Part 2. Scientific information

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From perception to inference. Evidential, argumentative and textual aspects of perception predicates in Italian.

Dalla percezione all’inferenza. Aspetti evidenziali, argomentativi e testuali del lessico della percezione in italiano.
1. Summary

The project examines Italian **perception predicates** that function as **inferential markers**.

Perception predicates are verbs or verbal constructions whose semantic frame includes an experiencer and a percept as explicit or implicit arguments. This category includes verbs such as *vedere*, in which the experiencer occupies the subject role in active sentences, but also verbs such as *sebrare*, in which the percept is the first argument. Perception predicates are not only used to report **direct perception** (e.g. *Sento un rumore* 'I hear a noise'). They may signal that the experiencer has **acquired a certain information through inference**. In the latter case, perceptual data may be explicitly referred to or be implicitly present as stimuli in a more complex perceptual and interpretive process (e.g. *Vedo che è partito* 'I see [something that indicates] that he has left' or *Sembra stanca* 'she seems/looks tired'); they may also be absent altogether (e.g. *Sembra un momento propizio* 'this seems to be a favourable moment'). When the experiencer role is assigned to the speaker in inferential uses, these function as an **evidential strategy**.

This strategy is recurrent in Italian and in other European languages, which lack evidentiality as a grammatical category. In line with existing research on grammaticalization and semantic change, it can be considered broadly as an instance of an unidirectional evolution from sensory to epistemic meanings, in which both categories of meanings may co-exist, resulting in polysemy. The semantic and pragmatic characteristics of this strategy in Italian are not entirely clear, however. Existing research on perception verbs and inference in European languages tends to concentrate on a limited number of highly grammaticalized appearance verbs (e.g. *seem*, *look*, it. *sembra*, *parere* etc.); moreover, the specific complexity of inferential markers, which usually imply both premise-conclusion relations and modal judgements of certainty and/or factuality, is not always accounted for; finally, the research dedicated to lexically based evidential strategies in Italian is rather rare. The project aims at a better understanding of the strategy through to a multi-layered synchronic analysis of the semantic and discursive properties of a wide range of perception predicates. **What makes perception predicates good lexical supports for pragmatised inferential constructions, and which specific functions do these constructions fulfill?**

To capture the specific properties of the perception predicates’ inferential uses, these will be examined at three levels:

a) A first research task will consist in the identification of inferential uses of perception predicates in contemporary Italian and in a description of their relation to perceptual meanings in a **frame-semantic perspective**. The link between perceptual and inferential meanings will be explored, in particular (i) the relation between similarity, analogy and inference in constructions with verbs such as *sembre*, *avere l’aria*, *sapere di* etc.) and (ii) the affinity between the formation of a new distinct percept and the inference and assertion of a new proposition, relevant in predicates such as *emerger*, *diventarechiaro*, *notare* etc.

b) The second research task aims at determining the types of inference perception predicates are used to express. Which kinds of **inferential relations** are encoded? Which differences are there between perception based inferential constructions and inferential constructions rooted in other conceptual domains such as that of possibility and necessity modals, which have been described in the recent literature?

c) The third task aims at exploring possible **text structuring functions** of perception predicate constructions. Discourse functions of utterances containing perception verb constructions will be explored with regard to (i) the management of given and new information and of discourse topics; (ii) perspectivation, subjectivity and the management of points of view (polyphony).

Meanings and discourse functions are expected to vary across sequential contexts and genres. In particular, argumentative contexts are expected to favor inferential readings, whereas the perceptual process can be expected to be foregrounded in descriptive contexts. Therefore, a corpus-based approach has been chosen documenting various text and situation types. Existing reference corpora documenting spoken and written varieties of contemporary Italian (CORIS, C-Oral-Rom, LIP) will be used to gain a quantitative overview over certain formal phenomena. In parallel, a smaller corpus will be used for more detailed qualitative analysis. It will include a subcorpus of the beforementioned **spoken data**. As to written data, a corpus is currently being built which will contain a sociolinguistically varied set of reviews, a descriptive and argumentative text type, as well as **comment articles** in the press and on-line readers’ comments to them, which are preponderantly argumentative text types. In single cases, diachronic investigations will be made using lexicographical resources and historical corpora (TLIO, BIZ).

Besides its descriptive value for Italian, with possible lexicographical applications, the research will hopefully contribute significantly to the on-going debate about the role of the lexicon in the linguistic coding of evidentiality. Thanks to its special focus on argumentation, text types and discourse/sequential structures, it also has the potential to shed new light on the conceptual-functional category itself and on inference as one type of information source.

The project team will consist of the main applicant, the co-applicant (Prof. Andrea Rocci), a doctoral student trained in Italian linguistics, and a student assistant participating in data coding for quantitative analysis. The team will collaborate with prof. Carla Bazzanella, University of Turin, as a senior partner and advisor.
2. Research plan

2.1. State of research in the field

2.1.1. The conceptual category of evidentiality

Since the influential book by Chafe & Nichols (1986), the category of evidentiality has encountered increasing interest among typologists, semanticians and researchers interested in grammaticalization (for overviews cf. De Haan 1999, 2005, Lazard 2001, Aikhenvald 2004, Boye & Harder 2009, Ekberg & Paradis 2009; a relevance theoretical account is presented by Ifantidou 2009; in a broader perspective cf. Wierzbicka 2010 on the term evidence as a cultural keyword). These lines of research are concerned with linguistic means used to indicate which evidence the speaker has for a certain proposition he/she is asserting or, put in different terms, where the asserted information comes from, i.e. which information source the speaker is using.

One of the key theoretical issues discussed in this area of research is the distinction of typologically relevant types of information source (Anderson 1996, Willett 1988, Frawley 1992, Squartini 2001). An often cited general taxonomy of types of evidence is the one proposed by Willett (1988:57), who distinguishes between direct perceptual evidence and indirect evidence, and within the latter category between report/hearsay on one hand and inference on the other. As pointed out repeatedly in the typological literature, languages differ as to the functional importance given to these broad distinctions. Finer distinctions vary even more across languages, especially when the evidential functions of semantically complex lexical means are taken into account (see below).

