ISSA Proceedings 2010 – Construction Types And Argumentative Functions Of Possibility Modals: Evidence From Italian

1. Introduction

Modality has to do with communicating about possibilities rather than about the actual world, with construing alternative scenarios and with assessing the relationships between scenarios. This mode of communication has obvious affinities with argumentation, a communicative activity in which speakers compare and evaluate alternative views, exploring their relationships with beliefs and known facts. That is why linguistic expressions happen to have both modal and argumentative functions, as shows the example of negation markers, used to mark states of affairs as non-real, but also to disagree (cf. among others Anscombre & Ducrot 1983). In other words, modal expressions – among which negation markers, mood, conditional constructions and modal verbs as well as other expressions of possibility and necessity – happen to function as "argumentative indicators" (cf. Snoeck Henkemans 1997, van Eemeren et al. 2007).

According to the pragmatic-dialectical approach to argumentative indicators, the range of possible argumentative functions of linguistic expressions covers the content level, the level of discourse relations, the level of speech act types and illocutionary force, as well as the discursive-sequential level of signaling particular argumentative moves or discussion stages. Within this framework, considerable attention has been paid to pragmatic and dialogical aspects, i.e. to indicators that are useful to reconstruct stages and moves in a critical discussion (cf. also, among others, Tseronis 2009). As to modal expressions, they have been analyzed first and foremost as markers of the degree of commitment to a standpoint (Snoeck Henkemans 1997, p. 108-117).

A slightly different approach is adopted by Rocci (2008, 2010) in his investigation of Italian possibility and necessity modals as argumentative indicators. His analysis draws on a "stratified account of arguing" (Rocci 2010, p. 585-588), following Rigotti (2005) and Rocci (2005b), and taking into account earlier work by James B. Freeman (Freeman 1991) on modal expressions of probability as relational operators. It investigates the modals' functions zooming in on the act of arguing for a standpoint and on the structure of enthymemic reasoning, including *loci*, i.e. the underlying ontological relations warranting the inference of the standpoint from premises (e.g. cause-effect, authority etc.).

The research conducted by Rocci (2008, 2010), which is based on the careful semantic analysis of a series of attested and constructed examples, suggests that modal verbs have argumentative functions that are partly similar to those of argumentative connectives, contributing to the construction of argument-conclusion relations. At the same time, it draws the attention to an analytical difficulty that is relevant for a large range of argumentative indicators, i.e. their highly polysemous nature. The polysemy of modal expressions, especially of modal verbs, is well-known in the field of research on modality (cf. also section 2 below). Rocci (2008, 2010) sustains that it is argumentatively relevant, i.e. that differences in meaning correspond to differences in argumentative functions. In particular, it is claimed that inferential and non-inferential readings of the modals differ as to the relations they signal.

In this paper, a corpus-based approach will be adopted to further investigate the kinds of relations indicated by modal verbs and to lend empirical support to the idea according to which the distinction between the modals' inferential and non-inferential readings is highly relevant for the organization of argumentative discourse. I will examine a particular highly frequent modal expression in Italian, *potrebbe*, which is the conditional form of the possibility modal *potere* and roughly corresponds to English *could* or *might*. Combining insights from semantics, pragmatics, text linguistics and argumentation theory, this form will first be analyzed as a polysemous expression corresponding to different construction types, which involve different readings of the verb *potere* and of the conditional mood (section 2). In section 3, I will formulate specific hypotheses about the argumentative functions of the construction types in question, which will then be examined by analyzing a corpus of economic-financial newspaper articles**[i]**.

