Vigilance will be particularly useful in contexts of manipulative communication. In such cases, the addressee will be able to distinguish, based on what is assumed about the speaker's intentions, the speaker's intended meaning from the actual reliability of the content.

So, understanding is not believing, but nor is it adopting a sceptical position. Comprehension involves adopting a tentative and labile stance of trust; this will lead to acceptance only if epistemic vigilance, which is triggered by the same communicative acts that trigger comprehension, does not come up with reasons to doubt. (Sperber et al. 2010, 372)

Thus, the Epistemic Vigilance hypothesis argues that it is necessary to distinguish the *comprehension* of an utterance (to which the relevance-guided comprehension heuristic applies) from the *acceptance* of the content as true or reliable, which is what the Epistemic Vigilance mechanisms apply to. It should be noted, however, that Epistemic Vigilance mechanisms are limited in their ability to filter the reliability of verbal contents. Although Sperber et al. (2010) emphasize the addressee's capacity to confront the communicated content to his background beliefs, they also claim that it would be too costly to subject each piece of information to the complete evaluation of his "mental encyclopedia" (Sperber et al. 2010, 374). Thus, the mechanisms involved in Epistemic Vigilance come up against the fact that relevance-guided comprehension heuristic is geared towards *optimal* relevance without being exhaustive. As we shall see later, it is precisely at this level that presuppositional biases come into play, causing the addressee to overlook information that would possibly have been seen if it had been presented at the forefront of the conversation.

4.1.3. *Comprehension and commitment attribution*

In the first part of the dissertation, I presented Ducrot's (1984) approach to presuppositions, which highlights the distinction between what the speaker says and the contents to which the speaker commits (§1.3.5). He stresses the paradox of these contents, namely that they are implicit, but are nonetheless committing as attested by the impossibility for the speaker to retract these contents.

Later approaches, heir to both the Relevance theory tradition and Ducrot's considerations, raised the question of the extent to which the speaker is committed only to verbalised and explicit contents, or whether the speaker can also be held responsible for contents that he has communicated implicitly, through an implicature. This question was raised in particular by de Saussure and Oswald (2009), who argue that a theory of speaker commitment should account for the addressee's intuitions when interpreting an utterance. In their view, the perception of the speaker's commitment is intertwined with the way in which the addressee attributes relevance to the communicated content:

The processes by which recipients are able to assert a speaker's commitment go hand in hand with the processes presiding over the derivation of meaning. (De Saussure and Oswald 2009, 215, *my translation*)

The more relevant the verbal content, the more the speaker is held responsible for having communicated it. Thus, according to this view, a strong implicature will be more committing than a weak one. Furthermore, the cancelling of a highly relevant content will generate 'pragmatic inconsistency', which translates into an impression of bad faith on the part of the speaker (de Saussure and Oswald 2009, 21).

However, other traditions, essentially inspired by Grice, take the opposite position on the question of speaker commitment. For instance, in Pinker et al.'s *Logic of Indirect Speech* (2008), the speaker is not seen as being committed to conversational implicatures by virtue of the fact that these contents are logically cancellable. According to this view, the speaker will

always have the possibility of denying an implicit content. They give the examples below, specifying the intended meanings in square brackets, arguing that each of these meanings are either possibly deniable or plausibly deniable:

(107) Would you like to come up and see my etchings? [a sexual come on]

(108) If you could pass me the guacamole, that would be awesome. [a polite request]

(109) Nice store you got there. Would be a real shame if something happened to it. [a threat]

(110) Gee, officer, is there any way we could take care of the ticket here? [a bribe]

(Pinker et al. 2008, 833)

For Pinker and colleagues, implicit communication has the benefit of allowing the speaker to defend his interests in communicative situations, without being held responsible for having communicated these contents. This theory gave rise to numerous works in which it has been argued that implicit communication is fundamentally manipulative (Reboul 2011; 2017).

In Müller (2024), I argue that these theories precisely contradict assumptions from Relevance theory and Epistemic Vigilance hypothesis, according to which addressees attribute commitments as a function of the relevance of utterances (*as per* de Saussure and Oswald 2009) and also depending on the listener's vigilance towards the speaker. Thus, as we saw earlier (§4.0.1), the addressee will be more or less charitable in interpreting implicit contents, depending on his epistemic vigilance.

Ultimately, the tools of Relevance theory have been shown to be effective in assessing the plausibility of two competing implicatures, thereby suggesting that implicatures may be more or less committing for the speaker. In this respect, Oswald (2016) shows that when two implicatures are possible, one tends to select the one that presents the most optimal relation between cognitive effort and cognitive effects. In Müller

(2020), I show that this method can be used for the detection of straw man fallacies that would otherwise be impossible to properly identify.

In light of the above, the attribution of commitment to the speaker appears to go beyond explicit contents. In the third part of this work, I will assess in more detail the extent to which presuppositions allow for plausible deniability and discuss more generally the links between presuppositions and manipulation.

4.1.4. Conclusion

This section introduced the foundations of Sperber et al.'s (2010) Epistemic Vigilance hypothesis. I first showed the distinction between the attribution of competence and benevolence to the speaker. The addressee's vigilance towards the speaker has been shown to influence the processing of utterances: the more positively the speaker is perceived in terms of competence and benevolence, the more the addressee will be willing to spend cognitive efforts in processing the utterance. On the other hand, the speaker actively contributes to the way in which he will be perceived, depending on his ability to produce cognitive effects on a given audience and on the truthfulness of the contents he conveys, both explicitly and implicitly.

I then highlighted the distinction between the comprehension and the acceptance of an utterance, stressing that the comprehension of an utterance does not necessarily imply its acceptance. That is, the comprehension requires that the addressee first adopts a stance of trust to understand the utterance, before evaluating whether he accepts the content as trustworthy. Thus, the addressee may well reject the reasoning leading to an implicature, either because the conclusion is not perceived as relevant or because the speaker is not considered as trustworthy.

Finally, I distinguished verbal comprehension from the attribution of commitment to the speaker. To do so, I presented Pinker et al.'s (2008) theory according to which implicit contents allow for plausible deniability. I argued that such an approach contradicts the fundamental assumptions

of Relevance theory as well as the Epistemic Vigilance hypothesis. As a counterbalance to Pinker et al.'s approach, I discussed relevance-theoretic approaches which argue that the attribution of commitment to the speaker is intertwined with the attribution of relevance: the more relevant a content, the more difficult it will be to retract. I also highlighted the interest of Oswald's (2016) approach, which provides tools to assess the plausibility of two competing implicatures.

4.2. Presuppositions and utterance acceptance

In this section, I present the relation between presupposition effects and the acceptance of an utterance. In the first section, I argue that, from a developmental perspective, presuppositions are elementary foreground inferences, which I call “primary inferences”. By means of habituation, primary inferences are then relayed to the background of the addressee's cognitive environment (§4.2.1). I then argue that these primary inferences, once relayed to the cognitive background, become a prerequisite for the acceptance of an utterance as relevant, rather than for the comprehension of the utterance as such (§4.2.2). Finally, I conclude this section by highlighting the problem that presupposition effects pose for the addressee's epistemic vigilance: although they are prerequisites for accepting an utterance, they are also responsible for many of the addressee's epistemic errors. It is precisely this paradox that will be the subject of the last part of this dissertation.

4.2.1. Presuppositions as primary inferences

In this section, I argue that the alien's perspective (cf. §2.2.1), as presented earlier for the identification of discursive presuppositions, can be applied to issues relating to the acquisition of presuppositions. As Bova et al. (2017) point out, children deal with contents that are taken for granted on a daily basis, whether they relate to conceptual meaning or to pragmatic modulations on the explicit and implicit level of verbal communication.

Bova et al. (2017) claim that a significant amount of information dealing with people's beliefs (*e.g.*, system of values, stereotypes, etc.) is presented in the form of a presupposition. They draw on de Saussure's (2013) work on discursive presuppositions and propose that utterance (111) below illustrates a typical case of a stereotypical belief that a child could be exposed to in an everyday scene. The utterance triggers the discursive presupposition that « it is not desirable to go on holiday to a Muslim country » and, ultimately, that Muslims may be a problem of some sort⁴⁸ :

- (111) We won't go on holidays in that country: it has too many mosques.
- a. It is not desirable to go on holiday to a Muslim country.
 - b. Spending time with Muslims is not desirable. [...]

(adapted from Bova et al. 2017, 264)

Bova et al. (2017) assume that a child would spontaneously produce inferences based on the above utterance to make sense of the link between deciding not to go on holiday in a certain country and the presence of mosques. As they explain below, the link between these two propositions will be enriched by contextual assumptions contributing to making the utterance relevant:

[...]. Of course, he/she can recruit his/her encyclopedic knowledge about the Muslim's places of worship; it is possible that s/he has acquired sufficient information on this topic, for example by seeing mosques in books or on television. But understanding (P) involves substantial inferential work to understand the link between

⁴⁸ Note here that the examples on minarets by de Saussure (2013) as well as the one on mosques by Bova et al. (2017) reflect the massive media coverage of this period in which Muslim populations were strongly stigmatised. Thus, the discursive presuppositions oriented towards the dangerousness or undesirability of "Muslims" became all the more salient for the addressee.

mosques and the decision to avoid visiting that country. (Bova, Arcidiacono, and Clément 2017, 264)

Following Bova et al. (2017), I want to argue that both semantic and discursive presuppositions are relevant contents in the course of children's acquisition of world knowledge. Such perspective may be fruitful to providing a theory on the acquisition of presuppositions, completely rethinking the way in which we apprehend, firstly, the priority with which the child will attribute relevance to contents and, secondly, the order of the acquisitional pattern of presuppositions according to the cognitive skills they call upon.

For instance, it is conceivable that a child would be sensitive to discursive presuppositions, especially third-order ones, insofar as they inform the child about the rules governing their social environment in which he is evolving. Such rules are infinitely more important to understand for the child's immediate survival than, for instance, knowing whether an assertion about the king of France means that he exists in the real world. This would at least be in line with recent research on naïve psychology, showing the extent to which human beings are equipped from birth to evolve and survive in their social environment (Hirschfeld 2001; Shutts 2015; Kaufmann and Clément 2014). Thus, children are likely to have different priorities than adults when it comes to the content they consider relevant.

Children's proper understanding of presuppositions is presumably dependent on developmental stages of cognition. In this sense, presuppositions triggered by acts of showing (*e.g.*, prosody) or basic logical-semantic decoding are likely to be understood first. This could be followed by contents relating to social hierarchies, and finally those requiring the maturation of the theory of mind (*e.g.*, factive verbs). In the light of these considerations, I propose to discuss below a few examples of presuppositions from a developmental perspective.

Semantic presuppositions as primary inferences

From the child's point of view, the use of a change-of-state verb provides relevant information, especially when it is tacitly compared to an alternative possibility oriented towards the same consequences. For example, a child hearing "Dad quit smoking" in (112) rather than its equivalent "Dad doesn't smoke" in (113) is, as such, relevant because it is more informative:

(112) Dad **quit** smoking.

- a. Dad used to smoke.
- b. Dad does not smoke.

(113) Dad does not smoke.

The same applies for iteratives, which semantically encode a repetition of an event, which may be more than relevant for the child seeking to identify behavioural patterns. Importantly, just as it is the case for change-of-state verbs, the utterance which contains the presuppositions is more relevant for the child seeking to acquire world knowledge:

(114) The mouse stole the cheese **again**.

- a. The mouse stole the cheese [this morning].
- b. The mouse stole the cheese [yesterday/last week/...].

(115) The mouse stole the cheese.

- a. The mouse stole the cheese [this morning].

On the basis of the above two examples, we can assume that presuppositions triggered by change-of-state verbs or iteratives would be among the first to be mastered during acquisition, as they simply involve a logical reading of the utterance. Such observations would be consistent with other findings in language acquisition, particularly those found for scalar inferences (Noveck 2001; 2004; Pouscoulous et al. 2007).

Later on in development would come presuppositions which involve more complex pragmatic skills, requiring the maturation of the Theory of Mind (Dennett 1978; 1983, 344). Such cognitive skills would be necessary for an adult-like understanding of factive verbs. Otherwise, without a proper functioning of Theory of Mind, the child will not distinguish his own beliefs from the ones of the protagonists described in experiments, neither would they be able to infer that a factive verb should entail the truth of the following proposition. For instance, it may be difficult for the child to assess the extent to which the expression of the “belief that P” is less reliable than the expression of a the “knowledge that P’ or the “regret that P”. One can envisage an experimental setting in which a child is asked to find out where a mouse is. The child would then see two witnesses presenting two different locations, one with a factive verb and the other with a non-factive verb. In the absence of a Theory of Mind, the difference between thinking and knowing is not necessarily obvious :

(116) I **think** the mouse is in the box.

- a. There is a mouse.
- b. There is a box.
- c. The mouse [in question] is in the box [in question].
- d. The speaker thinks that c. is true.
- e. When the speaker thinks c., he/she is usually wrong/right.

(117) I **know** that the mouse is in the box.

- a. There is a mouse.
- b. There is a box.
- c. The mouse [in question] is in the box [in question].
- d. The speaker knows that c. is true.
- e. When the speaker says he knows c. to be true, he/she is usually wrong/right.

In the absence of a Theory of Mind, factive and non-factive verbs trigger similar inferences (*cf.* a-d above), which depend heavily on general world knowledge.

From a developmental perspective, presuppositional readings of factive verbs do not always seem to be performed, as appears to be the case in the study by Dudley et al. (2014). As a reminder, Dudley et al. assessed whether children used cues, based on factive or non-factive verbs, to find toys hidden in one of two boxes which were presented to them. Only a few children used factive verbs as cues for looking for a toy inside a box instead of another, without this result being significant. On the basis of the scarcity of the use of factive verbs as cues, the authors hypothesize that early representations of the factive verb "to know" do not presuppose that the following clause is true. These results are in line with what I am arguing here, namely that a presuppositional reading of factive verbs depends on the maturation of mind-reading skills, which would explain a later mastery of these presuppositions.

On the basis of the above, and referring to a paradox discussed by Boër and Lycan (1976), a child would consider the utterance (118) below as relevant mainly because it provides the information that " $1+1=3$ ":

(118) I know that $1+1=3$. (Boër and Lycan 1976, 24)

The utterance above could truly be treated as new and reliable information. However, it would only be in a second step, after having acquired the knowledge that " $1+1=2$ " and with the understanding that factive verbs generally presuppose the truth of the proposition, that the addressee would notice the inherent contradiction of utterance⁴⁹. Thus, an utterance like (118) is in fact unproblematic, as long as the proposition is distinguished from the epistemic stance communicated by the addressee.

⁴⁹ The same principle applies to other examples discussed by Boër and Lycan (1976), such as "Why is the Moon made of green cheese?" which presupposes that "The Moon is made of green cheese".

Discursive presuppositions as primary inferences

As far as discursive presuppositions are concerned, I have argued earlier that they involve different levels of complexity, namely from first-order to third-order discursive presuppositions (§2.2.2; §2.2.3):

First-order discursive presuppositions are likely to be mastered early on, although they already involve abstract concepts. Taking the example of Bova et al. (2017) adapted below, young children would produce very general inferences (119a-c), lacking definite knowledge related to lexical content, but nonetheless contributing to the relevance of the utterance:

- (119) We won't have fun in this place: it has too many
Hubblelops.
- a. It is not possible to have fun with Hubblelops.
 - b. It is not good if there are too many Hubblelops.
 - c. A few Hubblelops may be manageable.

Second-order discursive presuppositions should be acquired later, as they are based on the depth of the child's encyclopedic knowledge. It should be noted that these inferences themselves enable the child to construct the various components of meaning associated with concepts, namely their connotative value.