A further important issue is the relationship between evidentiality and epistemic modality (cf. Bybee et al. 1994, Botne 1997, van der Auwera & Plungian 1998, De Haan 1999, 2005b, Dendale & Tasmowski 2001a, Fitneva 2001, Nuyts 2001, Squartini 2004, Cornillie 2009). The distinction of the two categories is necessary in order to account for certain functional differences within and across languages; but is often blurred in discourse and at the level of language systems, one observes not only functionally specialized forms expressing either evidential or epistemic meanings, but also forms whose function includes both an evidential and an epistemic component. Inspired among others by a recent proposal by De Haan (2005b:380), who claims that “evidentiality asserts the evidence, while epistemic modality evaluates the evidence”, we consider that the two categories correspond to two cognitively and pragmatically different discursive operations, i.e. the assertion or (in most cases) presupposition of certain types of evidence for a proposition vs. the evaluation of the proposition in terms of certainty.

More recently, the debate has focused quite a lot on the modes of coding evidentiality. Historically, linguistic research on evidentiality had started out studying languages such as certain indigenous languages of the Americas, in which this category is fully grammaticalized, forming a grammatical paradigm of obligatory markers. When linguists began to examine the category in English and in other European languages, research was increasingly extended to lexical means such as the English adverbs allegedly or obviously, modal verbs (e.g. Dendale 1994, 1999, Diewald 2000, Rossari et al. 2007, Diewald & Smirnova 2010), perception predicates (see section 2.1.2.) as well as to polyfunctional grammatical means such as the Italian imperfect (Bazzanella 1990), the Romance conditional form (for an overview cf. the contributions in Dendale & Tasmowski 2001b) or the Romance future tense (Berretta 1992, Squartini 2004, 2005). These various linguistic means had traditionally been analyzed as markers of epistemic stance. Their reanalysis, in a synchronic or diachronic perspective, as markers that fulfill not only epistemic, but also (and in some cases primarily) evidential functions has contributed considerably to gain a more accurate picture of these languages’ verbal morphology and adverbal lexicon, and to enrich the set of hypotheses on recurrent paths of grammaticalization and pragmatalization (cf. e.g. Diewald & Smirnova 2010, Diewald 2011). In parallel, evidential functions have been taken into consideration in the rapidly evolving field of research on discourse markers (cf. e.g. Schiffrin 1987, Bazzanella 1995, Fraser...

A particularly influential contribution has been Aikhenvald’s (2004), who distinguishes the grammatical category of evidentiality, i.e. the presence, in certain languages, of full-fledged grammatical subsystems of evidential markers, from more or less conventionalized “evidential strategies” based on polyfunctional lexical or grammatical means. In this project, we will adopt the notion of evidential strategy with reference to perception predicates. We will not follow, however, Aikhenvald’s recommendation to apply the term “evidentiality” to the grammatical category only, but rather use it also to refer to the conceptual-functional category (what she suggests to call “information source”).

2.1.2. Perception predicates and their inferential uses

Perception predicates are verbs or verbal constructions whose semantic frame includes an experiencer and a perceived entity (a percept) as explicit or implicit arguments. Like in other psychological verbs or “verbes de sentiment” (cf. Franckel & Lebaud 1990 in a Culiolian perspective, and Kailuweit 2005 for a recent overview over Italian and French), the semantic role (Fillmore 1968) of the experiencer can be coded linguistically in various ways (rising problems of syntactic analysis that have been debated a lot with regard to psychological verbs – cf. Belletti & Rizzi 1988, Ruwet 1993, Bouchard 1995 – but which we will not tackle here). Two broad classes of perception predicates may be distinguished: experiencer oriented predicates and percept oriented predicates. The first class includes verbs such as vedere (“to see”), sentire (“to feel”, “to hear”), in which the experiencer is the first argument, i.e. occupies the subject role in active sentences, whereas the percept is assigned the syntactic role of a direct object (e.g. vedo una luce ‘I see a light’, sento un rumore ‘I hear a noise’). We will not enter here into the further distinction between different degrees of control exercised by the experiencer, relevant with regard to verb pairs such as vedere (“to see”) vs. guardare (“to watch”) (cf. Franckel & Lebaud 1988, Chuquet 2004, Hindsill 2007:119-174). Percept oriented predicates, on the other hand, include predicates such as sombrereto (‘seem’, ‘look’), apparire (‘to appear’) or essere/diventare chiaro (‘to become/be clear’), in which the percept is the first argument and the experiencer may either be referred to by various types of complements (e.g. Pietro le sembrava stanco ‘Pietro seemed/looked tired to her’, gli/ davanti a lui / davanti ai suoi occhi apparve un vecchio ‘an old man appeared to him / in front of him / before his eyes’) or be left implicit (e.g. Pietro sembrava stanco ‘Pietro seemed/looked tired’, apparve un vecchio ‘an old man appeared’).

In a cognitivist perspective, Talmy (2000) underlines the close relationship between the domains of perception and conception and suggests the overarching term of “ception” to refer to the conjunction of both domains. We will not enter into the philosophical discussion of the nature of perception and of its relationship with knowledge, but focus, so to say, on the ordinary “folk theory” of perception encoded in the semantics and use of the vocabulary of perception (cf. Austin 1964). On that linguistic and pragmatic level, indeed, the same predicates are used not only to report perception construed by the speaker as direct and unproblematic, as in the above examples sento un rumore, vedo una luce o apparve un vecchio, but also to signal what has been termed indirect perception by some (cf. Usoniene 2001), i.e. that the experiencer has acquired a certain information through inference. In inferential uses, perceptual data may be implicitly referred to or be evoked implicitly as stimuli in a more complex perceptual and interpretive process, whose reliability is often evaluated epistemically (cf. section 2.1.1.) by the speaker. In the above-cited utterance Pietro sembra stanco, for example, one possible reading is that the (implicit) experiencer infers on the basis of perceptual evidence that Pietro is tired, signaling at the same time the provisory, revisable character of this inference. Pietro refers explicitly to a perceived entity, while the existence of perceptual evidence the experiencer bases his/her inference upon is presupposed,
and the specific evidence itself (e.g. a certain aspect of Pietro’s face or the sound of his voice) must be inferred by the hearer on the basis of available co- and contextual cues. In cases such as *vedo che Pietro è partito* ‘I see that Pietro has left’, the existence of a visual stimulus (signs allowing to infer Pietro’s departure) is presupposed and thus communicatively relevant, whereas no perceivable element is topicalized. Besides inferential uses in which perceptual data play a role, one also observes uses of the same predicates in which perceptual data are absent altogether. An example is the use of *sembra* with abstract entities that do not have any perceptual properties, such as *sembra un momento propizio* ‘this seems to be a favorable moment’.