2. Preliminary considerations on the semantics of potrebbe

2.1. The modal verb potere

Italian has two modal verbs conveying the notions of possibility and necessity, respectively, i.e. *potere* (engl. 'can', 'may'; when nominalized: 'power') and *dovere* ('must', 'should'; when nominalized: 'duty'). These may be considered the partly grammaticalized core of a larger semantic field of lexical expressions of modality and evidentiality. The two verbs are polysemous. The meanings of *dovere* include at least need, obligation, agent-oriented (Bybee et al. 1994) and non agent-oriented ontological necessity, and different kinds of inference. Those of *potere* include at least

– ability (e.g. *Il re può decidere del destino dei suoi sudditi* 'The king has the power to decide on his subjects' destiny');

– permission (e.g. *Puoi andare adesso* 'You may go now');

– agent-oriented ontological possibility (e.g. *Qui puoi tornare a destra – la strada è sbloccata* 'You can turn right here – the street is not blocked anymore');

– non agent-oriented ontological possibility in generalized statements (e.g. *Un computer può rompersi* 'A computer can crash');

– sporadicity (cf. Kleiber 1983) (*A volte le telecronache possono essere noiose* 'TV news can sometimes be boring');

– inference (e.g. *Perché non è venuto? – Può aver dimenticato il nostro appuntamento* 'Why didn't he show up? – He may have forgotten our appointment').

In order to describe the interrelations between the modals and their polysemous semantics, it is useful to consider them as relational predicates with invariant and variable components.

An influential approach to the polysemy of modals, which has been adopted in the works by Rocci (2008, 2010) cited above, is the one outlined by Kratzer (1981). In Kratzer's view, modals are seen as operators relating a proposition to a set of propositions called *conversational background* or *modal base*. According to this author, possibility modals express the proposition's compatibility with the conversational background, whereas necessity modals indicate that the proposition is entailed by the conversational background. The differences between the modals' various uses are accounted for by assuming different types of conversational backgrounds. So in the case of *potere* (cf. Rocci 2008), the ability reading implies a conversational background containing propositions

concerning an agent's faculties; the deontic reading of permission implies a conversational background consisting of laws, norms or rules; ontological possibility is equivalent to compatibility with a relevant set of circumstances (a "realistic background", in Kratzer's terms); sporadicity may be analyzed as compatibility with a relevant set of experienced past events; and the inferential meaning amounts to compatibility with an epistemic conversational background, i.e. with a set of propositions known to the speaker.

A slightly different view is advocated by cognitive linguists, who postulate an underlying force-dynamic schema (Talmy 1988), implying a basic concept of causality which is present already in precursory work inspired by generative semantics, e.g. in Sueur's (1979) idea of different types of "causatifs" underlying the various readings of French *pouvoir*. In these approaches, the relation signaled by the modal is supposed to hold between a presupposed *modal source* and a state of affairs or proposition influenced in some way by the modal source (e.g. Diewald 2000). According to this view, the various readings of the modals differ both as to the types of entities involved as arguments of the relational predicate and as to the type of relation that holds between them. *Potere* conveys the idea that a modal source brings about a situation in which some relevant conditions for the realization of a state of affairs are fulfilled (in non-inferential uses), or puts the speaker into the position to claim that a certain conclusion might be true (inferential uses).

For the sake of the present analysis, I will adopt the cognitivist frame-semantic perspective, in particular the idea that the modals' non-inferential and inferential readings differ as to the kind of entities involved. To refer to these entities, the model of clause structure proposed in Functional Grammar (Dik 1989) will be used, distinguishing four layers of utterance meaning: predications (predicate-argument attributions not situated in time/space), states of affairs (situations and events in the discourse world), propositions (mental constructs concerning states of affairs, which can be true or false), and speech acts. Combining this model with the lexical semantic perspective sketched above, we may say that the modals' different readings function as operators on different layers of the clause, a main difference being that between inferential readings, which have scope over propositions as mental constructs, and non-inferential readings having scope over states of affairs.

2.2. Inferential readings of potere *and the context dependence of modals*

When analyzing modal verbs, it is important to acknowledge that the various readings of a modal depend to a certain degree on context. The distinction between inferential and non-inferential readings of *potere*, in particular, cannot always be drawn in a straightforward way. If it is signaled clearly by construction types in some co-texts, such as with past events (*può aver visto* 'she may have seen' vs. *ha potuto vedere* 'she was able to see / it was possible for her to see', cf. Rocci 2010, p. 600), in other cases pragmatic considerations contribute to decide whether an inferential meaning is intended or not.