Finally, third-order discursive presuppositions may be understood relatively early on, insofar as the identification of the social roles that enable the performance of speech acts are based on a competence of naive sociology (Kaufmann and Clément 2014). Current research shows that children are able to make behavioral predictions on the basis of social indicators from an early age. For example, they understand that certain behaviors (e.g., giving orders) are more often represented in adults than in children. Thus, the presentation of certain basic speech acts such as giving an order, asking a question, giving permission, explaining, etc. instructs the child about social roles and privileges.

Third-order discursive presuppositions are likely to play a role in the construction of stereotyped representations, as illustrated with the utterance "Men are as intelligent as women". For the agnostic child, this sentence contributes to the formation of a belief that there are reasons to think that men can be less intelligent than women.

Although the above considerations remain programmatic, they allow for a different approach to the categorisation of the large class of presupposition triggers that has so far proved to be problematically heterogeneous. According to this perspective, presupposition effects depend on specific cognitive skills, which would be reflected in an acquisitional pattern that could be established. Taking up the various presupposition triggers presented in this work, I propose in Table 9 to categorize them according to the cognitive skills likely to be required for their acquisition.

Table 9. Acquisition pattern for semantic and discursive presuppositions.

Presupposition trigger:	Cognitive competence:
Stress pattern	Stress pattern recognition
<ul style="list-style-type: none"> • Change-of-State verbs • Iteratives • Clefts • Quantifiers • Definite description • Temporal clauses • Manner verbs 	Semantic
<ul style="list-style-type: none"> • First-order discursive presuppositions 	Pragmatic inference
Third-order discursive presuppositions	Naïve psychology
Factive verbs	Theory of Mind

Second-order discursive presuppositions	Sophisticated world knowledge
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Importantly, this approach allows to account for the fact that presuppositions sometimes serve an informative function, brought to the conversational foreground, needing to be accommodated by the addressee. While many approaches to presuppositions consider that they should present information belonging to the conversational background, other approaches have pointed out that this is not really what is observed in practice. In fact, as Karttunen (1974, 191) points out, people frequently use presuppositions for their informative function. Thus, considering presuppositions as primary and relevant contents, which are eventually relayed in the background, makes it possible to account for these contents in terms of their foreground and background effects.

To summarize, the hypothesis I advocate here is that primary inferences are put in the background (*i.e.*, perceived as a presupposition) as soon as children anchor them in a routine. For example, when the child hears often enough that "to quit smoking" is used to communicate the practical consequence of "not smoking anymore", he will process the other entailment, namely "having smoked in the past", as being not (or less) relevant. The same applies to presuppositions based on Theory of Mind: once the child learns that, in general, saying "I know P" marks a mental state of higher confidence, and thus is usually more reliable than "I believe P", he will end up treating factive verbs as triggering a presupposition.

Importantly, conceiving presupposition effects as being originally a primary inference is consistent with Wilson and Sperber's (1979, 319) initial claim that presuppositions are necessary conditions for the establishment of relevance. It is only by virtue of pragmatic principles, in particular that of habituation, that presuppositions are relayed in the conversational background. In the next section, I take their conclusion a step further, arguing that presuppositions are preconditions for the acceptance of an utterance, rather than for its understanding *per se*.

4.2.2. Presupposition as preconditions for acceptance

In this section, I re-examine the relationship between presuppositions and the meaning of the sentence. I defend a position comparable to that of Strawson, who argues that presuppositions which lack a referent does not affect the comprehension of the sentence. The relevant excerpt, discussed in the first part (§1.1.3.) is recalled below:

[...] When we utter the sentence without in fact mentioning anybody by the use of the phrase, “The king of France”, the sentence does not cease to be significant: We simply fail to say anything true or false because we simply fail to mention anybody by this particular use of that perfectly significant phrase. (Strawson 1950, 127)

The idea defended here is that presuppositions do not contribute to the comprehension of the utterance, namely the recovery of the speaker’s intended meaning, but rather contribute to the acceptance of the utterance as a relevant content. Although presuppositions are often pushed into the conversational background, they fulfil the fundamental function of serving as a precondition for the acceptance of the foregrounded communicative act.

In what follows, I highlight some examples of semantic and discursive presuppositions and argue that their falsity essentially affects the acceptance of the utterance as an object worthy of being processed.

Definite descriptions and acceptance:

Utterance (120) below presents a fact about Barack Obama's son. However, anyone with sufficient encyclopedic knowledge knows that Barack Obama doesn't have any son. Importantly, the presupposition failure does not prevent the reader from interpreting which conditions should be fulfilled for the utterance to be true:

(120)The son of Barack Obama was born in New York.

Although the addressee understands (120), he may not accept the utterance as relevant, either by refusing to accommodate the presupposition as a new belief, or by openly challenging the speaker. However, if the existence of Obama's son corresponded to a hypothesis or fiction, it is no longer a problem that the presupposition has no referent.

(121) The son of Obama would have made an excellent president.

Such an example obviously echoes Strawson's approach, who insists that the fictional or hypothetical utterances are perfectly compatible with the non-referential definite descriptions (cf. §1.1.3). In Epistemic Vigilance terms (Sperber et al. 2010), the fact that (121) seems more acceptable than (120) could also reflect that the utterance goes through two evaluative stages, where the addressee would first identify the speaker's communicative intention and then evaluate whether he accepts it. In utterance (120), the speaker's intention is to inform about a state of affairs that turns out to be unassessable (or false), whereas (121) concerns a hypothesis or a fictive representation which does not need to be true. Thus, the addressee will evaluate, in a second step, whether the utterance is accepted as a relevant content. In the two above examples, the fact that Obama doesn't have a son will have different consequences on the acceptance of the utterance. While the falsity of the presupposition in (120) makes the utterance worthless to process, this is not the case for (121), where the cognitive effects would be beneficial for constructing a counterfactual representation.

In light of the above example, it seems necessary to reconsider what definite descriptions presuppose. Definite descriptions could arguably encode a general instruction which consists in requiring the identification of a salient referent⁵⁰. The identification of a salient referent would typically select an

⁵⁰ Lewis provides a similar claim regarding definite descriptions: "The proper treatment of descriptions must be more like this: "the F" denotes x if and only if x is the most salient F in the domain of discourse, according to some contextually determined salience ranking." (Lewis 1979, 348).

object that really exists or is unique, but not necessarily. However, a salient referent could also be conceived more broadly, allowing for the selection of fictitious, hypothetical, or non-unique referent (e.g. Barack Obama could have more than one son). A “salient referent requirement” of definite descriptions would also allow to account for attested processing difficulties when they occur in implausible contexts.

Some experiments have measured the processing ease of definite descriptions, comparing when they occur in a plausible vs implausible contexts (Singh et al. 2016; Müller and Mari 2021; Mari and Müller 2023). For instance, it has been shown that it is more costly to process (122a) than (122b), because the second sentence introduces a definite description in an implausible context:

(122)a. Mary went to **the office** a few hours ago. **The lifeguard** warned her there about the weather. (Definite description preceded by an implausible context, Singh et al., 2016, 631)

b. Mary went to **the beach** a few hours ago. **The lifeguard** warned her there about the weather. (Definite description preceded by plausible context, Singh et al., 2016, 631)

Singh et al.'s (2016) study shows that the participant stopped the reading task when the definite article was implausible, leading them to conclude that the definite description was “inappropriate” in an implausible context.

In Mari and Müller (2023), we designed another experiment to show that definite descriptions can be difficult to process even when the noun is compatible with the previous context. In a nutshell, the main point was to show that the referent of the definite description can be difficult to process only because of stereotype effects. The experiment consisted in the presentation of a plausible context, followed by sentence introducing a noun that conformed or did not conform to a gender stereotype. The noun was itself introduced by a definite or indefinite article (i.e., presupposed *vs* asserted condition). The stimuli were structured as follows:

(123)a. Lucienne est allée à l'hôpital le mois dernier. **La chirurgienne** l'a opérée avec une grande précision.
[Lucienne went to the hospital last month. **The surgeon_{female}** operated on her with great precision.

(Plausible context followed by an incongruent Gender Stereotype, *cf.* Mari and Müller 2023, 4)

b. Lucienne est allée à l'hôpital le mois dernier. **Le chirurgien** l'a opérée avec une grande précision.
[Lucienne went to the hospital last month. **The surgeon_{male}** operated on her with great precision.]

(Plausible context followed by Congruent gender stereotype, *cf.* Mari and Müller 2023, 4)

The significant slowdowns obtained for utterances containing an incongruent definite description, as in (123b) above, show that the processing of definite descriptions is significantly compromised when the referent is not salient. These results also applied to other types of stereotypes, such as national stereotypes (*cf.* Mari and Müller 2023, 4).

In summary, the referent of the definite descriptions need not to exist or to be unique in any way, contrary to what is argued in classical approaches. Rather, definite descriptions require the referent to be salient in the addressee's cognitive environment in order to facilitate its identification. The more salient the referent is, the less costly the processing of definite descriptions will be. Finally, if the referent were found not to exist or to be potentially incongruent with our world knowledge, the statement would consequently be considered irrelevant, but its meaning would nonetheless be computable. This conception is therefore compatible with both the information processing assumptions of Relevance theory, where relevance guided-heuristic follows an order of accessibility to assign the referent (§3.1.3, Table 7). And as soon as the identified referent appears problematic

(because it is false, or implausible), the acceptability of the sentence is compromised, but not its comprehension.

Iteratives and acceptance

Iterative particles (*e.g.*, “again”, “another”, etc.) presuppose that an event took place repeatedly. One of the most popular political slogans in the United States capitalises on a presupposition generated by the iterative “again”, namely “Make America Great Again”, used by Donald Trump, but also Reagan and Clinton before him:

(124) Make America Great Again.

Presupposition: America used to be great but is no longer great.

Assertion: Make America Great.

Paradoxically, this political campaign slogan has always worked very well despite the absence of a clear referent. Indeed, the specific period during which America lost its greatness, and what characterised this greatness in the past, remain unspecified. This shows to what extent the absence of the exact identification of the referent is not necessary for the understanding of the statement nor, in the present case, for the acceptance of the utterance.

The distinction between comprehension and acceptance of iteratives is also apparent in Tiemann et al.’s (2015) experiment on the German version of “again” (namely, “wieder”). They carried out a word-by-word reading experiment in which they presented sentences containing *wieder* across two conditions, the first one with a context sentence containing the presupposition (i.e., “the supporting context”, *cf.* (b) below), the second condition with a neutral context which did not contain the presupposition (i.e., “the neutral context”, *cf.* (a) below):

(125) *Context sentence: Last week, Linda bought Judith a pink lamp for a room.*

Two days ago, {(a) Linda / (b) Judith} received a pink lamp again, when she was out with a friend.

(Tiemann et al. 2015, 46)

The presentation of the stimuli was followed by comprehension questions relating to the presupposition and to the sentence in general. Reading times for each region were also measured to assess processing difficulties. Finally, participants were asked to rate the acceptability of the sentence in relation to the context sentence on a four-point rating scale (*i.e.*, 1 = very bad 2 = rather bad 3 = rather good 4 = very good).

Their results first showed that participants were perfectly capable of understanding sentences, regardless of whether the context was neutral or supportive. However, when the contexts were not supportive, participants simply chose not to accommodate the presupposed information. For example, if asked about the target statement “*Judith received a pink lamp again, when she was out with a friend*” (*unsupported context*), the participant would consider that she only received “one lamp”, as opposed to “at least two” which would be supported by the accommodation of the presupposition (Tiemann et al. 2015, 48). Overall, their results suggest that the lack of accommodation does not lead to incomprehensibility of the sentence, but rather to a judgement of the sentence's unacceptability (Tiemann et al. 2015, 51).

Thus, based on the two examples above, it appears that it is not difficult for the addressee to understand the utterance despite the lack of a referent. It would therefore be the acceptance of the utterance that would be compromised by the difficulty of identifying the presupposition.

Focus-sensitive particles and acceptance:

In a context where a teenager wanted to make a case for going out until midnight, he could argue that his friend John, who is the same age as him, has the right to go out late at night. The adolescent may simply point out to his parents that John has the right to stay out until midnight (126).

Alternatively, he may appeal to emotions, saying that John – who is usually the least likely to be allowed to stay out late – has the right to stay out until midnight (127):

(126) John gets to go out until midnight!

(127) **Even** John gets to go out until midnight!

Presupposition: John is generally the least likely to be able to go out until midnight

The above two utterances communicate the same proposition, the only difference being that (127) presupposes that “John is generally the least likely to be able to go out until midnight”. If the parents knew that the presupposition was true, it would make the foreground content all the more argumentatively relevant. Now suppose that the presupposition turned out to be false, in that John is *always* allowed to go home after midnight. In this case, the parents would be likely to reject utterance (127) as a valid argument for going out at night. Importantly, the rejection of the proposition might be stronger for utterance (127) than for utterance (126), because the relevance of (127) is rooted requires the truth of the presupposition.

To my knowledge, no experimental investigation has directly tested such a hypothesis. The only one that comes close to the intuition described above is the experiment by Mazarella et al. (2018), which demonstrates that presuppositions are committing for the speaker, given that he cannot deny having communicated a presupposition without suffering reputational consequences. This issue obviously affects the question of the acceptance of an utterance, but is more closely related to the question of the plausible deniability of presuppositions, which I address later (§ 5.2.1 - §5.2.2).

Change-of-state verbs and acceptance

Change-of-state verbs encode semantic instructions relating to an unfolding process. As we have seen earlier, saying "John has stopped smoking" entails that John no longer smokes and presupposes that John used to smoke. It would therefore be problematic for the truth of the sentence for John to say that he has stopped smoking when he has never smoked previously.

However, the falsity of the presupposition triggered by a change-of-state verb does not affect the comprehension of the sentence but rather its acceptance. In a context where it would be clearly known that John has never been a smoker, the statement "John stopped smoking" would be perfectly understood, but would probably trigger additional processing costs in order to assess whether any relevance can be attributed to such an utterance.

One of the most fascinating aspects of pragmatics is probably its way of demonstrating that there are always some ways to interpret an utterance, even if it goes against usual expectations. The key is usually in providing the adequate contextual information. So, in an appropriate context, the falsity of " $1+1=3$ " could even be relevant for conveying specific cognitive effects, as the example below shows:

(128)Context: *A woman, talking about her 4-year-old child.*

One day, $1+1$ will cease to be equal to 3.

Presupposition: $1+1=3$

In this context, the addressee would be able to understand the utterance, despite the fact that it contains a false presupposition: here, the speaker represents her child's obviously false epistemic stance, which allows her to convey a somehow condescending attitude.

Here, the problem is similar to the one addressed regarding fictional contexts for definite descriptions. Insofar as the content is capable of conveying information worth processing, the utterance will be accepted as relevant. This was the case for the utterance "The son of Obama would have made an excellent president". However, the mere assertion that " $1 + 1 = 3$ " cannot be accepted as relevant, although it remains perfectly understood.

Cleft sentences and acceptance

The two utterances below both convey the same proposition, namely that “Hans stole a key”. However, utterance (130) also presupposes that “Something was stolen by Hans”:

(129) Hans stole a key.

(130) It’s a key that Hans stole.

Presupposition: *Something was stolen by Hans.*

If Hans had not in fact stolen anything, there would be no difficulty in understanding utterance (130) containing the presupposition. However, the addressee would tend to reject the relevance of the utterance with potentially more severity for (130) than for the one that does not presuppose that something has been stolen as in (129). Indeed, the speaker who presupposes that something has been stolen by Hans is also making a commitment that this act of theft is something on which there is a consensus, which will obviously have reputational consequences for Hans. So, as in the case of focus-sensitive particles, the presupposition is used to communicate the speaker's commitment, which has consequences for the acceptance of the utterance as trustworthy.