In inferential uses, the experiencer role may be assigned to a perceiving instance other than the speaker *hic et nunc* (e.g. *l’insegnante ha l’impressione che Pietro non si impegni* ‘the teacher has the impression that Pietro is not applying himself’, *ho avuto l’impressione che Pietro non si impegnasse* ‘I got the impression that Pietro was not applying himself’). But perception predicates happen to signal EGO’s inferences as well. With experiencer oriented predicates, the subject’s perceiver role may be indicated by explicit first person deictic reference (e.g. *vedo che Pietro è partito* ‘I see that Pietro has left’) or may result from implicit inclusion in an experiencer subject designated by an impersonal or reflexive construction (e.g. impersonal *si vede che Pietro è partito* ‘evidently Pietro has left’, lit. ‘one sees that Pietro has left’). With percept oriented predicates, first person references can occur (*Pietro mi sembra stanco* ‘Pietro seems tired to me’), but quite often EGO’s involvement results from default saturation of an experiencer role implied by the semantics of the predicate being used in the present tense (e.g. *dall’indagine emerge un setto bancario in profonda crisi*, lit. ‘out of the inquiry, a banking sector in deep crisis emerges [before the eyes of observers, me included]’, i.e. roughly ‘the inquiry shows [us] a banking sector in deep crisis’).

When the speaker *hic et nunc* takes the role of an observer and conceptualizer in inferential uses, these function as an evidential strategy. The signaled inferencing process, in which perceptual data play a more or less important role, may be interpreted as an information source the speaker indicates as evidence for the asserted proposition.

The existing literature on inferential uses of perception predicates in the European languages has dedicated special attention to the so-called appearance verbs. These verbs semantically cluster around the verb *seem* in English or its rough equivalents in other languages, whereas the precise definition of the class does not seem to have been debated intensively yet. These verbs have a perceptual component, even if the perceptual modality is not specified – a type of vagueness that probably favors the inferential use (Lampert, abstract 2010). The existing research concentrates especially on the more grammaticalized appearance verbs that share syntactic properties with modal verbs in some languages, e.g. English *seem* (Aijmer 2009), German *scheinen* (Diewald 2001), Dutch *lijken, schijnen* (De Haan 2007), Italian *sembra* (Kratschmer 2006, forth.), French *sembler, paraître* (Bourdin 1986, Nolke 1994, Thuiller 2004), and Spanish *parecer* (Cornillie 2007b). A number of papers on various European languages (Agafonov 2006, Cambourian 2006, Col 2006, Delplanque 2006a,b, Gisborne & Holmes 2007, Diewald & Smirnova 2010, Lampert & Lampert 2010, Letuchiy 2010), as well as an on-going contrastive project directed by prof. Anne-Marie Vandenbergen at the University of Ghent on English *seem/appear/turn out vs. Dutch* *lijken/schijnen/blijken* ([http://www.researchportal.be/en/person/anne-marie-vandenbergen-(UG_597)](http://www.researchportal.be/en/person/anne-marie-vandenbergen-(UG_597)) compare appearance verbs with other lexical evidentials in European languages, both within the class of perception predicates (e.g. Engl. *look, feel*) and beyond this class (e.g. the German verbs *drohen, werden* and *versprechen* treated in Diewald & Smirnova 2010 or Spanish *prometer, amenazar* discussed by Cornillie 2007a).

Differently from the above-mentioned authors, Whitt (2010) focuses directly on perception verbs, rather than on verbs of appearance. Whitt dedicates a contrastive corpus study to the main perception verbs in English and German (all perceptual modalities) and analyzes evidential functions in the domain of direct perception (all verbs), of inference (mainly visual perception verbs) and of hearsay evidence (mainly verbs of auditory perception).
Besides lexico-semantic problems such as the differentiation between near synonyms such as French *sembler* vs. *paraître* (Bourdin 1986, Nølke 1994, Thuillier 2004) or German *wirken* vs. *aussehen* (Cambourian 2006), the main issue debated in the literature on appearance verbs, and more generally on inferentially used perception predicates, is the relationship between a certain number of constructional parameters and features of evidential meaning (see Croft 2001 on the notion of construction). The constructional parameters considered are mainly (a) syntactic complementation patterns, for example, in the case of percept oriented verbs, the syntactic differences between different types of raising constructions (*Pietro sembra (essere) stanco*), that-complement clauses (*sembra che Pietro sia stanco*) and parenthetical uses (*Pietro è stanco (sembra/a quanto pare)*); (b) the semantic typology of complements, especially the degree of concreteness of percepts. These constructional properties are examined as to correlations with three main features of evidential meaning: +/- propositional scope (drawing among others on Dik & Hengeveld’s 1991 paper on complement types of perception predicates and on further functionalist work on the difference between states of affairs and propositions; cf. also Boye 2010); degree of subjectivity, either in Langacker’s sense (e.g. Langacker 2003) or in Traugott’s sense (Traugott 1989); type of evidence (direct perception, inference, hearsay). Corpus-based studies underline the constructional variation with appearance and perception verbs and the necessity to examine each construction in its own right.

Some of the research cited above treats this syntactic-semantic interface in a diachronic perspective (in particular Gisborne & Holmes 2007, Diewald & Smirnova 2010, Diewald 2011, Lampert abstract 2010; cf. also, beyond the research field of studies on evidentiality, Harm 2000). The diachronic development of single lexemes is usually considered as an instance of grammaticalization or rather, as Diewald (2011) insists, pragmatization involving subjectification, bleaching and the development of propositional scope. However, there still remains much descriptive work to do in a diachronic perspective.

The cited literature gives useful insights into the constructional variety of certain perception verbs and, on the methodological level, the use of written corpora, including parallel translated corpora (Aijmer 2009) in the synchronic and diachronic analysis of these verbs’ forms and functions. With regard to evidentiality, however, a certain draw-back is the fact that little attention is paid to the analysis of the reasoning procedures that inferentials signal. Inference as an information source remains a black box because it is not determined precisely which set of premises is needed to arrive at the inferred proposition, how much – or how little – information the inferentially used perception predicate conveys at this regard, and how the speaker combines the predicate with other means to allow the hearer to at least partially reconstruct his/her reasoning. As a consequence, it remains unclear both which evidence precisely the speaker provides in support of an asserted proposition and how perception predicates differ from other types of inferentials; the very distinction between inference as a source of knowledge on one hand and simple belief (doxastic modality) or epistemic evaluation on the other sometimes becomes blurred.