This is the case with future events, the dominant context of use of *potere* in the economic-financial news under analysis in this paper, as will become clear in section 3. Consider the following example:
(1) Il forte ipervenduto *può* innescare un rimbalzo tecnico ma prima di *poter* tentare una reazione di una certa consistenza è necessaria la costruzione di una solida base accumulativa. (MF 26-4-2006, doc. 51)
The strong oversold situation may trigger a technical bounce, but before having the possibility to venture a clear reaction it is necessary [for the obligation market] to form a solid accumulation base.

In this economic forecast, a future development of obligation prices is envisaged, referred to first as "a technical bounce [of prices]", then as "a clear reaction [of the markets]".

In the second part of the utterance, this future development is modalized by *potere* in the infinitive and presented as dependent on a necessary condition (the generation of a solid accumulation base). The most plausible meaning of this instance of *potere* is agent-oriented ontological possibility, the agent being personalized markets, as often encountered in economic discourse, and the modal source being a set of economic circumstances – more precisely, the generation of a solid accumulation base. Evidence in this direction is both the presence of a verb implying an agent (*tentare* 'venture') and the syntactic embedding of the infinitive clause under a temporal connective (*prima* 'before'), which as a typical operator on the level of states of affairs excludes an interpretation of the infinitive clause as an inferred proposition.

The first part of the utterance, on the other hand, is potentially ambiguous between several readings:
a) A first possibility is a metaphorical ability reading by which the oversold

situation is attributed the semantic role of a Force (cf. Dik 1989, p. 101), comparable e.g. to natural phenomena such as earthquakes, capable of causing changes. According to this interpretation, the modal source consists in a set of properties of the actual oversold situation. Reference to a possibility in the future is not expressed explicitly but is entailed (it cannot be excluded that the oversold will cause the effects it is capable of causing).

b) A second possibility consists in interpreting the modal as an operator that takes scope over a complex state of affairs consisting of two causally linked events (the actual oversold situation triggering a future technical bounce). The modal source would then have to be identified with factual economic circumstances other than the oversold situation itself, which create conditions making it possible for this complex state of affairs to occur. In this case, too, future reference is entailed rather than expressed explicitly.

c) The third possible interpretation is an inferential one, in which a conjecture about the future is directly expressed. An inferential reading can be paraphrased by "one may hypothesize that [the oversold will trigger a technical bounce]$_p$", p being a proposition, not a state of affairs. What functions as a modal source, in this case, is a reasoning process based on different types of premises.

If with respect to the second part of example (1) an inferential interpretation of the infinitive *potere* can be ruled out on co-textual grounds, it is difficult to definitely rule out any of the interpretations sketched above for the first part of the example. In particular, even if there is strong evidence for the relevance of causality and thus ontological possibility (facts in the world making possible / not impeding other facts), the inferential interpretation, which implies the mobilization of wider and more general knowledge of the speaker and focuses on the guess made as to the probability that a specific event will take place, is clearly communicatively relevant in the context of economic forecasts. A plausible solution is to assume inference based on causal reasoning, in which the relevant causal relations function as premises. So in example (1), we can assume that the premises leading the speaker to infer that there could be a technical bounce centrally include knowledge about oversold situations and the circumstances under which they influence the movement of prices, according to economic laws and experience.

2.3. The conditional mood
The Italian conditional mood (COND) is, like *potere*, a polysemous relational

operator (cf. Miecznikowski 2008a, 2009 Ms). Its core meaning is to signal that a state of affairs or a proposition

i) stands in a sequential or consequential relation of some type with what I will call a reference point, in analogy with Reichenbach's (1947) model for the description of tenses;

ii) that the reference point contrasts with a further entity, which is mostly an aspect of the speech situation (the speaker's *hic et nunc*, or *origo*, in Bühler's 1934 terms), but can also correspond, in some readings, to a different co-textually salient entity.