In conclusion, all the examples given above deserve to be studied in greater depth, experimentally, in order to support the idea that presuppositions contribute more to the acceptance of an utterance than to its comprehension. However, although presuppositions remain unexpressed, the first experimental investigations have shown the extent to which they constitute genuine indicators of the speaker's commitment, which the speaker cannot deny without consequences. In particular, this is evidenced by the study conducted by Mazzarella et al. (2018), where they show that asserted and presupposed contents serve as cues to speaker commitment, which contribute to increasing the acceptance of an utterance as carrying

trustworthy information. However, as soon as the presupposed content turns out to be false, this entails reputational costs for the speaker.

In summary, if the presupposition turns out to be false, it does not interfere with the comprehension of the sentence. Instead, the utterance will not be accepted as worthy of bringing valuable information into the addressee's cognitive environment.

4.2.3. *Presuppositions bypassing the listener's vigilance*

We have seen so far that presuppositions contribute to the acceptance of an utterance as relevant. Here, I want to highlight the paradox arising from utterances that are accepted as relevant although the presupposition contains manifestly false information. Utterances are arguably accepted by the addressee when a) he does not question it, b) he provides an immediate response regarding the foreground content or c) he endorses the utterance (in the case of political campaign slogans, for example).

In some cases, presuppositions seem to bypass the addressee's epistemic vigilance, because he appears to accept an utterance that contains obviously false errors. Such cases apply to both semantic and discursive presuppositions, as illustrated below:

(102') How many animals of each kind did *Moses* take on the Ark.

Presupposition: *Moses took animals on the Ark.*

(131) If a plane crashes on the border between the US and Mexico, where do they bury the survivors?

Presupposition: *People bury survivors.*

(99') Are women as clever as men?

Discursive presupposition: *There are reasons to believe that women are not as clever as men are.*

(76') Do you accept the vote proposal to ban the construction of minarets?

Discursive presupposition: *minarets are a threat of some type.*

Example (102') is the famous Moses illusion, which has shown, through numerous replications, that participants tend to answer questions while completely ignoring the error encoded by the sentence (Erickson and Mattson 1981; Reder and Kusbit 1991; Bredart and Modolo 1988; Park and Reder 2004). This is also the case with utterance (131), which has made it possible to show that the errors resulting from the Moses Illusion do not arise solely from general culture or education (Barton and Sanford 1993). To the extent that the participants in these studies answered these questions without noticing the error encoded by the semantic presupposition, this suggests that it is possible to accept a proposition as relevant, even though it encodes a false piece of information.

Similar kind of problems arise for the discursive presuppositions (99') and (76') presented above, as they give rise to background information that is either obviously false or open to debate. In such cases, the addressee is prone to accept the verbal content as relevant, even though the presupposition is obviously questionable.

In some cases, it could be argued that the presupposition is simply overlooked. In this way, false or problematic content would just be ignored by the addressee, which would explain the acceptance of the content. However, this raises two concerns with respect to the approach I am proposing:

- If presuppositions are ignored, this raises the question of whether they really contribute to establishing the relevance of a statement.
- On a second level, these facts seem to contradict other experiments that have been discussed, where presuppositions have been shown to have epistemic effects in a subliminal way. In this respect, Loftus and Zanni's (1975) study showed the extent to which definite articles can bias the

memory reconstruction of a given event (cf. "Did you see the broken light?" vs "Did you see a broken light?", §3.2.3).

It is therefore necessary to explain how it is possible to hold that presuppositions are preconditions for relevance while conceding situations in which the addressee will not rely on these presuppositions to accept the utterance as relevant. Moreover, this raises the question of the addressee's epistemic vigilance in contexts of presupposition accommodation. These issues will be discussed in the final part of this dissertation.

4.2.4. Conclusion

In this chapter, I argued that presuppositions contribute to the acceptance of an utterance, following Sperber et al.'s (2010) distinction between comprehension and acceptance in their Epistemic Vigilance hypothesis.

I first showed to what extent presupposition effects can be understood from a developmental perspective as 'primary inferences'. I argued that presuppositions initially constitute foregrounded meanings which are fundamental in establishing meaning. It is only later, after having been consistently identified as not being part of the communicative intention, that primary inferences become presupposition effects, relayed in the background of the conversation. However, although they are put in the background, they remain essential for the acceptance of an utterance.

By approaching presuppositions as primary inferences, it is possible to account for the heterogeneity of different presupposition triggers. According to the perspective I propose, the effects of presuppositions are based on the cognitive skills they mobilise (*i.e.*, semantic decoding, Theory of Mind or mere pragmatic inferences), which would be reflected in a still-to-be-established acquisition pattern. In addition, this approach allows for the fact that presuppositions sometimes fulfil an informative function, being relevant in their own right.

In a second step, I defended a position comparable to that of Strawson's, namely that presuppositions which lack a referent do not

interfere with the comprehension of an utterance. I also showed that false presuppositions can be used in relevant ways. In this respect, I showed the contrast between “The son of Obama was born in New York” *vs* “The son of Obama would have made an excellent president”, where the second utterance brings about cognitive effects as a counterfactual thought. Besides, I highlighted different experimental approaches that underline that the falsity of a presupposition essentially results in the content being considered as unacceptable (Tiemann et al. 2015) or in negative consequences for the speaker’s reputation (Mazzarella et al. 2018).

Finally, in the last section, I pointed out the problem of presuppositions which bypass the listener’s epistemic vigilance, as attested by the Moses or Plane Crash Illusion. I argued that such experiments bring a tension with the proposition I am making, namely that presuppositions contribute to the acceptance of an utterance. In other words, it amounts to supporting both clauses:

- (A) Presuppositions are preconditions for the acceptance of an utterance.
- (B) In some cases, addressees accept an utterance as relevant even when the presupposition is obviously false.

Thus, the remainder of this dissertation is devoted to offering solutions to make the two above clauses reconcilable. We shall see that presuppositions can be seen as preconditions for relevance, while at the same time acknowledging specific situations in which the addressee does not rely on these presuppositions to accept the utterance as relevant.

**PART III: TOWARDS A COGNITIVE-PRAGMATIC
ACCOUNT OF PRESUPPOSITION ACCOMMODATION**

“The right understanding of any matter and a misunderstanding of the same matter do not wholly exclude each other.”

– Franz Kafka, The Trial

Overview

In this third and last part, I discuss contexts in which a presupposition is not mutually shared between speaker and addressee, thus requiring an accommodation. I argue that three kinds of accommodation should be distinguished, depending on whether it is conscious or unconscious, and on whether it induces a new belief in the addressee.

I shall begin with von Fintel's felicity conditions for accommodation, arguing to what extent this approach suggests, wrongly (in my view), that this process is solely a matter of the addressee's conscious decisions. Von Fintel argues that the addressee "chooses" to accommodate presuppositions, depending on the relative importance of the presupposed content and also taking into account the fact that questioning a presupposition is a costly conversational move. I will categorise such instances of accommodation as being "conscious with epistemic effects".

The propositions made by von Fintel about accommodation will then be contrasted with the numerous experiments in psychology which show that presuppositions are sometimes responsible for cognitive illusions. In some cases, however, it is not plausible to postulate that the addressee accommodates the presupposition, in the sense that this would generate a new belief. This applies to the Moses Illusion, which does not induce the belief that it was 'Moses', and not 'Noah', who took the animals on the Ark. In such contexts, the presupposition goes through lexical modulations which can be characterised as an accommodation in a weaker sense, as it is unconscious and does not induce an epistemic effect.

Finally, other experiments from psychology suggest the existence of presuppositional biases, insofar as they are capable of altering memory reconstruction, to the point of inducing a belief in the existence of an event that never took place. Such experiments have had a major influence on recent works in pragmatics, which argue that semantic and discursive presuppositions have an inherent manipulative power in their capacity to bypass the listener's epistemic vigilance. Such instances of accommodation fall under the third type of accommodation that I have identified, namely "unconscious with epistemic effects".

In what follows, I argue that these three types of accommodation should be distinguished and that the conditions that determine which category is applicable should be identified. These questions will be approached from the point of view of Relevance theory, following the route below:

- First, I introduce the key concepts that will be useful for understanding accommodation, in particular the definition provided by Stalnaker and Lewis, as well as the principles relating to bridging inferences as proposed in Relevance theory.
- Second, I discuss the manipulative approaches to presupposition accommodation, namely the “plausible deniability” approach and the “presupposition bias” approach. For each of them, I raise objections stemming from Relevance theory and experimental pragmatics.
- Finally, I distinguish three different types of accommodations, namely conscious ones, as well as unconscious ones with or without epistemic effects. The concluding remarks reconsider the problem raised by the accommodation of false content, from the perspective of epistemic vigilance. I point out that the processes dedicated to epistemic vigilance do not function exhaustively, but rather optimally. This explains why erroneous contents are sometimes accommodated.

More fundamentally, I will emphasize that accommodation is probably only a theoretical distinction, insofar as the processing of presuppositions can be accounted for by the relevance-guided comprehension heuristic.

Chapter 5. Accommodation in cognitive pragmatics

5.0. Introduction

This chapter deals with presupposition accommodation, focusing on contributions that are compatible with “cognitive pragmatics” (*i.e.*, Relevance theory). First, I identify the origin of the concept, presenting the first definitions provided, then I present two problems classically addressed in Relevance theory, namely bridging inferences, as well as the felicity conditions for accommodation.

Secondly, I present the theories supporting the idea that presupposition accommodation is responsible for manipulative effects, making it possible either to deny having conveyed some information or, alternatively, to induce a new belief in the addressee in a way that goes below the level of consciousness. In each case, I present objections to these theories, from a theoretical perspective as well as on experimental findings in the field of pragmatics.

5.1. Fundamental concepts

5.1.1. Origin of the term and perspective adopted

Lewis (1979) was the first to introduce the term "accommodation" into linguistics, designating the process by which the addressee integrates a presupposition which carries a content he was unaware of. He argues that presuppositions come into existence as soon as they are expressed to the addressee, although he does not exclude the possibility that he may challenge the presupposed content. Lewis' rule of accommodation is defined as follows:

If at time *t* something is said that requires presupposition *P* to be acceptable, and if *P* is not presupposed just before *t*, then – *ceteris paribus* and within certain limits – presupposition *P* comes into existence at *t*. (Lewis 1979, 340)

Shortly before Lewis, Stalnaker refers to “accommodation” by pointing out that presuppositions “need not be true” (Stalnaker 1970, 280). He observes that in some contexts the truth of the presupposition may remain anecdotal, meaning that there will be no accommodation, whereas some other contexts may require an update of the context. More specifically, he emphasizes the importance of accommodating a presupposition from an epistemological point of view:

The same contrast applies to a scientific experiment performed against the background of a presupposed theoretical framework. It may lose its point when the old theory is rejected, or it may easily be accommodated to the new theory. Sometimes, in fact, puzzlement is resolved and anomalies are explained by the discovery that a presupposition is false, or that a falsehood was presupposed. An experimental result may be more easily accommodated to the new presuppositions than to the old ones. (Stalnaker 1970, 280-281)

As Beaver (2001, 101) points out, Stalnaker's and Lewis's concept of accommodation differs with respect to the process it designates. For Stalnaker, accommodation refers to the way in which (scientific) observations are to be reconsidered after a presupposition has replaced a previous one⁵¹. For Lewis, accommodation is the process by which the addressee modifies his assumptions by integrating a presupposition which he was unaware of. In any case, from the 1970s onwards – since the pragmatic turn in presupposition theory – accommodation became new focus of linguistic research. This gave rise to the need to provide a theory of

⁵¹ However, it should be noted that Stalnaker (1998) returns to the subject of accommodation and its conditions of appropriateness, adopting Lewis's (1979) definition.

how the addressee proceeds when he is unaware of the presupposition, as illustrated below:

People do make leaps and shortcuts by using sentences whose presuppositions are not satisfied in the conversational context. **This is the rule rather than the exception** [...] I think we can maintain that a sentence is always taken to be an increment to a context that satisfies its presuppositions. If the current conversational context does not suffice, **the listener is entitled and expected to extend it as required.** (Karttunen 1974, 191, *my emphasis*)

Importantly, some aspects of the above quotation appear to be problematic for a cognitive pragmatic approach to accommodation. First, it preserves the idea that a common ground would or should exist, insofar as the "conversational context" is tacitly presented as being shared between the speaker and the addressee. And when the addressee is not aware of this context, the speaker expects the addressee to make an update so that it is once again shared by both parties. This premise has been argued against previously, emphasising that nothing can be truly mutually shared between a speaker and his addressee (§3.1.2). The second problem is that Karttunen's perspective is speaker-based, in the sense that the addressee fulfils the speaker's expectation of updating the context in accordance with what the speaker presupposes. As we have seen earlier, the perspective adopted in Relevance theory is that of the addressee, accounting for the way in which he builds interpretative hypotheses, also emphasising the fact that the relevance-guided comprehension heuristic is non-exhaustive and imperfect.

Importantly, the choice of the perspective adopted (*i.e.*, the speaker or the addressee) will guide the questions one will ask about accommodation. By adopting the speaker's perspective, the addressee is seen as updating the context according to the requirements set by the presupposition. Dynamic semantics (*cf.* §1.4.1) opt for this approach, insofar as they consider that the context is updated according to the constraints imposed by the presupposed content. A question that will typically be asked in dynamic semantic

frameworks is *what* is accommodated and *where* does accommodation occur in the utterance. With respect to the *what* question, the task consists of assessing whether the addressee strictly accommodates the content triggered by the presupposition, or whether the theory should also account for "bridging inferences", namely when the identification of the referent requires the resolution of an ellipse (*cf.* next section). As for the *where* question, Heim (1983) distinguishes two different locations where accommodation can occur. Within her Context Change Potential (CCS) framework, she develops a model in which presuppositions are defined as encoding the instruction to update the context in which the utterance takes place. Following Lewis' (1979) approach, she argues that accommodation corresponds to the creation of a slightly richer context, called *c'*, which entails the presupposition. The context update can occur *locally* in the language string or *globally*, which amounts to updating the presupposition from the outset. To better understand the distinction between global and local accommodation, Heim (1983) provides the utterance below, which includes two options for accommodation:

(132) The king of France didn't come. (Heim 1983, 401)

Global accommodation would mean that the context is updated from the start, implying that the proposition "a king of France exists" is added to the context before the utterance is processed. This would result in the interpretation that "the [present] king of France has not come". Heim underlines that global accommodation is typically the reading that would be preferred when considering the utterance in isolation (Heim 1983, 401). However, this stands in contrast with "local accommodation", which occurs after processing the presupposed content, and for which the resulting context would "only entail that either France has no king, or he didn't come" (Heim 1983, 401).

Heim's approach makes an essential distinction that enables a formal approach to accommodation. However, as Beaver (2001) points out, her approach does not provide an explanation as to how the addressee determines the new context in which the presupposition is to be contained.

In this respect, Beaver (2001, 103-104) highlights the interest of van der Sandt's (1992) approach, which formulates strategies adopted by the addressee to reconstruct the context of accommodation within a dynamic semantic framework. Although this approach provides rich avenues for modelling context updates by the addressee, they raise the problem of adopting the assumption that the context should be updated in accordance with the speaker's expectations in order to be mutually shared. In fact, semantic approaches tend to objectify context, whereas context is an internal, cognitive construction, from the perspective of Relevance theory.

From the point of view of cognitive pragmatics, two main questions arise regarding accommodation, namely *what* is accommodated – provided that something is accommodated – and *how* does accommodation modify the addressee's cognitive environment.