### 2.1.3. Inferentials and argumentation

Inferentiality as the linguistic marking of a certain type of information source is to be distinguished both from inference as a necessary, omnipresent and unnoticed interpretive process in the reception of texts and in dialogue (cf. Sbisà 2007, Bazzanella 2008, Moeschler forth.) and from inference schemes in argumentation (for an overview over argumentation theory see the classics Perelman & Olbrechts-Tyteca 1958 and Toulmin 1958, and more recent syntheses such as Lo Cascio 1991, Plantin 2003 and van Eemeren et al. 1996; on inference schemes, or argumentation schemes, cf. Garssen 2001, Walton et al. 2004, Katzav & Reed 2004 and Rigotti & Greco Morasso 2010).

However, close relations between inferentiality and inference schemes have been underlined in recent research by the applicants. Following Rigotti (2005) and Rigotti & Greco Morasso (2010), inference schemes correspond to one of
three layers of argumentative discourse: (i) the pragmatic layer of speech acts / argumentative moves, e.g. defending a standpoint or conceding an argument; (ii) the cognitive-procedural layer of inferential relations making it possible to derive standpoints from explicit arguments through a number of recurrent procedures – inference schemes – that activate additional implicit premises; (iii) the ontological layer of topoï/loci, e.g. the relation of causality, exploited in inference schemes. In informal argumentative discourse, inference schemes are never made fully explicit, but must be reconstructed by hearers on the basis of various co- and contextual cues. Among these cues there are linguistic items functioning as “argumentative indicators” (Snoeck-Henkmans 1997, van Eemeren et al. 2007, Tseronis 2009), which explicitly signal the presence of an argumentative relation and in some cases give hints concerning relevant topoï as well. Such indicators are, for instance, conclusion introducing discourse markers such as allora or dunque (cf. section 2.2.1. on allora, and Mosegaard Hansen 1997 on French alors and done). In recent research (cf. the sections 2.2.1. and 2.2.2.), however, not only discourse markers have been analyzed as argumentative indicators, but also inferential uses of modal verbs such as dovere ‘must’ and potere ‘can’. In that perspective, evidential-inferential markers have been described as indicators (a) signaling an inferential relation, i.e. that a proposition has been acquired by an experiencer through inference from a presupposed set of premises; (b) giving minimal, underspecified indications as to the nature of the premises, including indications as to the ontological layer of topoï; (c) eventually conveying an evaluation of the premises’ reliability and of the certainty of the resulting conclusion; (d) requiring the speaker’s positioning relatively to the experiencer’s point of view. These various meaning components, especially (a) and (b), may be exploited in certain contexts to guide the hearer in the reconstruction of inference schemes and in the retrieval of textually expressed arguments: inferentiality then becomes a resource for argumentation.

On the basis of this recent work, it can be assumed that inferentially used perception predicates be exploited argumentatively as well, with regard to the aspects a-d identified above. The argumentative use of perception predicates has not been explored to date, however.

2.1.4. Textual and sequential functions of perception predicates

Within text linguistics (cf. Ferrari 1995, Conte 1999, Gansel & Frank 2002, Andorno 2007, Fix 2008, Brinker 1997 [1985]), it is widely recognized that perception plays a major role in certain text types (Mortara Garavelli 1988), or “textualization patterns” (Vertextungsmuster, cf. Fix 2008:65-82), especially in description (Heinemann 2000, Hamon 2008 [1981], Janle 2009). Some authors have underlined, in a text grammatical perspective, the use of perception verb constructions to introduce new discourse topics “appearing on the scene” (cf. Dik 1989:268, as well as Lambrecht 1986:291 on the perception verb construction ‘je vois le/un x qui’, which “may be seen as a semantic transfer whereby the perception of a referent is metaphorically interpreted as its presentation in discourse”). Acknowledging the strong link between description, perception verbs and topicalization, Mondada 1994: 319-371 explores forms of the verb voir as a topic introducing device in travel literature.

These lines of research focus mainly on strictly perceptual uses of perception predicates, underlining the relationship between perception reports, the construction of perspectives on discourse referents and on states of affairs (relative to the point of view of an experiencer, often identified with the speaker/author), and the discursively constructed isomorphism between perceptual (mostly visual) salience and salience in discourse. Since inferentially used perception predicates have propositional scope, they can be seen to perspectivize not so much discourse referents or spatio-perceptual cadres/quadri (cf., respectively, Charolles 1997 and Ferrari et al. 2008), but rather abstract “mental spaces” (Faucounnier 1985), “discourse representation structures” (Asher & Lascarides 2003), “discourse worlds” (Rocci 2009a,b, cf. 2.2.2. below) or, in polyphonic terms, “points of view” (Nølke et al. 2004). Text organizing functions of
inferential constructions with perception predicates could arise at this level of discourse, but the constructions in question have not been studied much from this angle.

Within the linguistic analysis of conversation (for introductions to the field cf. Bazzanella 1994, Mondada 2001, Güllich & Mondada 2008), the investigation of the discourse structuring functions of linguistic forms has not taken perception verbs into consideration. One reason for this may be the relatively low frequency of the lexical phenomena in question. An exception are in fact those studies that examine highly frequent discourse marker uses of perception predicates: Dostie (2004) on tu vois, regarde, écoute and Canadian Frenchoudon (which has historically developed out ofécoute done), Rossari (2006) on regarder and Schneider (2007) on reduced parenthetical clauses, including parenthetical instances of appearance verbs. These studies show that in Romance languages certain perception predicates in certain forms (especially in the imperative) develop discourse marker uses in spoken language, above all in argumentative contexts. If argumentative and structuring functions are underlined by authors, the relationship with the perception predicates' evidential functions in syntactically integrated uses seems to be largely unexplored.

2.2. Research field of the applicants

2.2.1. Research by the main applicant

The main applicant has examined different kinds of polysemic and multi-functional lexical and grammatical units in Italian and French that fulfill, among others, inferential functions.