This core meaning gives rise to different readings of the form and different relation types depending on which type of reference point is involved. The Italian COND has three canonical meanings acknowledged by most traditional and contemporary grammarians, among which the first one requires the composed form of the COND:

– posteriority of a state of affairs with respect to a past state of affairs (the reference point is a moment in time and is construed as distant from the *origo*): *Ha annunciato che sarebbe arrivato in ritardo* 'She announced that she would be late');

– a hypothetical condition-consequence relation between states of affairs (the reference point is a non-factual – possible or counterfactual – state of affairs, contrasting with what is the case in the actual world): *Se tu ci aiutassi, ce la faremmo facilmente* 'If you helped us, we would manage easily');

– report, i.e. the evidential qualification of a proposition as originating in a discourse different from the speaker's: *Secondo lui sarebbe colpa di Mario* 'According to him, it is Mario's fault').

These three main meanings strongly presuppose the reference point in question. If, differently from the examples given above, no co-textual antecedent is given, this presupposition will be accommodated, i.e. hearers will use all available information to make a hypothesis about which reading of the COND is the good one and to infer the reference point accordingly (cf. e.g. *io non mi lamenterei* 'I wouldn't complain', an instance of the hypothetical COND in which an implicit counterfactual condition 'if I were you/X' has to be inferred to make the COND interpretable).

In contrast, the COND has a fourth class of uses, traditionally called "attenuating", which occurs mainly with a range of modal or evidential verbs and

with performatively used verbs of saying (cf. Miecznikowski 2009). It differs from the temporal and the hypothetical use in that it has no effect on the level of propositional content. Furthermore, it differs from all canonical meanings by the fact that the reference point corresponds to an element closely related to the semantics of the immediate co-text, especially the verb the COND is attached to. More specifically, thanks to a kind of semantic merger, the attenuating COND finds its reference points in propositions forming the background of the "scene" construed by the semantic frame of the modal/evidential/performative verb or larger construction the verb is part of; propositions which in the indicative form acquire the pragmatic status of presuppositions, whereas the attenuating COND cancels their presupposed, taken for granted status, construing them as non-factual, unknown, or controversial.

Consider the following example:
(2) *Vorrei un panino* 'I want$_{cond}$ (≈ 'would like') a sandwich'.

The use of the COND in (2) differs from the hypothetical use of this mood by the fact that the state of affairs of the speaker's desiring a sandwich is neither dependent on another state of affairs nor can it be interpreted as non-factual; there can be no doubt about the speaker's desiring the sandwich. In contrast, the utterance conveys doubt about an implicit proposition, i.e. about the possibility for the speaker to get her desire realized. This doubt differentiates examples like (2) from their counterpart in the indicative, in which an attitude and intention of the speaker towards a non-factual state of affairs is asserted taking for granted that the necessary conditions to get the latter realized are fulfilled; a difference, by the way, which in the context of requests, in which those necessary conditions include the hearer's plans of action, regularly acquires politeness functions.

2.4. Potrebbe*: interaction with the hypothetical and the attenuating COND*
The conditional form of the modal *potere*, *potrebbe*, is frequently used both hypothetically and in an attenuating way. In the former case, the form raises problems of scope that interact with the readings of *potere* involved. In the latter case, no variation of scope occurs, since modal and mood combine to form a single complex operator; what does vary, in function of the reading of the modal activated, is the set of presuppositions modalized by the attenuating COND. In what follows, I will briefly consider the four most frequent construction types encountered:

– first type: hypothetical COND with scope over non-inferential *potere*;
– second type: inferential *potere* with scope over hypothetical COND (conditional conjecture);
– third type: the attenuating COND form of *potere* expressing agent-oriented ontological possibility;
– fourth type: the attenuating COND form of inferential *potere* (simple conjecture).

In the first construction type, *potere* has an apodosis of a conditional construction in its scope. Since the hypothetical COND relates states of affairs and not propositions, the apodosis has the status of a state of affairs, and *potere* has always a non-inferential reading. The speech act performed is the assertion of an if-then-relation opposing possible and impossible scenarios ('only if p, is q possible'; 'if p, then only q is possible'; 'if p, then q is not possible'). This case is illustrated by example (3) with deontic *potere* and a protasis establishing a necessary condition:

3) *Se Maria avesse dieci anni compiuti, potrebbe partecipare al concorso* ('If Maria had already reached the age of ten years, she could participate at the contest').