With respect to the first question, the aim is to assess the strategies adopted by the addressee to identify the referent. In this respect, Relevance theory has paid particular attention to situations in which the referent is not explicitly mentioned in preceding contexts, thereby calling for 'bridging inference' (cf. next section). In addition, relevance-theoretic approaches have also raised the question of whether accommodation encompasses other pragmatic contents, such as discursive presuppositions.

Regarding *how* accommodation modifies the addressee's cognitive environment, Relevance theory focuses on the "cognitive effects" of accommodation, namely whether accommodation entails a new "belief" on the part of the addressee, and if so, how are we to characterize them. As we shall see, evaluating the type of the epistemic effects involved in accommodation will allow to account for those paradoxical situations in which the addressee accommodates a presupposition that turns out to be manifestly false.

5.1.2. Bridging inferences

In the literature on definite descriptions, a distinction is made between the existential and/or uniqueness presupposition, namely (“The king of France is bald” presupposing that there exists a king a France) and the “bridging inference” or “anaphorical bridging inference”, which makes it possible to retrieve the referent from memory or identify the antecedent in a previous context. In their seminal article, Haviland and Clark (1974) distinguish between definite descriptions with a direct and indirect antecedent, arguing that it is less costly to process a content when the antecedent explicitly stated (133) than when it is indirect (134):

(133) We got some beer out of the trunk. *The beer* was warm.

(134) We checked the picnic supplies. *The beer* was warm.

(Haviland et Clark 1974, 514-515)

The first example involves satisfaction condition of the presupposition, whereas in the second case, the definite description requires the accommodation of the presupposition, namely that there are some beers, and that these beers are to be situated in a salient context, namely that of picnic supplies. Wilson and Matsui (2013) argue that bridging inferences consist in the production of contextual hypotheses, based on the addressee’s elementary encyclopedic knowledge. For instance, based on utterances presented in (135) below, the addressee would produce the hypotheses (136):

(135) a. Jane has a new house. *The front door* is blue.

b. Susan sent her meal back. *The steak* was underdone.

(136) a. Jane’s house has a front door.

b. Susan’s meal included a steak.

(Wilson and Matsui 2013, 187)

These contextual assumptions allow the addressee to recover the communicative intention of the speaker, by accommodating not only the presupposition of the existence of the content, but also the exact specification of the referent and its context. In this way, the definite description is enriched by an explicature, as illustrated below:

- (137) a. Jane has a new house. *The front door* [of Jane's house] is blue.
b. Susan sent her meal back. *The steak* [which was included in her meal] was underdone.

The explicatures presented above allow the definite description to be consistent within the discourse. However, the referent may prove to be more or less difficult to assign depending on a number of variables, such as focus-topic constraints (Erk and Gundel 1987), the plausibility of the previous context (Singh et al. 2016; Mller and Mari 2021), semantic proximity (Haviland and Clark 1974; Garrod and Sanford 1977; Clifton Jr 2013; Schwarz 2019) and the compatibility with a stereotype (Mari and Mller 2023).

Relevance theory accounts for situations where the listener favors the least costly interpretation to achieve a given cognitive effect. However, as Wilson and Matsui point out, the performance of a bridging inference does not depend solely on the relative salience of the referent. In some cases, the addressee will choose a referent that carries more cognitive effects, even though it is more costly:

- (138) I prefer England to Italy. I hate the pasta there. (Wilson and Matsui 2013, 193)

Here, according to stereotypical representations, the referent of "the pasta", which is presented as not being good, was preferred to be assigned to England rather than in Italy, the latter being known for its expertise in pasta making. The selection of England as the referent is also supported by syntactic reasons, according to which it would be preferable to choose the

direct object of “prefer”. However, here, the addressee chooses to accommodate the referent of “the pasta” as being from Italy, as this produces more cognitive effects: according to this reading, the addressee will understand that the reason why the speaker prefers England over Italy is because he hates pasta produced in Italy (Matsui 2000; Wilson and Matsui 2013).

Wilson and Matsui (2013) stress the importance of discourse connectors, which make it possible to constrain the choice of possible contexts in order to obtain more cognitive effects. For example, in the utterance (139a) below, the preferred referent is England, because the listener interprets that it is *because of the bad English pasta* that the speaker prefers Italy. However, the simple addition of “however”, as in (139b), reverses the tendency, making it clear that the speaker prefers Italy to England, *despite* the bad pasta made in Italy :

- (139)a. I prefer Italy to England. I hate **the pasta** there. [England 80%]
b. I prefer Italy to England. *However*, I hate **the pasta** there. [Italy 100%]

(Matsui 2000, 259)

Consequently, in Wilson and Matsui’s view, an adequate approach to bridging inferences does not depend solely on salience, but requires the integration of the two variables at play in the comprehension heuristic, namely the interpretative costs (*i.e.*, salience) but also the cognitive effects generated (*i.e.*, the acceptability of the content as plausible in order to integrate / reinforce / revise a belief).

Despite the fact that the founding papers of Relevance theory do not provide any further information about accommodation processes for presuppositions, it is reasonable to assume that the addressee proceeds according to the same principles for the accommodation of other presupposed contents, both semantic and discursive. In the concluding remarks, I will argue the relevance-guided comprehension heuristic can

account for the accommodation of false or manipulative presuppositions, as the result of an optimal trade-off between processing costs and cognitive effects.

5.1.3. Felicity conditions for accommodation

Felicity conditions for accommodation were first discussed by Stalnaker (1998), when examining the utterance (140) below:

(140) I can't come to the meeting – I have to pick up my cat at the veterinarian.

Presupposition: the speaker has a cat.

(Stalnaker 1998, 10)

In the above, the speaker presupposes that he has a cat, which serves as background information justifying his absence from the meeting. Stalnaker argues that the addressee accommodates the presupposition by assuming that the speaker is being “cooperative”. I pointed out earlier Stalnaker's affinity with Gricean pragmatics, insofar as they both posit that the speaker is cooperative and shares a common ground with the listener (§1.3.2). It should be reiterated here that these two premises are incompatible with Relevance theory's approach to communication (§3.1).

Interestingly, Stalnaker (1998) opens the door to the issue manipulative uses of informative presuppositions when the speaker deliberately attempts to "sneak something by the addressee" (Stalnaker 1998, 10). However, he considers that accommodation involves felicity conditions, resulting in a presupposition challenge by the addressee when they are not fulfilled. Stalnaker follows Heim (1992) in saying that accommodation can only take place when the presupposition is uncontroversial:

Assumptions to be accommodated are supposed to be uncontroversial and unsurprising. One may explicitly assert

controversial and surprising things (in fact one should) but to expect one's audience to accept them by way of accommodation is not good conversational practice. (Heim 1992, 212).

It should be emphasized here that felicity conditions for accommodation amount, at this stage, to what will be perceived as "uncontroversial and unsurprising". As we shall see later, this view fails to account for the many instances in which the addressee accommodates a presupposition that turns out to be either controversial or obviously false. Moreover, such an approach reveals itself to be prescriptive, thereby failing to account for what listeners do when facing a controversial presupposition. Indeed, as illustrated above, Heim takes the position that accommodation of a controversial presupposition 'is not good conversational practice'. As I pointed out earlier (§3.1.1), a cognitive pragmatic approach is intended to be descriptive, not prescriptive.

The first foundations of a psychological approach to accommodation have been laid by von Fintel (2000), who takes Stalnaker's analysis a step further by comparing example (140) presented above with the one below, which illustrates a situation in which the presupposition is not predicted to be accommodated by the addressee:

(141) Context: *A woman to her father, who is unaware of her having a fiancé.*

Oh Dad, I forgot to tell you that my fiancé and I are moving to Seattle next week.

Presupposition: The Speaker has a fiancé.

(von Fintel 2000, 16)

The processing of the above utterance can be costly, insofar as the woman informs her father, by means of a presupposition, that she has a fiancé, which is obviously highly relevant information for him. For von Fintel, the

presupposition would be challenged here simply by the fact that the information is relevant to the speaker.

Von Fintel sets out two essential conditions for predicting when a presupposition will be accommodated by the addressee, which are presented in Table 10 below.

Table 10. Von Fintel's (2000) felicity conditions for accommodation.

-
1. The listeners may be **genuinely agnostic** as to the truth of the relevant proposition, assume that the speaker **knows about its truth** and **trust the speaker not to speak inappropriately falsely**.
 2. The listeners may **not want to challenge** the speaker about the presupposed proposition, because it is **irrelevant** to their concerns and the **smoothness** of the conversation is important enough to warrant a little leeway.

(Von Fintel 2000, 11, *my emphasis*)

The first condition mentions two distinct criteria, namely the state of the addressee's previous knowledge about the presupposition and the presumption of cooperativity regarding the speaker. Insofar as the addressee has no prior knowledge about the presupposed content, von Fintel predicts that the presupposition will be accommodated. With respect to this question, I shall ask later what kind of epistemic effects are involved when the addressee is agnostic with respect to the truth of the presupposition. Should we expect the addressee to incorporate this content into his background knowledge, or should we expect him to process the information superficially, identifying it as irrelevant, but without incorporating it into his beliefs? If we take the cat example again, will the addressee remember that the speaker has a cat, or will he remember that he has a "pet", or will he simply remember that he had a "reason to cancel

his appointment"? I will argue later that these different types of epistemic effect need to be distinguished in the context of accommodation (§6.2.).

With regard to the presumption of the speaker's cooperativeness, von Fintel argues that the addressee will accommodate the presupposition if he can make the assumption that the speaker is competent (*i.e.*, "knows about the truth") or if he is benevolent (*i.e.*, "trust that the speaker does not speak inappropriately falsely"). These two elements come under what cognitive pragmatic approaches call the listener's *epistemic vigilance* (Sperber et al. 2010). These two variables will indeed weigh in the evaluation of the relevance of the presupposed content and on the listener's interpretive charity when dealing with implicit contents.

Von Fintel's second criterion suggests that accommodation is a conscious and voluntary process (*i.e.*, "the listener may not wish to challenge"). According to him, when the presupposition is not relevant, the listener will not feel the necessity to challenge it. Moreover, the cost of renegotiating presuppositions would not be seen as worthwhile. In my view, von Fintel's contribution provides the foundations for a discussion of the prerequisites for a presupposition to be 'accommodated' by the addressee, namely his prior knowledge, his degree of vigilance towards the speaker, and the costs involved in a presuppositional challenge, which are likely to make the addressee less inclined to question them.

However, I will argue later that a closer look at further examples of accommodation leads to the conclusion that von Fintel's criteria are neither sufficient nor necessary to account for accommodation. They are not sufficient because accommodation may be constrained by other variables, such as the ones discussed previously regarding bridging inferences (*i.e.* an optimal balance between processing costs and cognitive effects). In fact, the addressee's prior knowledge is not sufficient to predict in which cases content will be accommodated, or what form it will take in the addressee's cognitive environment.

Besides being insufficient, von Fintel's criteria may not all be necessary. This is the case, for example, of the addressee's confidence towards the speaker, which is not always required to explain situations in which the presupposition will be accommodated. This is the case of certain

experimental set-ups in which participants were warned of errors in series of utterances. This did not prevent participants from accommodating manifestly false contents, such the one recalled below, possibly involving the accommodation of “survivors have been buried”:

(131') If a plane crashes on the border between the US and Mexico, where do they bury the survivors?

(Barton and Sanford 1993, 477)

Finally, apart from questioning the need for the addressee to trust the speaker to accommodate a presupposition, it is also worth asking whether accommodation is necessarily a voluntary and conscious process on the part of the addressee. These distinctions will appear to be fundamental for accounting for manipulative approaches to presupposition accommodation.

5.1.4. Conclusion

The aim of this first part was to present the fundamental concepts of accommodation for a cognitive pragmatic approach. As a preamble, I presented the origin of the term according to Lewis, who raises the question of the processes by which the addressee incorporates a presupposed content that he was unaware of. I emphasized the importance of the turn taken in the 1970s, notably by Karttunen, who pointed out that informative presuppositions are the rule rather than the exception, thus underlining the importance of providing a theory of presupposition accommodation.

However, I argued that the perspectives so far adopted are incompatible with Relevance theory's framework, insofar as they are based on the perspective of the speaker (and not the addressee), and their expectations that the addressee will update the context to satisfy the common ground. Thus, a cognitive pragmatic approach will rather emphasize the addressee's perspective, rejecting the idea of a common

ground in favor of the concept of content made mutually manifest between the speaker and the addressee. Finally, I pointed out that the perspective adopted, namely that of the speaker *vs* the addressee, will have an influence on the questions we ask about accommodation. Whereas speaker-based approaches tend to ask *what* is accommodated and *where*, an addressee-based approach asks *what* is accommodated and *how* does accommodation modify the addressee's cognitive environment.

In a second step, I presented the issue of bridging inferences involved in definite descriptions, which relates to the the question of *what* is accommodated. We saw that accommodation can be conceived narrowly as applying to the concept that is triggered by the presupposition (the existence of the referent, for example), or accommodation can be conceived in a broader sense, accounting for the inferences involved in anaphora resolution. A broader approach seems necessary to account for the perspective of the addressee and his attempt to recover the meaning intended by the speaker. In particular, it is essential when it comes to disambiguating an utterance containing several possible referents.

Furthermore, I highlighted Relevance theory's two fundamental variables weighing in the accommodation of a definite description: on the one hand, it is necessary to consider processing costs, which may vary depending on the salience of the content, notably through semantic or stereotypical proximity. And on the other hand, the cognitive effects also weigh in the balance for the selection of a referent, as it has been shown with regard to the the plausibility of the selected referent (cf. "hating the pasta" presented as a reason to prefer England). Although the founding works of Relevance theory do not present more on accommodation processes, I underlined that the same principles are likely to apply to the accommodation of other presuppositions, both semantic and discursive.

Finally, I introduced the notion of felicity conditions for accommodation. Whereas Stalnaker's early discussions led to a prescriptive approach, von Stechow's approach sets out conditions that lay the foundations for a descriptive approach to accommodation, opening up the possibility of understanding how the addressee processes informative presuppositions. However, I emphasised that von Stechow's criteria are neither necessary nor

sufficient to account for accommodation, particularly in view of the many observations made in manipulative approaches to accommodation, to which we now turn.

5.2. Manipulative uses of presupposition accommodation

5.2.1. *Plausible Deniability*

In the chapter dedicated to the speaker's commitment in implicit contents, I presented the approach of Pinker *et al.* (2009) according to which implicatures would allow for plausible or possible deniability on the part of the speaker (§4.0.3). In Pinker *et al.*'s perspective, implicit communication performs more of a strategic function than a communicative one, on the basis of the trade-off between the costs and effects of each function: whereas implicit communication would be costly and “vulnerable to being misunderstood” (Pinker, Nowak, and Lee 2008, 833), the manipulative function would yield greater benefits, by conveying a content that allows the speaker to deny a manipulative intention whenever it is suspected. In this way, the cancellable nature of implicatures makes sense in that it allows the speaker to plausibly deny the implicature.

Following on from Pinker *et al.*'s (2009) *Logic of Indirect Speech*, Reboul (2011; 2017) presents a similar approach, arguing that implicit communication allows the speaker to deny the intention of having conveyed an information. Reboul's distinction between the cancellation of a communicative *intention* and the cancellation of the *content* makes it possible to include presuppositions as allowing for plausible deniability. As mentioned above, the approach proposed by Pinker *et al.* includes only implicatures, excluding presuppositions because their cancellation generates a logical inconsistency (§1.2.1). Reboul's approach therefore includes a specific twist, consisting in emphasizing the possibility to negotiate the speaker's communicative intention rather than the content itself. In this way, the speaker can presuppose a manipulative content, while keeping open the possibility of denying the true reasons why he made this

content mutually manifest. To illustrate this phenomenon, Reboul comments on the following example:

(142) A: I have decided to give the job [...] to John.