She has analyzed the use of the Italian and French conditional mood in face-to-face interaction. Besides the morpheme's temporal, hypothetical and evidential functions, she has highlighted a range of modal and interaction related functions it fulfills in combination with modal verbs, performative verbs and evaluative predicates (Miecznikowski 2009, Ms.). In collaboration with Carla Bazzanella, she has examined the use of the Italian discourse marker allora in spoken and written contexts, determining its temporal, hypothetical, inferential-argumentative and interaction structuring functions (Bazzanella et al. 2007, 2008a, 2008b, Bazzanella & Miecznikowski 2009, Miecznikowski et al. 2009). Among others, inferential-concluding allora (meaning roughly ‘so’) has been shown to have polyphonic properties in face-to-face interaction, a combination of features that is exploited in various ways by speakers to manage agreement and disagreement in dialogue (Miecznikowski et al. 2009). Within a project directed by the co-applicant ("Modality in argumentation", FNS project nr. 100012-120740, 2008-2011), the main applicant has described inferential meanings and argumentative functions of the conditional form of the modal potere (potrebbe) in a corpus of Italian economic financial news articles, with special attention toward the interplay between the semantics of the modal, that of the conditional form and the presence or absence of a non-factual (usually nominalized) protasis (Miecznikowski 2011). The paper shows that potrebbe corresponds to three constructions sharing the relevance of causality, but differing as to the presence of inferential meaning. Inferential uses, differently from purely conditional uses, are regularly accompanied by textually expressed premises in the corpus; it is argued that one of their functions is connective, supporting the establishment of argumentative coherence relations. Within the same project, the applicant has examined a number of lexical constructions indicating written information sources in economic financial news, among which the perception predicate emergere (è scritto, si legge, recita, emerge, Miecznikowski, working paper, 2009). The paper shows that in economic news each construction is quite specialized as to the type of source indicated and as to the relation the author construes between his/her own discourse and the source. Finally, the applicant has examined various constructions of the perception predicates sembrare and parere (Miecznikowski & Zlatkova, submitted), hypothesizing a path of semantic change from the indication of a perceived similarity relation to inferential meaning, and shedding new light onto the semantic differences between the two lexemes.
In addition to these works concerning the categories of modality and evidentiality and their manifestation in discourse, she has conducted discourse analytical research on argumentation in economic financial news, on narrative structures in language biographies and on certain types of problem solving in research groups' meetings, which provides her with useful analytical tools to address issues related to the perception predicates' contribution to the sequential organization of texts and conversations.

2.2.2. Research by the second applicant

Andrea Rocci is Senior Associate Professor at USI and Vice-Director of the Institute of Linguistics and Semiotics at the Faculty of Communication Sciences. He is a member of the steering board of the Pro-Doc PhD school Argupolis II – Argumentation practices in context. He is currently directing three FNS projects:

- 100012-120740/1 “Modality in Argumentation”, to be concluded in December 2011. The project investigates the role of modality in predictions appearing in a 4 million words corpus of articles from different Italian economic-financial newspapers;
- PDFMP1_1248451 “Endoxa and cultural keywords in the pragmatics of argumentative discourse”, to be concluded in March 2012;
- PDFMP1_137181 “Argumentation in newsmaking process and product”, starting in January 2012.

He has published a book on expressions of epistemic modality in Italian (Rocci 2005) and has studied the Italian future tense and Italian modal verbs potere and dovere in a semantic, evidential and argumentative perspective (Rocci 2006a, 2008, 2010). Adopting Kratzer's (1981) notion of relative modality, he shows that modal verbs provide relevant information to reconstruct argumentative discourse thanks to a relational semantics linking the modalized proposition to a "conversational background". According to the type of background – deontic, epistemic-doaxastic or "realistic" in Kratzer's terms – the various uses of the modals are shown to support different types of coherence relations in argumentative discourse. The modals' uses traditionally termed "epistemic" are reanalyzed as inferentials, which function as direct argumentative indicators marking conclusions and pointing to textually expressed arguments. Non-epistemic uses, on the other hand, express ontological relations that are relevant to the comprehension of the topical organization of argumentation.

In an argumentation theoretical perspective, he has formulated a key distinction between pragmatic (communicative) inferences and argumentative (communicated) inferences (Rocci 2006b). In a text linguistic perspective, he has explored the notion of discourse world (Rocci 2009a) and studied the Italian discourse marker in realtà as a device introducing a new discourse world (2009b).

2.2.3. Collaboration with Carla Bazzanella as an external partner and advisor

At the University of Turin (Faculty of Letters and Philosophy), she taught Philosophy of Language, and is currently teaching General Linguistics, Cognitive Linguistics, and Pragmatics. She has analyzed dialogue and spoken language in a pragmatic and interactional perspective (e.g. 1994 Le facce del parlare, 2002 Sul dialogo), and published, among others, on the following phenomena: the correlative hypothetical ‘se’, discourse markers (also in Old Italian), dialogic repetition, intensity, context and understanding, indeterminacy, modal uses of Imperfect and Future, the attenuative conditional. Recently she has devoted some attention to the issue of approximation in the usage of numbers in everyday language (2011 Numeri per parlare). In the years 2004-2007 she was Supervisor of the main applicant's FNS Postgraduate Research Grant (“The conditional in French and Italian: functions related to the thematic and sequential organization of discourse”) at the University of Turin, and, also hereafter, wrote some papers on discourse markers and on the conditional with her.
2.3. Detailed research plan

2.3.1. Research question

Perception predicates comprehend verbs and constructions that include an experiencer and a percept in their semantic frame as explicit or implicit arguments. In Italian and in other European languages, perception predicates are frequently used to indicate that a proposition has been inferred by the speaker. This use implies backgrounding of the predicates’ perceptual meaning and foregrounding of modal and/or subjective evaluations by the experiencer and/or the speaker. In an argumentative perspective, moreover, it is plausible to hypothesize that it implies the communicative relevance of premise-conclusion relations that, albeit underdetermined, are at least partly accessible to the hearer (cf. section 2.1.3.). All in all, the inferential use of perception predicates can be considered as pragmatised to a higher degree than purely perceptual meanings, which have more significant referential functions. It is a recurrent evidential strategy in European languages, which lack evidentiality as a grammatical category (cf. section 2.1.1.).

Despite its presence in a series of languages, little is known about the semantic and pragmatic characteristics of this strategy. Even if it is plausible to assume that potentially a wider set of perception predicates participates in the strategy, existing research on perception verbs and inference in an evidential perspective (cf. section 2.1.2.) tends to concentrate on a limited number of high frequency appearance verbs (e.g. engl. seem, look, it. sembrare, parere etc.), such that generalizations about the larger class of perception predicates are formulated quite rarely (but cf. Lampert, abstract 2010). Moreover, the specific argumentative complexity and diversity of inferential markers mentioned above is not always accounted for. Finally, textual or interactional functions tend not to be taken into consideration, even if in other realms, especially with regard to discourse markers or modal verbs, evidential meanings have been shown to interact closely with the structuring of argumentative discourse (cf. sections 2.1.3. and 2.2.1.), and certain perception predicate constructions have been shown to play an important role in the structuring of descriptive discourse or (in the form of discourse markers) in the organization of spoken and written argumentative discourse (2.1.4.).