In the second construction type with the hypothetical conditional, *potere* undergoes raising and takes scope over the conditional construction. Since the if-then construction as a whole is a proposition and not a state of affairs, *potere* then necessarily acquires inferential meaning. The resulting speech act is a conjecture about a possible consequence of a non-factual state of affairs (*conditional conjecture*). Accordingly, *potrebbe* can be paraphrased by raised impersonal *può darsi che*, which has always inferential meaning (cf. Rocci 2005a) – a paraphrase that would be inadequate in the assertive construction type discussed above. (4) is an example of this:

4) *Se la domanda continuasse ad aumentare i prezzi potrebbero salire* ('if demand continued to increase prices could rise').

Possible paraphrase: *Può darsi che se continuasse ad aumentare la domanda i prezzi salirebbero* ('It is quite possible that if demand continued to increase prices would rise').

The third type involves the attenuating COND and the agent-oriented use of *potere*. The latter is the only non-inferential reading of *potere* that can be used in

the attenuating COND, whereas the ability reading as well as generalized and sporadic statements are not interpretable in the attenuating COND. The reason for this special status of agent-oriented modality is probably that it involves practical reasoning, i.e. options of action are evaluated with regard to the agent's goals, providing a possible reference point of the COND. By default, the indicative use of *potere*, when referred to a possibility of action, presupposes that the realization of the action in question is part of the agent's goals. It is the content of this presupposition that functions as a reference point for the attenuating COND: the latter form signals that the issue of which goals the agent has is open. This contrast is illustrated by the following two examples:

5) *Domani è festa; possiamo andare a vedere i nonni.* 'Tomorrow is a holiday; we can go and see the grandparents'.

6) *Domani è festa; potremmo andare a vedere i nonni.* 'Tomorrow is a holiday; we could go and see the grandparents'.

In (5), the speaker takes for granted that seeing the grandparents is part of the goals and wishes of the group referred to by the first person plural.

In (6), this presupposition is cancelled. Seeing the grandparents could be an option nobody has thought of, or there could be doubts or controversy about the desirability of the action.

The fourth construction type are simple conjectures. As with the present tense of *potere*, these can concern both past events and possible future events:

7) *Che cosa è successo a Piero? – Ha una brutta ferita; potrebbe essere stato morso.* 'What has happened to Piero? – He has a ragged wound; he may have been bitten'.

8) *Attenti: il cane potrebbe mordere* 'Watch out: the dog could/might bite'.

In this type, the modal source of *potere* is a reasoning process which leads the speaker to privilege one possible hypothesis without excluding others. The COND's reference point can be identified with major premises activated in enthymemic reasoning, e.g. that dogs sometimes bite, that ragged wounds happen to be caused by bites, or that what has been observed in the past has a certain likelihood of occurring again. Such premises are construed as taken for granted when using the indicative form of *potere* inferentially. The attenuating COND suggests that they are either unknown to the hearer (e.g. when utterances such as (7) and (8) are addressed to non-experts such as children) or controversial, or of doubtful reliability/relevance. In all cases, the COND's

contrastive feature is relevant (cf. (ii) mentioned in section 2.3. above), which gives alternative outcomes of the reasoning process greater relevance than *potere* used in the present tense. Moreover, an important function of the attenuating COND is to foreground the reasoning process itself as a mental effort to apply general knowledge to a concrete case. This has an important disambiguating and particularizing effect with respect to *potere* used in the indicative. When no agent-oriented modality is relevant, attenuating *potrebbe* is indeed clearly inferential and applied to a specific case, whereas the use of non agent-oriented *può* in the present tense centrally includes generalizing interpretations, and the inferential reading is context-dependent to a much larger extent, as we have seen discussing example (1) above (cf. section 2.2.).