B: That's an excellent choice, especially now that he has stopped drinking.

Presupposition: John drank [or was an alcoholic].

Reboul (2011, 11)

In the above, speaker B applied for the same job as John. However, it turns out that it was John who got the job. In this context, speaker B pretends to congratulate his colleague on getting the job, while conveying the information that John may not be the most reliable employee due to his recent and “obvious” problems with alcohol. Thus, although the content is linguistically triggered (by the change-of-state verb “to stop”), the information that John drank is not properly verbalised and is also presented as background and mutually shared information. According to Reboul, although the speaker cannot deny having communicated that John used to drink, he can claim to have imagined that this content was already known by his interlocutor. He can also deny having intended to bring this information to his detriment, claiming that he thought it was good to help John who, *obviously*, was going through a difficult time. Thus, according to Reboul, B's response is manipulative, as he presents information that is prejudicial to John, while allowing him to claim to be happy for him.

Interestingly, Stalnaker also mentions manipulative uses of presuppositions, with the difference that they occur in contexts where the speaker is fully aware of the falsity of the content presupposed by the addressee and would choose to manipulate the addressee by continuing to presuppose false information, such as explained below:

[...] in some cases, presuppositions may be things we are unsure about, or even propositions believed or known to be untrue. This may happen in cases of deception: the speaker presupposes things

that his audience believes but that he knows to be false in order to get them to believe further false things. (Stalnaker 1970, 281)

A good example of this kind of manipulation can be found in Shakespeare's *Othello*, where Iago tries to make Othello believe that his wife, Desdemona, is cheating on him. More precisely, Iago is out to create doubt in Othello's mind, while portraying himself as wanting nothing but the best for him. Having succeeded in instilling doubt in Othello's mind, Iago perpetuates the presupposition that Desdemona might cheat on him sooner or later, which is why he can only *hope* that Othello will think that this is not the case, for lack of being able to *know* that it is not the case:

(143) Othello: I do not think but Desdemona's honest.

Iago: Long live she so. And long live you to **think** so.

(Shakespeare, *Othello*, Act 3, Scene 3, my emphasis)

As we can see above, Iago draws a contrast between his wish for Desdemona to remain honest and the one for Othello to continue *believing* her to be honest. In this way, Iago seeks to create doubt in Othello's mind, insofar as Desdemona's *honesty* cannot be presupposed. It can actually be argued that her *unfaithfulness* is presupposed, by the weak degree of commitment of the evidential marker 'think' which can arguably be seen as counter-factive verb⁵² (cf. §1.3.3). In this way, playing on presupposition effects, Iago manipulates his addressee by giving himself the opportunity to deny having had any bad intentions towards his addressee.

Based on the above two examples, presuppositions appear to be a handy tool for manipulation, insofar as they allow the speaker to convey information to pursue his personal goals, while being able to deny having had a manipulative intention when the speaker is challenged. In the next section, I highlight the limits of such an approach, by recalling some concepts from Relevance theory and drawing on some empirical data relating to the speaker's commitment in presuppositions.

⁵² I am grateful to Elly Ifantidou for drawing my attention to this point.

5.2.2. *Plausible Deniability vs Speaker-commitment*

The two examples of manipulation presented in the previous section suggest both that presuppositions can be effective in *establishing a belief* in the addressee and that the speaker can *withdraw his responsibility* for having communicated this content. For the sake of simplicity, let us assume that the presupposition is always fully understood by the addressee in a manipulative context. In such a setting, it would still be necessary to assess the extent to which the communicative intention is deniable by the speaker. This raises the question, already announced by Ducrot (1984), of the perceived commitment of the speaker to the presupposed content (§1.3.5). As we have seen, Ducrot's answer to this question remains ambiguous, insofar as he claims that the speaker will be held responsible for having communicated an erroneous presupposition, while he also argues that presuppositions are presented as belonging to the community to which the speaker belongs.

The questions related to the speaker's commitment were directly addressed in the framework of Relevance theory by de Saussure and Oswald (2009). In this paper, they argue that the attribution of commitments to the speaker goes hand in hand with the processes of meaning attribution. In their perspective, an implicature will not necessarily be plausibly deniable if it is relevant in context. By the same token, a strong implicature will be harder to cancel than a weak implicature. In their perspective, an attempt to cancel a strong implicature – *i.e.*, further down in the conversation instead of blocking it straight away – will lead the addressee to consider the speaker to be acting in bad faith.

In the light of these considerations, de Saussure (2018) argues that a distinction should be made between the “cancellation” of an implicature, which occurs right after the content is communicated (anticipating a possible misunderstanding), and the “retraction” or “denial” of an implicature, which occurs later (de Saussure 2018, 179). While the cancellation of an implicature is always logically possible, this is not always the case for a denial of an implicature, which depends on the degree of relevance of the content in a given context.

As far as presuppositions are concerned, it is necessary to assess whether they are relevant in a given context, in line with von Stechow's felicity conditions for accommodating a presupposition (§5.1.3). In Müller (2024), I argue that Reboul's example would not allow for plausible deniability of the manipulative intention because the content – *i.e.*, John's alcoholism – is too relevant in the context of granting a job. Indeed, even if the employer was perfectly aware of John's alcoholism, the attempted manipulation seems difficult to deny insofar as the speaker activates information in the employer's cognitive environment that is clearly prejudicial to John. The same applies if the presupposition was not mutually shared, where the manipulative intention is likely to be revealed in the process of challenging the presupposition. In the process of negotiating the conversational background, discursive presuppositions are also likely to become more apparent. Yet, in this example, discursive presuppositions raise serious problems when confronted with the encyclopedic knowledge one can reasonably attribute to the addressee, as illustrated below:

(144)B: It's an excellent choice, especially now that he's stopped drinking.

(145)? Stopping excessive drinking is an excellent asset for being nominated for a job. (discursive presupposition)

(146)? Someone who used to be an alcoholic is in no way likely to fall back into alcoholism. (discursive presupposition)

(Müller 2024)

Propositions (145) - (146) would correspond to speaker B's convictions which would justify sincerely uttering (144). However, the discursive presuppositions triggered by (144) lead to absurd claims, where being a former alcoholic is a genuine asset for being nominated for a job position (145), and where a former alcoholic presents no risk of relapsing into addiction (146). These discursive presuppositions are so evidently

incompatible with stereotypical representations that it seems necessary to interpret them as being ironic. Thus, one could paraphrase (144) in the following way:

(147) People who think it's a good decision to hire a former alcoholic are foolish.

(Müller 2024)

Utterance (147) is a straw man fallacy, insofar as the speaker attributes to his employer having chosen John according to the criterion of his alcoholic past. This criterion is obviously false, and attributing it to his employer can be seen as an attempt to delegitimize his choice... In this example, speaker B not only runs the risk of being accused of conveying information prejudicial to John, but he can also be accused of attributing an implausible and fallacious content to his employer.

Based on the above, the semantic presuppositions and the discursive presuppositions do not seem to be plausibly deniable. Thus, it is worth pointing out an essential feature of discursive presuppositions, in the light of de Saussure and Oswald (2009): even if discursive presuppositions can be characterized as weak implicatures, their contribution to the relevance of an utterance confers on them a special status, which makes them difficult to deny. However, further research on this subject, specifically on an experimental level, would be necessary to confirm this hypothesis.

Experimental research on speaker commitment in verbal communication is still in its infancy. One study carried out by Mazzarella et al. (2018) presents initial results in favour of the idea that semantic presuppositions are committing for the speaker, to the extent that they involve a punishment and reputational costs when the presupposition conveys false information. These results contrast with those obtained for implicatures, for which the transmission of false information is significantly less likely to involve consequences. Their experimental set-up presented a backup story setting the conversational context, followed by two testimonies providing false

information. The pairs of false content were presented across four different conditions, namely “confident speaker *vs* unconfident speaker”; “presupposing speaker *vs* saying speaker”; “saying speaker *vs* implicating speaker”; “implicating speaker *vs* presupposing” (Mazzarella et al. 2018, 20). The Table 11 below illustrates the types of stimuli presented to the participants:

Table 11. Mazzarella et al. (2018) experiment assessing the attribution of speaker-commitment in verbal communication.

Background story:

*You are the new supervisor of a team of creative designers. After having been away for a one-week business trip, you are back at the office. This morning you have to hold a presentation in front of an important costumer. When you arrive at the office you notice that the conference room is not ready yet. So, you send an email to your team members and ask **them why the projector has not been set up yet.***

Two false testimonies are provided:

Joe: Louis gave a presentation at the central office yesterday evening.
[implicating speaker]

Peter: It was Louis who removed the projector. It is at the central office.
[presupposing speaker]

(Mazzarella et al. 2018, 19)

Mazzarella et al.'s (2018) results suggest that presuppositions and assertions generate the same level of punishment and loss of trust. In other words, presuppositions appear to commit the speaker as much as the asserted content. However, another study conducted by Bonalumi *et al.* (2020), in a comparable experimental setting, suggests another picture,

where the speaker's commitment aligns with principles of relevance, as it is argued in de Saussure and Oswald (2009). In their own words, "breaking a commitment when the hearer relies on the promise has reputational consequences for the communicator regardless of whether it is explicitly said or implicitly meant, but not otherwise" (Bonalumi et al. 2020, 382–83). Hence, contrary to Reboul's theory, presuppositions are not always plausibly deniable, even if it consists in trying to deny a communicative intention.

In more complex examples, such as the one from *Othello*, it can be more challenging to identify the speaker's exact intention in conveying a presupposition. In the utterance recalled below, Desdemona's infidelity is inferred on the basis of the counter-factive verb "to think", which is seen as a semantic presupposition trigger (cf. above). One could also argue that some discursive presuppositions are involved, triggered by the presumption of relevance of the utterance. On the grounds that Iago cannot assert a more desirable alternative, namely "And long live you to know so", one can presume that Iago has reasons to believe that this is the best he can hope for, knowing that Desdemona is or may not be faithful.

Interestingly, the play capitalizes on different perspectives which can be adopted, namely that of Othello and that of the reader, as illustrated below. Gradually, Othello will come to believe that he has come by himself to the conclusion that Desdemona is unfaithful:

(143') Othello: I do not think but Desdemona's honest.

Iago: Long live she so. And long live you to **think** so.

Discursive presupposition (from Othello's perspective):
Iago wishes me to continue thinking that Desdemona is faithful, so that I may feel peaceful.

Discursive presupposition (from the reader's perspective):
There are reasons to believe that Desdemona is not faithful, which is why Iago cannot say with conviction that she is honest.

At this point, we still need to establish the extent to which the discursive presuppositions are plausibly deniable. As we saw earlier, with the example given by Reboul, discursive presupposition can involve a dimension of social threat (with the performance of a straw man fallacy). In such case, the discursive presupposition would be difficult for the speaker to deny. However, the example from Othello appears to be more complex in the assessment the speaker’s commitment, as attested by the two possible readings (cf. Othello’s vs the reader’s perspective), suggesting that they are easier to deny. Insofar as discursive presuppositions correspond formally to weak implicatures, they are less committing for the speaker. But, again, the deniability of discursive presupposition still needs to be tested experimentally, in a similar way to what was done in Mazzarella et al. (2018).

To conclude, the deniability of semantic presuppositions should be distinguished from the one of discursive presuppositions. While semantic presuppositions are impossible to deny as contents, they are also difficult to deny as communicative intentions. As far as discursive presuppositions are concerned, they are in any case cancellable by virtue of their formal properties. However, the deniability of a discursive presupposition as a communicative intention will depend on the perceived relevance of the content in a specific context. For the sake of clarity, Table 12 below summarizes the position taken on speaker commitment to semantic and discursive presuppositions.

Table 12. Degree of speaker commitment in semantic and discursive presuppositions.

	Commitment in the content	Commitment in the communicative intention
Semantic presuppositions	+	+

Discursive presuppositions	-	+
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The “+” symbol means that the speaker is committed to the communicative content or intention, meaning that it is not possible to deny the communicative content or the intention of having conveyed this content without suffering social consequences. The symbol “-” means that the speaker is not committed to the communicative content or to the intention of conveying it, allowing the speaker to deny either of them. Discursive presuppositions do not commit the speaker to a specific “-” content, but instead to all the activated meanings that contribute to the presumption of relevance of the verbal utterance “+”.

Thus, as can be seen above, semantic presuppositions are not plausibly deniable, contrary to what is proposed by Reboul (2011 ;2017), whether it is an attempt to deny the content or whether it is an attempt to deny having intended to communicate this content. We have seen that from a theoretical point of view, this hypothesis is not plausible by virtue of the formal characteristic of such content, where the cancellation would lead to an inconsistency. Furthermore, we have seen that the first studies in cognitive pragmatics, notably that of Mazzarella et al. (2018), show that the attempt to cancel a communicative intention via presuppositions has consequences for the speaker.

There remains the question of discursive presuppositions, which have not yet been investigated experimentally in the same way as semantic presuppositions. For the time being, it can be argued, from a theoretical point of view, that discursive presuppositions are relatively less committing than semantic presuppositions, insofar as they cannot be reduced to a single proposition. This leaves room for the speaker to deny a specific content attributed to him. However, insofar as the relevance of the utterance rests on a set of discursive presuppositions, the speaker cannot detach the verbal utterance from them, otherwise his utterance would not be relevant. In this sense, I would argue that presuppositions are committing, at least to some extent, for the speaker.

5.2.3. Accommodation as a cognitive bias

This section is devoted to approaches according to which presuppositions make it possible to manipulate audiences because they bias information processing. Insofar as this question concerns how presuppositions may unconsciously induce beliefs in the addressee, it precedes any attempt made by the speaker to deny a communicative intention, as discussed in the previous section. As we have seen, plausible deniability approaches take it for granted that presuppositions will be consciously processed by the addressee, whereas "presupposition bias" approaches postulate that the accommodation of presuppositions is not always conscious.

Approaching accommodation as a cognitive bias was initially proposed by de Saussure (2013). While following the fundamental concepts derived from Relevance theory, he argues that presupposition accommodation can be seen as a cognitive bias, serving as a tool for the manufacturing of consent⁵³. He introduces the concept of "discursive presuppositions" as a pragmatic background content, sharing with semantic presuppositions the property of being presented as given (*cf.* Chapter 2). In the excerpt below, he argues that presuppositional biases consist in forcing the acceptance of a controversial information, through the process of accommodation:

[A presuppositional bias] favours successful manufacture of consent when unjustified accommodation of presupposition occurs, *i.e.* when the incorporation of new information is achieved by means normally dedicated to process given information. We suggest that the notion of presupposition accommodation can be extended to elements in the background which are not triggered linguistically and which emerge only as to provide basic motivations to ensure the relevance of the utterance. (de Saussure 2013, 178)

⁵³ See also Allott's (2005) approach to the conceptual modulations exploited in political contexts for the manufacturing of consent.

De Saussure returns to the question of the felicity conditions of presupposition accommodation, as proposed by von Stechow (2000), putting forward two conditions to characterize the process as being inappropriate:

- 1) An inappropriate accommodation « contradicts an assumption strongly held by the Hearer” (de Saussure 2013, 183).
- 2) When the speaker predicts that the presupposed content will be relevant to the addressee in the current context, the accommodation will be inappropriate. (de Saussure 2013, 183).