The project aims at a better understanding of this recurrent evidential strategy: **What makes perception predicates good lexical supports for pragmatised inferential constructions, and which specific functions do perception based inferential constructions fulfill, as compared to non perceptual inferential markers described in the literature?**

2.3.2. Delimitation of the object of study

In the project, the research question formulated above will be explored concentrating on contemporary Italian in a synchronic perspective. The choice of Italian as an object of study is descriptively useful because investigations on Italian perception verbs in an evidential and argumentative perspective, and on lexical evidentials in Italian in general, are still rather rare. A continuous confrontation with the growing body of literature on other Romance and Germanic languages (cf. 2.1.) and with research conducted previously by the applicants on Italian and French (cf. 2.2.) will make it possible to evaluate the obtained results within a wider context and to make hypotheses about possible cross-linguistic generalizations. A diachronic follow-up research can be envisaged in the future.

The linguistic forms to be studied include:

- experiencer oriented perception verbs such as vedere, sentire, notare, osservare, percepire, scoprire, scorgere, accorgersi, avvedersi, discernere, avere l'impressione/la sensazione;

- percept oriented and impersonal constructions such as parere, sembrare, avere l'aria di, dare l'impressione/sensazione, ricordare, far pensare a, far venire in mente, fare + NP/adj., sapere di + NP, evocare, appa-
rire, presentarsi, emergere, rivelarsi, profilarsi, delinearsi, essere/diventare chiaro/evidente, esserci sentore, nasce l’impressione/la sensazione.

Verbs such as guardare and ascoltare, which foreground the control exercised by the perceiver with regard to perceptions or perceptual field to which she directs her attention, are not directly included in the study. Like in French (cf. Dostie 2004, Rossari 2006), these verbs undoubtedly participate in a number of pragmatically constructed and may mark argumentative moves (e.g. the imperative guardate introducing an argument); but they do not seem to have inferential functions.

In the project it will be hypothesized, on the basis of the existing literature, that argumentative and descriptive text types are relevant contexts highlighting different aspects of the relation between perception and inference (cf. the section 2.3.3. below). Therefore, special attention will be dedicated to (i) various kinds of reviews, a discourse genre that combines preponderantly descriptive passages with argued judgments, and (ii) newspaper editorials and comment articles, a dominantly argumentative discourse genre (cf. 2.3.3.2.).

2.3.3. Theoretical framework and levels of analysis

On the basis of the literature discussed in the section 2.1. and 2.2., features that make perception predicates good candidates to take over inferential functions may be hypothesized to be situated and to become observable at different levels:

At the level of conceptual domains, an experience-based and folk-theoretically perceived affinity between the domains of perception and thinking may be hypothesized, which manifests itself among others in the importance of visual and spatial metaphor in the conceptualization of abstract entities and processes (cf. Lakoff and Johnson 1980, who identify among others the conceptual metaphor SEEING IS UNDERSTANDING, and Langacker 1999).

At the level of the lexemes’ semantic frame, perceptual and inferential processes seem to be encoded linguistically by structurally similar frames, favoring metaphorical semantic shifts from one to the other. According to Talmy (2000), these frames are basically motion path frames involving an experiencer, an experienced figure – possibly related to a ground –, and a path. In both inferencing and perception, perspectivization of the experienced entity with regard to the experiencer’s point of view is communicatively relevant. As to the above-mentioned ground, certain perception predicates are combined with locative complements indicating an environment, e.g. in mezzo al paesaggio emerge/appare/si vede la copula della basilica, whereas inferential uses may combine with directional complements indicating a source, similarly to resultative verbs and verbs denoting the act of drawing a conclusion, e.g. dal documento emerge/appare/si vede/sembra/risulta/si desume che la ditta è in buona salute. Both patterns share the reference to space, a common feature that might contribute to reinterpretation.

At the level of argumentative relations within inference schemes, explicit reports of perception processes have several functions in argumentative and descriptive discourse that might favor their reinterpretation as formulating processes of inferencing.

In argumentative discourse, sensible pieces of evidence are highly relevant in persuasive reasoning based on a number of argumentation schemes, e.g. in causal argumentations from witnessed results to possible causes and from perceivable present conditions to possible future evolutions, or in the construction of arguments from expert opinion in cases in which the expert’s authority derives from his/her being a witness or having an otherwise privileged access to data. Discursively displayed drawing of conclusions on one hand and explicit reference to perception on the other are therefore often associated, such that metonymic shifts (as opposed to the metaphorical shifts hypothesized above) between the two discursive operations might occur.
Descriptive discourse, on the other hand, often has an important testimonial dimension. The description then involves both the report of witnessed experience and various reflexive and reasoned elaborations of it, resulting in various kinds of micro-argumentative discourse configurations. These range from approximated or otherwise mitigated (Caffi 2007) categorizations and evaluations to more complex discursive elaborations, including reformulations, metadiscursive comments and comparisons (for the relationship between comparison, categorization and approximation cf. e.g. Barsalou 1987:116-117, Mondada 1994:436-443, Mihatsch 2010:209-260). As Mondada (1994:353-362) points out with regard to travel literature, in some cases perception reports in descriptions may even be part of properly argumentative speech acts, e.g. when what the author has seen in a certain place is contrasted dialectically with what people say about that place (“j’aitvu” vs. “on dit”). By means of these various argumentative elaborations of descriptive discourse, speakers relate the report to shared knowledge, while at the same time construing their ethos as trustworthy witnesses. Such elaborations may function as yet another type of “bridging context” between perception and inference. Indeed, the most frequent frequent inferentially used perception verb in Italian, sembrare, combines an originally comparative semantics (dal latino similare ‘resemble’) with an epistemic evaluation that suggests the potentially deceiving character of sensorial data, functioning as a disclaimers and mitigating device.