3. Argumentative functions of potrebbe *in a corpus of economic-financial news articles*

3.1. Hypotheses

According to the semantic analysis of modals proposed by Rocci (2008, 2010) (cf. 1. above), all modals contribute to the construction of argument-conclusion relations. One important claim made is that argumentative functions are present both in inferential and non-inferential uses of the modals, albeit on different levels of argumentation. On the one hand, by referring to distinct types of conversational backgrounds (in a Kratzerian perspective), all types of modals guide the receiver in the reconstruction of *loci*. On the other hand, when used inferentially, modals may function more specifically as direct argumentative indicators signaling that a standpoint is being advanced with a certain degree of commitment, and that premises allowing to infer that standpoint are to be found in the context (Rocci 2010, p. 614).

According to this approach, inferential modals signal that the speaker is engaged in a process of reasoning; they do not only guide the reconstruction of premises, but prompt their phorical recovery in the first place. In example 7 given above, for instance, *potrebbe* may be analyzed as an indicator of a conjectural (weak) standpoint, combined with an instruction to look for premises. The latter instruction facilitates the retrieval of both unexpressed premises and textually given premises (*ha una brutta ferita* 'he has a ragged wound'), supporting text coherence and reinforcing relations of text cohesion between explicit premises and the conclusion.

I will start out from these considerations to investigate *potrebbe*'s functions a of

argumentatively relevant discourse relations. I will assume that in the case of *potrebbe*, argumentative functions vary according to the construction type, and that the type of reading of *potere* – inferential or not – is highly relevant at this regard. I hypothesize, in particular, that the second and the fourth construction type (conditional and simple conjectures) are more likely to contribute to discourse cohesion at an argumentative level than the first and the third type. Moreover, since the fourth type (simple conjectures in the attenuating COND) is a particularly explicit marker of inference, we might expect, following Rocci (2008, 2010), that this type behaves most clearly of all four types as a pointer to premises.

These hypotheses can be verified empirically in written texts in a number of ways. The method I have adopted in the present paper is that of examining all occurrences of *potrebbe* in a text corpus, treating them, by default, as standpoints and looking for arguments given in the text to support them. What we may expect is that in the case of clearly inferential constructions, we regularly find argument-conclusion relations, which may be varied and span over larger portions of text. In contrast, in non-inferential or less clearly inferential constructions, eventual discourse relations between the modal and portions of co-text are expected to hold at the level of propositional content; explicitly expressed arguments are likely to be rarer, less varied and more closely related to the modal source in question (ability, circumstantial causes, laws and norms).

3.2. Data

For the present analysis, a corpus of 65 articles taken from two Italian economic-financial newspapers (*Sole 24 Ore, Milano Finanza*) has been used, part of the larger corpus studied in the project *Modality in argumentation. A semantico-argumentative study of predictions in Italian economic-financial newspapers* (cf. footnote 1).

Sections of *Il sole 24 ore*	number of texts	Sections of *Milano Finanza*	number of texts
Economia italiana	10	*Analisi tecnica*	4
Mondo e mercati	10	*Banche e banchieri*	3
Finanza e Mercati	13	*Media marketing & finanza*	3

Finanza	8	Mercati globali	7
		first page	7
Total	41		24

Table 1. Composition of the corpus.

3.3. Construction types

in the sub-corpus studied here, 63 tokens of *potrebbe(ro)* have been identified. These occur almost exclusively in predictions of future economic developments, a finding that is hardly surprising, given the key role predictions play in economic-financial argumentation (cf. Rocci, Miecznikowski & Zlatkova in press). Most of these 63 tokens are simple conjectures (33 tokens), followed by conditional conjectures (21 tokens), assertions of a necessity relation with *potere* in the scope of the hypothetical COND (6 tokens) and agent-oriented *potere* in the attenuating COND (2 tokens). This distribution of construction types is highly genre-specific. In particular, the low frequency of agent-oriented attenuated *potrebbe* contrasts with the high frequency of this type in other contexts such as informal and formal spoken interactions (cf. Miecznikowski 2009, Ms.).