It should be reminded that questions related to the “appropriateness” of accommodation is likely to take us outside the framework defined by Relevance theory, insofar as it seeks to account for the processes by which the addressee recovers the speaker's intended meaning, independently of what is socially appropriate. However, the notion of appropriateness can eventually be reconciled with a cognitive pragmatic approach, as long as we bring it closer to what the addressee will perceive as pragmatically plausible or acceptable in terms of the speaker's commitments. Thus, the criteria of appropriateness may be of interest in a context of the speaker's attempt to deny a content, where the addressee will characterize the speaker's approach as being one of bad faith. Let us note that the conditions governing the attribution of the speaker's commitment to presupposed contents were dealt with in the previous question.

De Saussure also argues that the accommodation of a presupposition, whether semantic or discursive, escapes a controlled processing and is in some cases unconscious. In particular, he refers to the shallow processing involved in the adjustment of concepts which would explain, for example, errors occurring at the lexical level in the accommodation of false content, as in the following examples, recalled below⁵⁴ :

(102”) How many animals of each kind did *Moses* take on the Ark?

⁵⁴ These examples were first discussed in the chapter dealing with presuppositions which by-pass the listener's epistemic vigilance (§4.1.3).

Presupposition: *Moses took animals on the Ark.*

(131”) If a plane crashes on the border between the US and Mexico, where do they bury the survivors?

Presupposition: *People bury survivors.*

For de Saussure, the two examples above involve the broadening of a concept⁵⁵, where “Moses” is understood as a “biblical figure”, allowing the inclusion of “Noah”, which turns out to be the correct lexical item in the above utterance. With regard to example (131”), de Saussure argues that the concept “survivor” would be interpreted in terms of “human beings”, its hypernym, allowing the inclusion of the concept “victim”. In both cases, the broadening of the lexical item would allow the expectations of relevance to be satisfied (de Saussure 2013, 184). Similar considerations are discussed in Allott and Rubio Fernández (2002), who explain in greater detail how the addressee constructs his expectations of relevance in relation to the question asked. According to them, the experimental setting guides the addressee towards fulfilling the task of answering the question raised. The addressee will process the information in a superficial manner, following the order of accessibility:

Due to the expectation that relevance can be attained – as it were – cheaply by the subject's providing an answer to the question asked, then the property *is alive*, not the most accessible attribute of SURVIVOR in the context, need not be accessed at all. (Allott and Rubio Fernandez 2002, 99–100)

De Saussure also discusses the notable example of the minaret vote in Switzerland, which would have involved accommodating the discursive presuppositions that minarets are dangerous or that there is a significant number of minarets in Switzerland or planned to be built. The accommodation of these contents would be reflected by acceptance of this ballot item as being appropriate.

⁵⁵ More is said about concept broadening in Section 3.1.3.

However, at this stage, it is not clear how the accommodation of the presupposed content would be the same for semantic contents (as in (102') - (131'')) and for the discursive presuppositions in the example about minarets. In the former cases, the addressee was genuinely blind to the errors encoded by the sentences, whereas in the vote on minarets, it seems plausible that the addressee had formed a certain belief about the dangerousness of minarets. Thus, it seems necessary to distinguish between different types of accommodation in terms of their epistemic effects.

In a similar vein, Lombardi Vallauri and Masia (2018) argue that asserted and presupposed content take different processing routes. In their perspective, the asserted (or focused) content of an utterance goes through "controlled processing", while presuppositions require the listener to go through "automatic processing". Faced with an advertising statement such as the one shown below, the asserted content, "It's time to buy an Audi", would be handled by controlled processing, while the presupposed content about the customer's resulting loyalty ("Buying an Audi implies buying other Audis") would be handled automatically:

(148) It's time for your first Audi.

Presupposition: Buying an Audi entails buying other Audis.

(Lombardi Vallauri and Masia 2018, 350–51)

Thus, in this other approach, it is assumed that presupposition accommodation is a process distinct from that of asserted contents. Within the framework of Relevance theory, this would mean that the assumptions made about the speaker's communicative intention would be processed by the relevance-guided comprehension heuristic, while presupposed contents would be processed by another heuristic. I will argue later that such an approach is unconvincing, since the relevance-guided comprehension heuristic alone can account for both processes.

At this stage, the question is whether presupposition accommodation can be considered a cognitive bias in its own right, and whether this bias is systematically correlated with epistemic effects, *i.e.*, the integration of a

new belief in the addressee's cognitive environment. To answer this question, I propose in Chapter 6 to distinguish different types of accommodation depending on the quality of their processing (conscious vs. unconscious) and on whether the addressee actually forms a new belief (i.e., epistemic effects).

5.2.4. Limitations to the concept of presuppositional bias

In order to evaluate the hypothesis that presupposition accommodation constitutes a cognitive bias in its own right, it is necessary to clarify the assumptions on which it is based. Drawing on what we saw in the previous section, one can identify the following assumptions, which are common to the various approaches to "presuppositional bias":

1. Accommodation is an automatic process.
2. Accommodation is an unconscious process.
3. Accommodation involves epistemic effects.

The above assumptions are essential to an approach in which the accommodation of presuppositions constitutes a cognitive bias. Furthermore, manipulative approaches to accommodation tacitly assume that this process is distinct from the heuristics dedicated to comprehension (cf. Table 6, §3.1.3). Although each of these assumptions may, in isolation, apply to specific cases of presupposition accommodation, they are not always applicable as a whole to each situation. Furthermore, it is also necessary to assess whether the process of accommodation can truly be conceived as distinct from the relevance-guided comprehension heuristic.

The first postulate (i.e., "accommodation is an automatic process") is in line with the claims made about the processes involved in verbal comprehension. These processes are triggered automatically in order to recover the meaning intended by the speaker. However, the automatic nature of the accommodation is not specific to this process, insofar as it

applies to all meaning attribution processes. The problem here consists in characterizing the automatic nature of the processing of informative presuppositions, as a process distinct from the relevance-guided comprehension heuristic. The automatic processing of accommodation therefore needs to be demonstrated as a process *distinct from* the relevance-guided comprehension heuristic, which seems rather implausible by virtue of the cognitive costs it would involve.

As for the second postulate (*i.e.*, "accommodation is an unconscious process"), it allows a distinction between the automatic and spontaneous nature of accommodation and the awareness of the result of accommodation, namely the update of the context or the epistemic effects of accommodation. It appears that most manipulative occurrences exploiting presuppositions work precisely because accommodation is an unconscious process. However, the generalisation of this postulate would not allow for conversational situations, such as those discussed by Stalnaker (1998) and von Stechow (2000), where the addressee is surprised by a presupposed information, but nevertheless consciously decides to accept and integrate this content into his background knowledge (*i.e.*, the speaker has a cat). This means that the second postulate can only be partially accepted.

With regard to the third postulate (*i.e.*, "accommodation implies epistemic effects"), some examples show that accommodation does not involve any new beliefs, as is the case with examples containing unquestionably false presuppositions (*i.e.*, the *Moses Illusion*, or the *Plane Crash Illusion*). The main argument in favor of the idea that no belief has changed is the fact that the participants could not have plausibly come to believe that "people bury survivors" as it would be the case in the *Plane Crash Illusion*. Furthermore, in some experimental settings, participants were led to realize their mistake after the experiment.

This raises the question of whether the addressee has fully accommodated the content, in the sense of having formed a new belief on this basis. Clearly, as de Saussure (2013) points out, the lexical content is

processed at least on a superficial level. However, it remains to be determined whether this should truly be characterized as an "accommodation" of a presupposition, and not simply as a lexical modulation participating in a cognitive illusion. Finally, insofar as these latter cases do not necessarily involve new beliefs, it is worth asking whether they can really be characterised as a form of manipulation.

Overall, the extent to which presupposition accommodation constitutes a process distinct from relevance-guided comprehension heuristic needs to be assessed. In Müller (2018), I argued that one could assume the existence of a heuristic dedicated to the processing of background information, going in the direction of the above-mentioned works on presupposition biases. More specifically, I proposed to conceive presupposition accommodation as a cognitive heuristic which would borrow energy-saving paths to process background information, both semantic and discursive presuppositions. The benefit coming from such heuristic would be that it allows the speaker to save cognitive effort, with the risk of making errors.

However, in this paper I neglected the extent to which such an assumption would be globally costly for a cognitive system. Indeed, this would imply the cognitive management of two distinct processes, which appears to be unjustified by the fact that the relevance-guided comprehension heuristic is sufficient to account for accommodation. Thus, the hypothesis of two distinct processes seems implausible, insofar as Relevance theory is already equipped to account for the superficial processing of relatively less salient contents. As we saw in Chapter 3, the relevance-guided heuristic processes information in order of accessibility, and stops as soon as the content is relevant (§3.1.3). In some cases, presupposed contents will turn out to be relevant in their own right, either when acquisitional factors justify it, or because the addressee's epistemic vigilance will encourage him to spend more effort in checking information.

Regarding epistemic vigilance mechanisms, it could be objected that the Moses Illusion proves to be particularly resistant to the addressee's vigilance, as shown by Erickson and Matson (1981). Despite the warning

that the stimuli contained errors, participants were significantly more inclined to overlook an error when it was presupposed rather than when it was asserted. However, this can be explained by the fact that epistemic vigilance is an *optimal* process, aimed at extracting sufficiently useful information for the addressee. Importantly, an excessive level of epistemic vigilance would lead the addressee to question too many contents, which would interfere with the processes dedicated to comprehension. Thus, the process of epistemic vigilance is fundamentally optimal, with the consequence that the addressee will not necessarily invest the effort required for a complete reconsideration of the information provided, as explained by Sperber et al. (2010) below:

To keep processing time and costs within manageable limits, only a very small subset of that encyclopaedia, closely related to the new piece of information, can be brought to bear on its assessment. Indeed, the systematic activation of even a limited subset of background information solely for the purpose of assessing the believability of communicated content would still be quite costly in processing terms. We will argue that such ad hoc activation is unnecessary. (Sperber et al. 2010, 374)

Thus, the relevance-guided comprehension heuristic is sufficient to account for the shallow processing of presupposed content, even in the presence of the listener's epistemic vigilance. Consequently, the hypothesis of a comprehension heuristic dedicated to background information does not appear to be plausible. Furthermore, the assumption that accommodation of presuppositions constitutes a cognitive bias requires certain precautions, particularly when it comes to examples for which no new belief was plausibly induced in the addressee.

5.2.5. Conclusion

This chapter was dedicated to relevance-theoretic approaches to presupposition accommodation. I first presented the fundamental concepts

derived from Lewis and Stalnaker, emphasizing that Lewis's approach is the best suited to account for the process under study, *i.e.*, the way in which the addressee operates an epistemic change in order to accommodate a presupposition. However, I pointed out that approaches following Lewis tacitly adopt the speaker's perspective, presenting the accommodation of presuppositions as an expectation that the speaker would have towards the addressee to update the context. Thus, from this angle, a common ground is always expected to be shared between the speaker and the addressee. As I have shown in previous chapters, such a perspective escapes the framework set by Relevance theory, insofar as it focuses on the addressee's perspective, arguing that the addressee can never truly share a common ground with the speaker. Indeed, he only has the possibility of constructing interpretative hypotheses regarding a stimulus made mutually manifest.

Secondly, I presented the way in which Relevance theory accounts for bridging inferences, *i.e.*, when a definite description requires an inference to assign a referent (*cf.* “I prefer England to Italy. I hate **the pasta** there”, Wilson and Matsui 2013). We have seen that “processing costs” are just as important as “cognitive effects” for deciding which referent to assign. Thus, Relevance theory argues that the accommodation of a definite description depends on the optimal relationship between processing costs and cognitive effects. I pointed out that the same principles are likely to apply for the accommodation of other presupposition triggers when it comes to disambiguating the referent.

I then presented the felicity conditions approach to accommodation, as proposed by Stalnaker and von Stechow. I argued that Stalnaker's approach has a strong prescriptive dimension, falling outside the defined framework. In contrast, von Stechow felicity conditions lay the first foundations for a description of the cognitive mechanisms underlying the accommodation of presuppositions.

Finally, I presented the way in which the approaches stemming from Relevance theory describe presuppositions as a manipulative tool. Even though these approaches claim to be based on Relevance theory, they depart from it on certain points that became clearer as the argument

progressed. The first approach considered, by Reboul, argues that presuppositions allow for plausible deniability on the part of the speaker in manipulative contexts. I pointed out, however, that the deniability of a presupposition, in terms of both content and communicative intention, remains implausible in the light of experimental work by Mazzarella et al. (2018) and Bonalumi *et al.* (2020). However, I argued that discursive presuppositions seem to offer more possibilities for deniability, although this needs further experimental investigations.

In a second step, I presented approaches arguing that accommodating presuppositions constitute a bias, making it possible to force the acceptance of false or questionable contents. I argued that these approaches are essentially based on three postulates, namely that accommodation is automatic, unconscious and involves epistemic effects. These three postulates were put into perspective: first, I emphasised that the automatic dimension is not specific to accommodation but applies to verbal comprehension in general; second, I emphasised that the accommodation of contents is not always carried out unconsciously, as discussed by Stalnaker (1998) and von Fintel (2000); third, I emphasised that some cognitive illusions, such as the Moses Illusion, are unlikely to involve cognitive effects.

To conclude, I emphasized that accommodation cannot plausibly be regarded as a process distinct from those responsible for verbal comprehension, insofar as the relevance-guided comprehension heuristic can already explain the shallow processing of relatively less salient contents.

Chapter 6. Epistemic effects of presupposition accommodation

6.0. Introduction

The aim of this final section is to account for the nature of the accommodation process, addressing the question of when it begins (§6.1.1) and when it ends (§6.1.2), and accounting for the different types of epistemic effects involved. This will lead to the elaboration of a typology for presupposition accommodation (§6.2). As I suggested earlier, it seems that accommodation can involve both very precise and definite contents, conveyed by the presupposition trigger, but there are also many instances of accommodation involving pragmatic inferences, from bridging inferences to the recovery of discursive presuppositions. The question will then be to determine whether accommodation is to be conceived as applying strictly to the presupposition trigger, or whether it can presumably be conceived as a broader process, responsible for the recovery of background pragmatic contents. In addition, when considering manipulative theories of presupposition accommodation, this process appears to be responsible for the creation of new beliefs in an unconscious way, whereas in other cases, it seems implausible that the listener forms a new belief based on a false presupposition. Thus, a distinction should be made between the different epistemic effects induced by accommodation. To meet this need, I propose a classification of different types of accommodation depending on their epistemic effects. This typology offers new research perspectives on the accommodation of presuppositions, in particular with regard to the potential variables responsible for generating the identified epistemic effects.

6.1. What is accommodated?

6.1.1. *Where does accommodation start?*

Presupposition accommodation applies, at its most basic level, to the presupposition trigger. Thus, when I utter (149), the presupposition "Moses took something on the Ark" should theoretically be incorporated into the addressee's background knowledge provided he does not reject the information:

- (149) It is two animals of each kind that Moses took on the Ark.
Presupposition: Moses took something on the Ark.

According to manipulative theories of presupposition accommodation, the listener would accommodate a false presupposition, meaning that he accepts the proposition that Moses took something on the Ark. However, in their experiment setting, Erickson and Mattson showed that as soon as the participants were confronted to the error, they claimed that they had not noticed it (Erickson and Mattson 1981, 541). This raises the question of whether the content is truly accommodated here, in the sense that the addressee would incorporate the presupposed content into his prior beliefs. Importantly, the addressee manages to spot the error when the lexical entry departs from biblical lexical scope, as illustrated below:

- (150) It is two animals of each kind that Kennedy took on the Ark.
Presupposition: Kennedy took something on the Ark.