At the level of text structuring strategies, some perceptual constructions are used to introduce new discourse referents (e.g. vedere, apparire, cf. 2.1.4., emergere); others introduce new discourse worlds through comparison and analogy between (discourse old) percepts and (discourse new) mental representations of some sort (e.g. x ha l’aria di/sembra/ricorda un y; vedere x come un y). This textual function, especially when it has propositional scope, has affinities with the argumentative operation of taking a reasoning procedure one step further and thus might favor reinterpretations of perception predicates in that sense.

2.3.4. Method

Given the potential simultaneous relevance of the various levels identified in the previous section, a multi-layered corpus-based analysis of the syntactic, semantic and discursive properties of perception predicates will be conducted. Certain analyses requiring frequency counts and the coding of surface form will be realized using available representative corpora of written and spoken Italian. In order to guarantee an adequate treatment of constructional, textual and pragmatic aspects, qualitative analysis will be privileged, however.

2.3.4.1. Research tasks

a) Perceptual meanings and inferential functions at the level of semantic frames

A first research task will consist in the identification of inferential uses of perception predicates in contemporary Italian and in a description of their relation to perceptual meanings in a frame-semantic perspective. First, complementation patterns will be identified and their syntactic and semantic characteristics as well as their distribution in text types will be described. The various uses will then be compared with each other in order to identify properties related to perception (in particular the presence of perceptual data and of information as to perceptual modalities), properties related to inference (in particular propositional scope and relevance of premise-conclusion relations) and further properties related to subjectivity and modality (e.g. attribution of the experiencer role to the speaker or not, modality and epistemic evaluation, expression of esthetic or moral judgments). The status of locative complements will be examined. Contexts that are vague or ambiguous between perceptual and inferential meanings will be analyzed.

Particular attention will be paid to (i) the relation between inference and similarity/analogy in constructions with verbs such as sembrare, avere l’aria, sapere di etc.) and (ii) the affinity between inference and the formation of a distinct perpect on a ground, relevant e.g. in predicates such as emergere, apparire, notare, rivelarsi.
b) Inference schemes and topoï

The second research task aims at determining the types of inference perception predicates are used to express. Which kinds of inferential relations are encoded? Which differences are there between perception based inferential constructions and inferential constructions rooted in other conceptual domains such as that of possibility and necessity modals (cf. 2.1.3.), which have been described in the literature?

The co-text of the perception predicates’ inferential uses will be examined as to straightforward argumentative relations (to be expected in dominantly argumentative texts, including comment articles) and micro-argumentative relations (to be expected in a greater number of other text types, including reviews). These relations will be reconstructed on the basis of various available co- and contextual cues, determining which argumentative topoï are exploited. In a further step of analysis, results will be interpreted in order to determine which (if any) conventionalized functions inferential uses of perception predicates have with regard to (a) the signaling of premise-conclusion relations; (b) the specification of the nature of the premises, including indications as to the ontological layer of topoï; (c) the evaluation of the premises' reliability and of the certainty of the resulting conclusion; (d) the speaker's positioning relatively to the experiencer’s point of view.

c) Textual structuring strategies

The third task aims at exploring possible text structuring functions of perception predicate constructions.

Discourse functions of utterances containing perception verb constructions will be explored with regard to (i) the management of given and new information and of discourse topics; (ii) perspectivation, subjectivity and the management of points of view (polyphony). The degree of conventionalization of any such functions will be estimated and the relationship between these functions and the perceptual meaning and/or inferential functions of the constructions will be examined.

2.3.4.2. Data

Corpus data will represent various text types and registers. Since the project examines evidential, argumentative and textual functions that may be subject to different structural constraints depending on medium and participation framework, various interaction settings and media will also be taken into account, from face-to-face or telephone mediated situations to written texts; among the latter, traditional print-medium texts must be distinguished from texts produced by professionals and lay users within an internet community.

Three existing corpora and one new corpus currently being compiled will be used:

- C-Oral-Rom (Cresti & Moneglia 2005 and http://lablta.dit.unifi.it/corpora/imdi/coralrom/italian/): spoken language; varied as to situation types and degrees of formality; represents only language use in the region of Florence; transcripts and sound consultable on DVD through a powerful built-in concordancing software, no extraction of text data possible. All transcripts except man-machine interaction will be included, totaling 300’948 words.

- Lessico dell'italiano parlato / LIP (cf. De Mauro et al. 1993 and http://badip.uni-graz.at/): spoken language; balanced for situation types and geographic areas; transcripts available as simple text files; sound not available and transcripts partly incomplete. All transcripts will be included, for a total of 515’324 words.

- Corpus di italiano scritto / CORIS/CODIS (written language; text types: press, fiction, academic prose, legal and administrative prose, miscellanea, "ephemera" such as letters and instructions, cf. Rossini Favretti 2002, http://dslo.unibo.it/coris_ita.html). The complete corpus is 120 Million words; through the CODIS interface,
four smaller representative versions of the corpus can be searched (respectively 48, 28, 15 and 9 Million words).

- Reviews and comment articles/posts (currently being compiled from sources available in electronic format from public websites and from the database LexisNexis accessible through the University library, estimated size 2.6 Mio words (see below)).

The CORIS-CODIS corpus, which does not give access to full texts, will be used merely for large scale frequency counts. The other corpora will be exploited in qualitative analysis.

The reviews and comment articles corpus is designed to represent instances of those discourse genres that have been hypothesized to be particularly revealing with regard to the relationship between perception and inference (cf. 2.3.3.).

**Reviews** are descriptive-argumentative texts in which the author addresses primarily a readership of persons potentially interested in making use of the reviewed object or of objects of the same kind. In full-fledged reviews, the author typically reports his/her direct perception of the reviewed object or event, evaluates it – eventually confronting his/her judgment with opinions expressed by others – and possibly derives recommendations for readers (cf. Köhler 2000). The genre of reviews, historically closely linked to literary and art criticism and to academic specialized discourse, is currently being transformed thanks to the great success of reviews in internet communities. The latter give large groups of readers-writers the possibility to express their opinion in this form, creating new forms of expertise, and have expanded the range of reviewed objects (e.g. hotels or travel destinations, traditionally described in various forms of travel writing, are currently described and evaluated in texts explicitly categorized as reviews by authors; cf. e.g. Vásquez 2011). The genre has maintained, however, its basic characteristics combining description based on direct experience – the reviewer reports, by definition, first-hand experience with the reviewed object – with micro-argumentative aspects (subjective elaboration of the description and negotiation of credibility and expertise, cf. 2.3.3. on these aspects in descriptive discourse in general) and argumentation at the speech act level (formulation of argued judgments and recommendations). In reviews, perception predicates are therefore quite frequent and all types of uses can be expected to occur, perceptual uses as well as inferential uses in which perception-based premises are relevant, or purely inferential-argumentative uses.

The review corpus (planned size: ca. 1.7 million words) will be composed as follows (the planned size of the written corpus has been estimated on the basis of the material gathered up to date):

- Samples of reviews published in the Italian national daily newspaper *La Stampa* from 1992 to 2011; these texts have been downloaded in August 2011 from a full text archive of the newspaper stored on LexisNexis, where they are indexed as "recensione" (1'458'000 words);
- Academic book reviews from a range of specialized journals, yet to be defined (2010-2011; 100-150 texts / ca. 100'000 words);
- Samples of reviews stored as "recensioni" in the on-line archive of the Italian national daily newspaper *Corriere della Sera* (2010-2011) and downloaded in August 2011 (ca. 50'000 words);
- Reviews of books, expositions, plays, concerts, CDs, movies, games, websites and hotels published in the internet (websites to be defined) and explicitly categorized as "recensioni" (2010-2011; ca. 250 texts / 100'000 words).

The set of **comment articles and posts** will include newspaper comments and editorials as well as readers’ comments to them and journalists’ blogs. As declared expressions of standpoints, which are often inserted in a context of clearly diverging opinions, these genres are dominantly argumentative. They are distinguished neatly by newspaper makers from the news stories themselves (cf. Bell 1991 on news discourse). Perception predicates can be expected to be
much rarer in comments than in reviews. In turn, the relatively evident argumentative macro-organization of these texts will facilitate the argumentative micro-analysis of inferentially used perception predicates.

The corpus of comment articles (planned size: ca. 900’000 words) will be composed as follows:

- Samples of comment articles published in La Stampa from 1995 to 2011, which can be downloaded from the database LexisNexis, where they are indexed as "commento" (ca. 1100 texts / 550’000 words);
- Samples of comment articles from the Swiss regional daily newspaper Corriere del Ticino contained in the section labeled "Commenti" of the newspaper's on-line archive (2009-2011, ca. 160 texts / 120'000 words);
- Samples of comment articles from Corriere della Sera contained in the section labeled "Editoriali e commenti" of the CdS on-line archive (2010-2012; ca. 120 texts / 73'000 words);
- Samples of comment articles, author blogs and readers’ comments contained in the section "Pubblico" of the Italian national daily newspaper La Repubblica (mixed text types contained in the section "Rubriche e commenti"; articles labeled "commento", "editoriale" or "opinione"), 2011-2012 (ca. 80 articles/posts by journalists and 900 lay users' comments, ca. 160'000 words).

2.3.4.3. Tools for analysis

Texts will be stored in text format and searched using WordSmith Tools 5.0.0.207 (http://www.lexically.net/wordsmith/). Categorizations of relevant phenomena will be stored in Access databases.

2.3.5. Composition of the project team

The project team will consist of the main applicant, the co-applicant (prof. Andrea Rocci), a doctoral student trained in Italian linguistics, and a student assistant participating in data coding during the first project year. The team will collaborate with prof. Carla Bazzanella (University of Turin) as an external senior partner and advisor.
### 2.4. Schedule and milestones

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<tr>
<th>Period</th>
<th>Activities</th>
<th>Milestones</th>
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| April 2012 - Sept. 2012 | - Student assistant: methodological training, large scale frequency counts to get an overview over data; data coding in view of research task (a)  
- Doctoral student: reading, basic methodological training, participation in doctoral training at USI in argumentation theory;  
- Doctoral student and main applicant: data coding in view of task (a) | Large scale frequency counts completed |
| Sept. 2012 | | Work-shop with the extended project team (incl. the second applicant and prof. Bazzanella) |
| Oct. 2012 - March 2013 | - Student assistant: data coding in view of task (a);  
- Doctoral student: reading, planning of the PhD thesis, participation in doctoral training at USI in argumentation theory;  
- Doctoral student and main applicant: data coding in view of task (a) | Data coding in view of task (a) completed  
Subject of PhD thesis defined |
| March 2013 | | Work-shop with second applicant and further members of the USI linguistic-semiotic Institute |
| April 2013 - Sept. 2013 | - Doctoral student and main applicant: data analysis in view of tasks (b) and (c)  
- Doctoral student and main applicant: Participation at conferences and preparation of 1-2 papers presenting the results of task (a) | 1-2 papers submitted presenting the results of task (a) |
| Oct. 2013 - March 2014 | - Doctoral student and main applicant: data analysis in view of tasks (b) and (c)  
- Doctoral student and main applicant: Participation at conferences and preparation of 1 paper presenting intermediate results of the tasks (b) and (c) | 1 paper submitted presenting intermediate results of the tasks (b) and (c) |
| April 2014 - Sept. 2014 | - Doctoral student and main applicant: data analysis in view of tasks (b) and (c)  
- Doctoral student: writing of the PhD thesis, presentation of the PhD research at conferences  
- Main applicant: preparation of 1-2 papers presenting results of all tasks | Sept. 2014: Data analysis for tasks (b) and (c) completed |
- Main applicant: preparation of 1-2 papers presenting results of all tasks | March 2015: PhD thesis completed  
1-2 papers submitted to peer-reviewed international journals, presenting results of all tasks |

### 2.5. Importance and impact

Besides its descriptive value for Italian, the research has the potential to contribute significantly to the on-going debate about the status of the category of evidentiality for the European languages, about the notion of evidential strategy, in particular with regard to lexical strategies, and about pragmatalization in this domain. Two theoretical choices make this contribution particularly innovative. On one hand, notions stemming from recent argumentation theory will be integrated into the analysis of perception predicates’ meaning and functions. On the other, text structuring strategies will be taken into consideration. These choices make it possible to explore possible driving forces of pragmatalization that are rarely considered in the typological and cognitively oriented literature on evidentiality.

Beyond these theoretical issues, a better understanding of evidentiality and of the management of information sources and points of view in discourse is a text linguistic desideratum that is highly relevant not only in Academia, but also in teaching. Since perception predicates – and inferentials more generally – linguistically encode, albeit in a partly
implicit way, fundamental cognitive relations in the evidential domain, their semantic analysis may have an interesting heuristic value in teaching for the development of a more conscious management of information sources, in the same way as the already existing didactic of argumentative connectors helps students understand the argumentative structure of texts.
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