Due to semantic proximity effects, participants overwhelmingly rejected the statement (150), identifying the error much more easily (Bredart and Modolo 1988). Such a phenomenon suggests that the addressee processes the lexicon in a relatively superficial way, as suggested in the relevance-theoretic framework, where Moses is interpreted broadly, as simply referring to a biblical character (cf. L. de Saussure 2013; Allott and Rubio

Fernandez 2002; Allott 2005). According to this broader understanding, the concept encompasses, through hypernymy effects, both Moses, but also Noah, which happens to be the correct answer. This procedure fails with the lexical entry "Kennedy", which is too distant from the relevant domain (*i.e.*, the biblical character), making the error more salient for the addressee.

Thus, the addressee performs a spontaneous *ad hoc* adjustment, potentially making him blind to the error included in the lexical entry. However, it is questionable whether the addressee has truly "accommodated" the presupposition that "Moses took animals into the Ark" (Moses Illusion) or "the survivors were buried" (Plane Crash Illusion). Clearly, both the Moses illusion and the Plane Crash illusion involve accommodation in a weaker sense, which can be formulated as follows:

(149') It is two animals of each kind that **Moses** took on the Ark.

Presupposition: [One of these well-known biblical characters] took something from [the biblical] Ark.

(131'') If a plane crashes on the border between the US and Mexico, where do they bury the **survivors**?

Presupposition: People bury [human beings].

As explained in Section 5.2.3, both the Moses illusion and the Plane Crash illusion involve the creation of an *ad hoc* concept, which consists of a concept broadening, where MOSES* merely refers to a biblical figure⁵⁶ and SURVIVOR* to a human being. This process is a spontaneous function that facilitates information processing, consisting in the selection of a few semantic features relating to a lexical entry. In some cases, the superficial processing of information will be problematic, insofar as it leads to a blindness towards an error. However, it should be stressed that such errors are not unique to presupposition accommodation, as Barton and Sanford (1993) point out below⁵⁷.

⁵⁶ Presumably, additional constraints apply to the Moses illusion. Indeed, the illusion may not work with just any other biblical figure, like "Jesus" for example.

⁵⁷ On the same issue, see also Sanford and Graesser (2006).

Taken together, all the evidence shows that coherence establishment is incomplete: when a satisfactory level of coherence has come from one source, a check on coherence based on other sources may not take place. (Barton and Sanford 1993, 486)

In the light of these examples, it is reasonable to argue that the addressee adjusts much vaguer concepts than what has so far been imagined in manipulative theories, in order to accept an utterance as relevant. This is reflected in the presidential campaign "Make America Great Again" – used by Reagan, Clinton and Donald Trump – where the population was asked about their representation of what the presupposition meant. The responses were very diverse and some even included contradictory propositions:

(151) Context: *A journalist asking people about the meaning of Donald Trump's campaign slogan "Make America Great Again"*

Journalist: When was America last great?

Answers:

- a. The turning point was 1913, when we passed the 17th Amendment.
- b. We were probably the strongest during post-WW2.
- c. When it was founded.
- d. It has always been great!

The Daily Show, URL:

<https://www.youtube.com/watch?v=uVQvWwHM5kM>

The answer provided in (151d) is clearly problematic, since it contradicts the presupposition: it cannot be argued that America has lost its greatness if it has always been great. However, we can reconsider the problem in the following way, by first arguing that there is some ambiguity in the term GREAT, which first explains why so many different answers have been

provided. Also, it is also conceivable that the addressee finds the slogan relevant enough to endorse the idea of America's greatness, without really needing to understand what the utterance presupposes. With respect to the contradictory answer provided, the addressee might have agreed with the vague idea that America has lost some (but not all) of its greatness, which would justify, to some extent, both wanting to restore America's greatness and thinking that America has always been great.

In the light of these considerations, presupposition accommodation is sometimes a superficial process, involving a shallow processing of lexical items. In the example of the Moses illusion, the addressee broadens the lexical entry, which allows for the accommodation of a vaguer content such as “biblical figure”, therefore allowing the acceptance of the utterance as relevant. Importantly, in such cases, the addressee does not incorporate a false proposition, e.g. “It was Moses – and not Noah – who took animals into the Ark”. In the light of these considerations, two options are available. Either these processes are not genuine instances of presupposition accommodation, but simply lexical modulations, or they involve a certain type of accommodation with weaker epistemic effects. In either case, it cannot be said that they involve manipulative effects in the sense of leading the addressee to form a new belief in an unconscious way.

6.1.2. Where does accommodation stop?

For Thomason (1990), who elaborates on the considerations presented in (Lewis 1979), accommodation covers a wider range of contents than those strictly triggered by the linguistic marker. In his view, accommodation is a process motivated by the Gricean Cooperative Principle:

The principle behind accommodation, then, is this :

Adjust the conversational record so to eliminate obstacles to the detected plans of your interlocutor.

If the term hadn't already been claimed, this could well have been called the Cooperative Principle. (Thomason 1990, 344)

As a reminder, Grice's Cooperative Principle postulates a rationality in human beings that enables them to recover conventional and conversational implicatures, with the addition of conversational maxims for the latter. Thomason therefore defines the accommodation process as comparable to what Grice proposes for conversational implicatures. For example, the utterance "I regret that I can't help you" and the utterance "Arnold doesn't know that his shoelace is untied" both contain a presupposition triggered by a factive verb, respectively "I can't help you" and "Arnold's shoelace is untied", which also correspond to the communicative intention of the speaker.

For Thomason, accommodation would apply to any update necessary to achieve a conversational goal between the speaker and the addressee. It would in fact be an "underlying cause of implicatures", the result of which takes the form of transformations of presumptions into a propositional form. These propositions correspond either to implicatures – in the commonly understood sense – which he calls "assertional implicature", or they take the form of background information, which he calls "background implicatures" (Thomason 1990, 352). Thomason also emphasises the relevance of presuppositions to a conveyed utterance: "A background implicature [...] may be the most important and newsworthy information that is conveyed by an utterance" (Thomason 1990, 352). Thus, from this perspective, accommodation is a much broader phenomenon than we might think, incorporating both presuppositions and Grice's implicatures. Beaver and Zeevat (2007) also emphasise the extent to which accommodation in the Thomason view is broader than is generally understood:

[...] Thomason's account implies that what is accommodated could stand in a much more nebulous relation to what is conventionally presupposed: we accommodate whatever seems most appropriate to make sense of the speaker's intentions in the light of our joint communicational goals. That is, while what we accommodate must satisfy conventionally signalled presuppositions, it may also incorporate other information. (Beaver and Zeevat 2007, 505)

Such a perspective would be compatible with that of Relevance theory, for which comprehension proceeds step by step, following an order of accessibility and stopping when relevance is reached. Under this reading, accommodation would cover both semantically triggered background contents, sometimes involving a lexical adjustment, and pragmatic background information. Table 3 below illustrates the process of presupposition accommodation, which essentially corresponds to the relevance-guided comprehension heuristic. So defined, accommodation would stop when relevance is achieved:

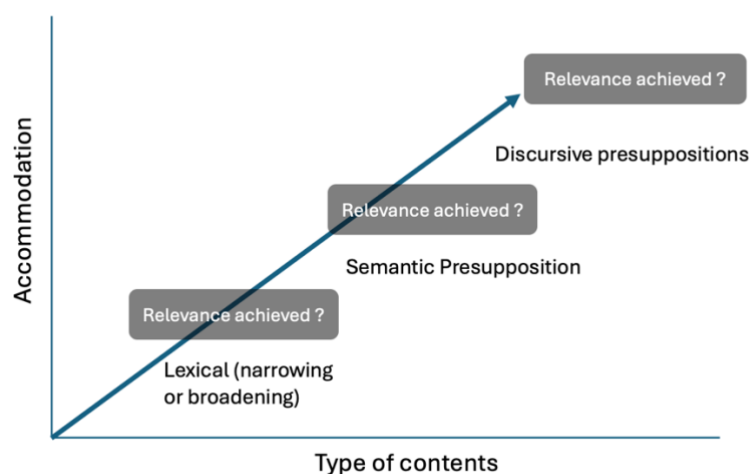


Figure 3. Accommodation, where does it start, where does it end?

I argued earlier that both semantic and discursive presuppositions correspond to preconditions for the acceptance of an utterance. From this point of view, identifying the speaker's intended meaning would include both semantic and discursive presuppositions, depending on the addressee's search for relevance. The example below illustrates the extent to which semantic and discursive presuppositions co-exist and can presumably be accommodated by the addressee:

- (79') Men are as clever as women.
 a. Women are clever. (Semantic presupposition)

- b. Men could be less clever than women. (Discursive presupposition)
- c. There are reasons to believe that men are less clever than women. (Discursive presupposition)

Another example previously discussed (§2.2.4) demonstrates the fine line between presuppositions and implicatures. In utterance (87'), the implicit meanings can either be conveyed as a conversational implicature, or they can be discursively presupposed:

- (87') I took the umbrella.
- a. There is no longer an umbrella at home.
 - b. It is raining/ it might rain outside.

(adapted from Marmaridou 2000, 123)

As we have seen earlier, saying "I took the umbrella" can be intended to communicate that it is going to rain, presupposing that there is no umbrella left at home, just as it can do the opposite, namely communicate that there is no umbrella left at home, presupposing that it is going to rain. From this perspective, it is reasonable to assume that the same process is responsible for recovering meaning, proceeding in order of accessibility and stopping as soon as sufficient cognitive effects have been obtained. Moreover, the addressee is likely to incorporate more or less contents, whether semantic or pragmatic, in a process of accommodation according to his search for relevance.

Thus, by way of conclusion, accommodation would appear to belong to the relevance-guided comprehension heuristic, which would apply to the recovery of semantic and discursive presuppositions. In some cases, a discursive presupposition may be more salient than a semantic presupposition for the addressee. For example, in the utterance (79') "Women are as clever as men", the addressee may find more cognitive effects in the discursive presupposition (*i.e.*, "there are reasons to believe

that women are less clever than men”) than in the semantic presupposition (*i.e.*, “men are clever”). However, contrary to what Thomason proposes, accommodation will not necessarily be in the form of a 'proposition' but may also involve indeterminate meanings, as I argued earlier (§2.1.3)

6.1.3. Conclusion

In this section, I highlighted two questions that arise regarding accommodation, namely when does accommodation start and when does it stop. In my view, accommodation begins when a lexical broadening takes place, enabling the processing of a presupposed content. In this respect, I argued that we need to account for the lexical adjustments of concepts that are involved cognitive illusions. This is all the more important as the addressee does not assimilate just any presupposed information, as shown by Bredart and Modolo’s (1988) experiment which tested the proposition “It is two animals of each kind that Kennedy took on the Ark.”

With regard to the end of the accommodation process, I highlighted Thomason's work, which is of interest for Relevance theory in the way he refers to presuppositions in terms of "background implicatures". In this way, he argues that accommodation incorporates more than the strict content triggered by a linguistic marker, which seems to be a reasonable assumption within a cognitive pragmatic framework. There is no reason to postulate distinct processes for the recovery of semantic and discursive presuppositions. It could even be argued that accommodation is merely a theoretical distinction, accounting for background contents, which in fact corresponds to the relevance-guided comprehension heuristics. Thus, the relevance-guided comprehension heuristic would be referred to in terms of “accommodation” as soon as it processes information that is backgrounded, namely semantic and discursive presuppositions (*cf.* Figure 3, previous section).

However, it should be noted that the epistemic effects linked to accommodation have not yet been elucidated. It cannot be argued, at this stage, that every instance of accommodation involves the incorporation of

a new belief in the addressee. It is precisely to this last problem that I shall turn, in an attempt to establish a typology of accommodation processes, depending not only on the addressee's willingness to incorporate a presupposition, but also on the epistemic effects involved.

6.2. Three types of accommodation

I now suggest a classification of different types of accommodation, according to whether they are conscious *vs* unconscious, as well as whether they involve the integration of a new belief. Note here that the notion of "consciousness" implies that the addressee chooses to accommodate a presupposition of which he was unaware. This differs from cases where the addressee accommodates a presupposition without this being a conscious choice, as can be observed in the case of some cognitive illusions. Furthermore, it should also be emphasized that I refer to epistemic effects only to account for situations in which the addressee incorporates, reinforces or revises a belief, corresponding therefore to the notion of cognitive effects found in Relevance theory.

6.2.1. *Conscious with epistemic effects*

In canonical examples, presupposition accommodation is presented as being a choice on the part of the addressee. The most representative example of such a situation can be found in discussions relating to the felicity conditions of presupposition accommodation, as presented in Stalnaker (1998) and von Stechow (2000). The relevant example is recalled below:

(140') I can't come to the meeting – I have to pick up my cat at the veterinarian. (Stalnaker 1998, 10)

Presupposition: The speaker has a cat.

In this context, the addressee is not aware that the speaker has a cat. As discussed in Section 5.2.1, Stalnaker and von Fintel underline, however, that this information can easily be introduced by the speaker in the form of a presupposition because it has little impact with respect to the matter being discussed. Von Fintel argues that addressee will not choose to challenge the presupposition because it is "irrelevant to [his] concerns and the smoothness of the conversation is important enough to warrant a little leeway" (von Fintel 2000, 11, cf. Table 10).

These explanations are perfectly compatible with the approach advocated by Relevance theory, which stresses the importance of balancing cognitive costs and effects in utterance processing. So, given that "having a cat" is secondary compared to the question of being "absent from the meeting", the presupposition is of little relevance in this context. Challenging a presupposition is a costly conversational move because it requires the interruption of the natural flow of a discussion, as discussed in Section 3.2.3. From this point of view, challenging the presupposition does not seem to be worthwhile, unless it targets the reason given for not attending the meeting, rather than the presupposition itself.

In any case, presupposition accommodation can indeed occur consciously, when the addressee chooses to integrate the presupposition into his beliefs, thus participating in the acceptance of the speaker's utterance.

6.2.2. Unconscious with epistemic effects

In the literature on cognitive illusions, instances of presupposition accommodation involving the creation of new beliefs have widely been documented. In Loftus and Zanni's (1975) experiment, participants were even found to create false memories in relation with a presupposition accommodation. The cognitive illusion is based on the use of a definite description that distorts the participant's memory representation. The sentence used in the experiment is presented below:

(152) Have you seen the broken light [in the video]?

Presupposition: There was a broken light in the video.

(Loftus and Zanni 1975)

This type of effect has been shown to be persistent in other experiments involving memory reconstruction. For example, Loftus and Palmer (1974) were able to show the extent to which the choice of a lexical entry affects the way participants evaluate the speed of a car for which they have seen the same footage. The statements used were the following :

(153) About how fast were the cars going when they *smashed* into each other?

(154) About how fast were the cars going when they *collided/bumped/ contacted/hit* into each other?

(Loftus and Palmer 1974, 585)

In this experiment, participants who saw the utterance containing the strong term "smashed", estimated a significantly greater speed than in the alternative utterances presented in (154). In these experimental settings, the addressee accommodated a presupposition unconsciously while shaping his beliefs on the basis of the presupposed content. Here, the presupposed content effectively distorts the memory reconstruction of an event that the addressee witnessed. This type of presupposition accommodation can thus be described as unconscious, with epistemic effects.

In this case, accommodation is obviously problematic from the point of view of the addressee's epistemic vigilance. It raises the question of whether the lexical choices made can systematically bias the memory representation of an event. The answers to these questions lie at the intersection between neurosciences (which also includes questions relating to affective sciences), and that of language processing. It is only on this last point that Relevance theory can comment.

With regard to such an example, one could argue that the use of strong terms, such as "smashed", carries more cognitive effects than the use of more neutral terms, such as "collided/bumped/ contacted/hit". Thus, these strong terms, which carry more cognitive effects, are likely to constitute salient cues for the addressee, when assessing the car's speed. As for the example with the broken light (152), the presupposition of existence of a salient referent may have guided the participant to believe, in order to satisfy his relevance expectation of the question, that there was indeed a broken light. Such requirements are absent from the other sentences presented, which contained an indefinite description. Thus, Relevance theory would possibly argue that the memory reconstruction was biased by the participant's expectation of relevance. However, although it leads to a memory distortion, the processing "strategy" allows the addressee to make sense of the question presented to them.

6.2.3. *Unconscious without epistemic effects*

The last identifiable category of accommodation concerns those that are unconscious, but without involving the formation of a new belief. As I argued above, this seems to be precisely what is at stake in the Moses Illusion recalled below:

(102'') How Many animals of each kind did Moses take on the Ark.
Presupposition: Moses took animals on the Ark.

Although the addressee does not incorporate a new belief (*i.e.*, the one consisting in making him believe that it was Moses – and not Noah – who took animals from the Ark), this can be characterized as an accommodation in the sense that the speaker broadens the critical lexical item, thereby participating in making him accept an erroneous content. As I showed above, the illusion only works when it meets certain criteria, in particular the one of semantic proximity. For example, the illusion does not work when the utterance includes the noun "Kennedy" instead of "Moses",

because of the obvious departure from the biblical lexical field, which is highly relevant to the treatment of the question relating to the "animals in the Arch".

It is worth noting that such illusions sometimes lead the addressee into elaborations about the false lexical entry, thereby causing them to persist in the error. This is what happens, for example, in the "Friday the 13th illusion", described below (*cf.* de Saussure 2013):

(155) In the year 2000, New Year's Eve will be on Friday the 13th.
Are you worried about this?]

(URL: <https://www.youtube.com/watch?v=E7cgldbjlrA>, *my translation*)

The above question typically implies a broad interpretation of the concept of "Friday the 13th", interpreted as "a day of bad luck", regardless of the actual date, which clearly cannot coincide with December 31st. Faced with this utterance, some participants were asked to assess whether they would be more confident if the New Year occurred on a Thursday the 12th, for example, to which they replied that this was not a problem for them, still not seeing the error. Here, the participants remained in the conceptual domain of the 'unlucky day', thus contributing to the persistence of the error. This example reveals the conceptual adjustment made by the addressee in his search for relevance. However, despite the elaborations presented by the participants, it is unlikely that they began to *believe*, in the strong sense, that 31 December could take place on the 13th of the month. The participant therefore remained at a superficial level of processing of the lexical item, even when elaborating on a possible fear that the New Year might occur on a Thursday the 12th.

These instances of unconscious accommodation are therefore to be distinguished from the previous ones, insofar as they do not involve epistemic effects. It should also be noted that the consideration of this category puts the manipulative theories of accommodation into perspective, insofar as it reveals the fact that accommodation does not

always make it possible to induce a new belief, a *sine qua non* condition for performing a manipulative act. We would therefore be dealing here with a mere form of deception.

6.2.4. *Accommodation and epistemic vigilance*

The accommodation of obviously false presuppositions potentially raises a problem with respect to the view I proposed earlier, namely that semantic and discursive presuppositions are preconditions for the acceptance of an utterance (§4.1.2). Here, I seek to disentangle this problem by accounting for unconscious accommodations, with and without epistemic effects.

First, accommodation without epistemic effects (*cf.* The Moses Illusion) does not really raise any problem, insofar as the addressee does not incorporate a false content into his prior beliefs. In fact, the addressee broadens a concept superficially to save cognitive effort in the search for relevance. It is rather the occurrences of accommodation involving epistemic effects, as attested in the Broken Light Illusion, that are likely to be problematic in the proposed approach.

With respect to accommodation that involves epistemic effects, three points are relevant for the addressee's epistemic vigilance: the first relates to the specificities of the experimental setting; the second relates to the addressee's expectations of relevance, and the third relates to the imperfect nature of the addressee's epistemic vigilance:

- With regard to the specific characteristics of experimental contexts, most of them involve a short viewing of a sequence, with relatively little at stake, and on which the participant has no prior knowledge. Thus, from the point of view of the addressee, it can be argued that his epistemic vigilance is relatively low in such a context, because he cannot compare what he sees with his prior knowledge, and also because of the limited time he has to provide an answer. This favours a low level of critical evaluation. This point has also been made by Allott and Rubio Fernandez

(2002, 100), who underlined that relevance expectations, in such experimental settings, can be cheaply attained “by the subject's providing an answer to the question asked” (cf. §5.2.3).

- On a second level, as highlighted in the previous section, the addressee constructs the best possible interpretive strategies for attributing relevance to an utterance. When confronted with a question encoding a presupposition, it is possibly less costly for the participant to take these contents for granted, using them as cues for the memory reconstruction of an event to which he has only had limited exposure. Thus, I emphasized above that the main point lies in the participant’s ability to attribute relevance to an utterance, at the cost of potentially biasing the memory reconstruction.
- Finally, epistemic vigilance is an optimal process, just like the relevance-guided comprehension heuristic. In this way, it is expected that the listener will make some errors, especially if the content is backgrounded. The imperfect nature of epistemic vigilance is explicitly mentioned in Sperber et al. (2010):

What we are suggesting is that the search for a relevant interpretation, which is part and parcel of the comprehension process, automatically involves the making of inferences which may turn up inconsistencies or incoherencies relevant to epistemic assessment. When such inconsistencies or incoherence occur, they trigger a procedure wholly dedicated to such assessment. **Still, comprehension, the search for relevance, and epistemic assessment are interconnected aspects of a single overall process whose goal is to make the best of communicated information.** (Sperber et al. 2010, 376, *my emphasis*)

Epistemic vigilance is therefore intended to be an optimal process for sorting the reliability of communicated content. This process cannot therefore claim to be perfect without causing an excessive slowdown in the processing of information. In addition, as pointed out earlier (§5.2.3), an

excessive level of epistemic vigilance would interfere with the processes dedicated to verbal comprehension.

To conclude this chapter optimistically, despite the epistemic errors committed in accommodation processes, human beings do not accommodate any type of content. Recent developments in artificial intelligence have shown that machines sometimes perform less well than humans in terms of accommodation. Until a recent fix, the ChatGPT software provided speculative answers to the following question:

(156) How should cow's eggs be collected?

Presupposition: Cows lay eggs.

Faced with a sentence like this, the adult addressee immediately challenges the presupposition. There are therefore some variables that explain why, in some cases, the addressee will be more or less vigilant regarding a presupposition that turns out to be false.

Identifying an error initially depends on the addressee's ability to process the information more or less carefully. Subsequently, other variables weigh in the detection of possible errors, such as semantic proximity or compatibility with stereotypical representations, which weigh in the processing costs of the information. Furthermore, as Wilson and Matsui (2014) point out with regard to bridging inferences, the cognitive effects generated also have an impact on the acceptability of the content. In the Friday the 13th example, the addressee certainly focused on the speaker's communicative intention, namely to ask a question about the addressee's degree of superstition, which was the only relevant element to address.

If we wanted to build a flawless software to deal with a presupposition, we would have to implement the instruction to "fact-check" every presupposed content. However, this would be a very costly instruction to apply – if not impossible due to the risk of infinite regress. Additionally, the process of fact checking discursive presuppositions initially raises the problem of finding out how to instruct the system to identify such contents,

also accounting for contextual variations. Despite these difficulties, the project of enabling a software to be more competent than a human being in verifying presupposed information is realistic, although it entails the risk of losing the ability to prioritize information according to its relative relevance, which is inherent to human cognition.

6.2.5. Conclusion

In this section, I distinguished three different types of accommodation, according to whether it was conscious or unconscious, and according to the epistemic effects generated. These three different categories are illustrated in Table 13 below:

Table 13. Three types of accommodation.

Conscious	Unconscious
With epistemic effects	Without epistemic effect

The most obvious example of accommodation is of course that proposed by Stalnaker, involving conscious accommodation of a presupposition which the addressee was unaware of. As for unconscious accommodations, these are at the origin of manipulative theories about presupposition accommodation. However, when examining more closely the various experiments accounting for cognitive illusions involving accommodation processes, we are not always dealing with instances responsible for the creation of a new belief. Thus, although presuppositions are likely to bias memory reconstruction (*cf.* Broken Light Illusion), this is not the case in other situations, which only involve a superficial modulation of a lexical item (Moses Illusion). I emphasized that these latter cases can still be

considered as an accommodation, insofar as they are based on a conceptual broadening of the lexicon which allows the acceptance of the presupposed content.

Secondly, I asked whether instances of unconscious accommodation, with and without epistemic effects, are problematic from the point of view of the addressee's epistemic vigilance, and more particularly from the perspective that presuppositions are preconditions for acceptance of the utterance. First, I argued that accommodation which does not generate epistemic effects is not a problem, insofar as the addressee does not integrate a false content in order to accept an utterance. On the contrary, the representation in question is coherent due to the lexical adjustment.

Finally, with regard to the accommodation of false content involving epistemic effects, I highlighted three characteristics that make them compatible with the epistemic vigilance hypothesis. The first one comes from the specific conditions of experimental settings, which lead the addressee to process information superficially, with no possibility of confronting the stimuli with eventual background knowledge. The second one is that the participant's interpretative strategies reflect their search for relevance. Within this context, they unconsciously use presuppositions to reconstruct a memory representation. In this way, the participant seeks above all to make sense of the question asked, with the consequence of making epistemic errors. Finally, epistemic vigilance is an optimal process, which makes it inevitable for the addressee to sometimes makes mistakes in the process of attributing relevance to an utterance. In light of these three elements, the unconscious accommodation of "obviously false content" remains compatible the hypothesis that presuppositions contribute to the acceptance of an utterance as opposed to its comprehension.

Chapter 7. General conclusion

Presuppositions in Relevance theory: what has changed?

In Sperber and Wilson's (1987) founding work, presuppositions are conceived as mere entailments, giving the addressee a pragmatic instruction to process them as not relevant with respect to the speaker's communicative intention. According to this definition, presuppositions contribute to the relevance of utterances by saving cognitive effort.

In the light of recent contributions in cognitive pragmatics, Sperber and Wilson's claims about presupposition effects are more than reasonable. It appears that the addressee processes presupposed information by default, fast and superficially. Experimental investigations show that presuppositions are processed as soon as they arise, in line with the hypothesis that such content is semantic (cf. §1.4.1). Moreover, the idea of superficial processing of presuppositions is also convincing in the light of epistemic errors found in the context of psychological research.

However, Relevance theory requires some adaptation/modification in order to account for some new observations and questions that arise, as listed below:

1. Some implicatures (i.e., discursive presuppositions) are processed by the addressee in a similar way to semantic presuppositions.
2. How can we situate semantic and discursive presuppositions within the meaning_{NN} diagram, proposed by Sperber and Wilson (2015)?
3. Does the Epistemic Vigilance hypothesis (Sperber et al. 2010) offer any insights regarding the processing of presuppositional information?

4. Finally, in view of the many predictions made about the acquisition of pragmatic skills in Relevance theory, what could we propose as an acquisitional model within this theory?

My thesis has contributed to rethinking presuppositional effects in the light of the above-mentioned observations and questions. In particular, I assessed the extent to which discursive presuppositions, as proposed by de Saussure (2013) but also discussed by Simons (2005), are indeed comparable to semantic presuppositions. Furthermore, I argued that in an acquisitional context, it is plausible to assume that presuppositional effects are inferences of primary importance for the acquisition of world knowledge.

In addition, I included questions relating to the Epistemic Vigilance hypothesis, which distinguish between comprehension and acceptance of an utterance. This distinction highlights the importance of presuppositions as preconditions for relevance, while remaining background contents. Finally, I argued that presuppositional effects require the addition of a third dimension to Sperber and Wilson's (2015) diagram (cf. proposal below)

Three main claims regarding presupposition effects

In summary, the main claims formulated and defended in this thesis are, as follows:

CLAIM 1: Semantic and discursive presuppositions are processed by the addressee in a similar way:

- Semantic and discursive presuppositions are perceived as belonging to the conversational background. By default, they contribute to relevance by saving processing efforts (as initially proposed in Relevance theory).
- Semantic and discursive presuppositions serve as relevance establishers (as initially proposed in Relevance theory).
- Presuppositions are, in the first stage, "primary inferences", highly relevant for the acquisition of world knowledge. The elementary

property of presuppositions exposes them to being progressively relayed into the background of the addressee's cognitive environment.

- The acquisition of presuppositions depends on the cognitive skills required to identify them.
- Semantic and discursive presuppositions are conveyed by the speaker in a relatively less ostensive way. For this reason, Sperber and Wilson's (2015) diagram requires the addition of a third dimension, namely a continuum of more or less ostensive meanings, to account for presuppositional effects.

CLAIM 2: Semantic and discursive presuppositions do not constitute a cognitive bias.

- Semantic and discursive presuppositions contribute to the acceptance of an utterance, and not to its comprehension *per se*.
- The epistemic errors that are found cannot only be attributed to presupposition effects. Other parameters, such as lexical and stereotypical features will weigh in the processing of the presupposition, balancing cognitive effort and cognitive effects. (in line with Wilson and Matsui 2013).

CLAIM 3: Presupposition accommodation begins with lexical inferences and ends when relevance expectations are met.

- Accommodation is not a process distinct from the relevance-guided comprehension heuristic.
- Accommodation starts with concept broadening and ends with discursive presuppositions, depending on the listener's expectations of relevance .
- Three levels of accommodation can be distinguished: conscious accommodation with the integration of a new belief, and unconscious accommodation with or without the integration of a new belief.

The proposals developed in this thesis raise new questions and call for further experimental and theoretical elaboration; a few of them are listed below:

- The three categories of discursive presuppositions discussed in Chapter 2 need to be examined in greater depth (cf. 1st order – 3rd order discursive presuppositions). First, the extent to which these three categories are exhaustive and genuinely distinct needs to be examined. In addition, questions relating to their possible acquisition need to be considered in greater detail.
- The acquisitional hypothesis of presuppositions as primary inference also requires further consideration. As a first step, a closer look should be taken as to which cognitive skills are involved in the processing of different presupposition triggers, putting forward hypotheses based on what is known about the acquisition of other equivalent pragmatic skills.
- Regarding accommodation, the hypotheses concerning bridging inferences proposed by Wilson and Matsui (2013) require further consideration. A more systematic assessment could be made of the extent to which the processing of presuppositions involves a balance between cognitive costs and effects.
- Experimental evidence could also be provided regarding the cognitive effects of false presuppositions, using contextual variations to make an utterance more acceptable, as in the case of ironic presuppositions (*e.g.*, One day, 1+1 will cease to be equal to 3, discussed in Section 4.2.2).
- The contribution of presuppositions to the acceptance of an utterance rather than to its comprehension also requires further elaboration, especially for discursive presuppositions. Mazzarella et al. (2018) already provide an experimental setup applying to semantic presuppositions, showing that they imply consequences to the speaker in case of

deception. Similar experiments could be conducted on the consequences of obviously false discursive presuppositions.

- Finally, it would be worth assessing the extent to which modulating the addressee's epistemic vigilance makes it possible to increase the critical assessment of semantic and discursive presuppositions. More specifically, it is worth assessing the extent to which greater epistemic vigilance encourages more processing effort to be devoted to the conversational background, or whether the addressee remains significantly inclined to making errors in relation to presupposed contents.

While many issues remain enigmatic, I do hope that this thesis has served to clarify some of them and, most importantly, point to the theoretical interest of studying presuppositions in the context of Relevance theory.

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