The two most frequent types are illustrated by the examples 9 (construction type 2: conditional conjecture) and 10 (construction type 4: simple conjecture):

9) In caso di violazione di area 44,50 quindi il titolo *potrebbe* puntare verso 42,00/42,50. (Sole 24 Ore, doc. 166)

In the case of a violation of the 44,50 region, the price could *therefore target 42,00/42,50.*

10) Nell'intero 2006 l'espansione *potrebbe* essere del 3,6 per cento. (Sole 11-4-2006, doc. 258)

In 2006, on the whole, growth could/might *be 3,6 per cent.*

Example (11), finally, is an instance of the somewhat rarer construction type 1: *potere* is placed within the apodosis of a conditional construction preceded by a nominalized protasis ("a drop below 14 euro" may be paraphrased as 'only if prices dropped below 14 euro'):

11) [...] solo una discesa sotto 14 euro *potrebbe* seriamente deteriorare l'attuale dinamica rialzista. (MF 5-4-2006, doc. 2)

[...] only a drop below 14 euro could *jeopardize the actual upward trend.*

3.4. The textual expression of arguments in predictions containing potrebbe

In what follows, I will concentrate on the three most frequent construction types, neglecting agent-oriented attenuated *potere*. The instances of these types can be considered weak predictions of future events. In many cases, and especially with conditional constructions (construction types 1 and 2), these weak predictions are composite: the asserted content centrally regards an association of events (if p then q) and implies a weak prediction of both single events (p, q).

Among the various possible argument-conclusion configurations that occur in the texts examined, it is useful to distinguish two main types: on the one hand, causal relations between states of affairs, expressed by means of an event noun and a causative verb within the proposition containing *potrebbe*; on the other hand, arguments expressed outside the scope of the construction type containing *potrebbe*.

Proposition-internal causality is exemplified by (9) above (event noun: "una discesa sotto 14 euro"; causative verb: "deteriorare"). It is present also in the first and the third instance of *potrebbe* in (12) below. The first instance (causative verb: "determinare") is a simple conjecture with an event noun referring to a factual state of affairs ("il raggiungimento di un riferimento grafico di tale rilevanza"); the third instance (causative verb: "favorire") is a conditional conjecture with an event noun referring to a non-factual state of affairs ("un rapido pull-back verso l'area 5.150-5.135 punti"):

12) […] il benchmark tedesco ha superato l'importante soglia psicologica a 6.000 punti, rilanciando quella tendenza rialzista che lo sostiene ormai da cinque mesi. Nel breve, proprio il raggiungimento di un riferimento grafico di tale rilevanza *potrebbe* determinare una salutare pausa di consolidamento, con le quotazioni che *potrebbero* così ricoprire il gap rimasto aperto attorno a quota 5.920 prima di provare una nuova accelerazione. Una dinamica molto simile ha premiato anche l'indice francese, con i corsi che hanno strappato fino a 5.250 punti, lasciando aperto un analogo gap attorno a 5.190: in questo senso, un rapido pull-back verso l'area 5.150-5.135 punti *potrebbe* favorire un utile alleggerimento dell'ipercomprato di breve, creando i presupposti migliori per un successivo, nuovo allungo. (MF 5-4-2006, doc. 1)

[…] the German benchmark has exceeded the important psychological threshold of 6000 points, reinforcing the upward trend that has held for the last five months. In short terms, precisely the fact that such an important graphical reference has been reached could *lead to a healthy pause of consolidation; stock*

prices could *fill the gap opened around 5.920 points before trying to accelerate again. A very similar development can be observed on the French stock market, where prices have jumped to the 5.250 level, opening an analogous gap around 5.190 points: in this sense, a rapid pull-back towards the 5.150-5.135 region* could *favor a useful decrease of short-term oversold, creating ideal conditions for a subsequent long-lasting recovery.*

The presence of a causative verb relating two events p and q directs the attention of the reader towards causal chains of states of affairs. On the argumentative level, it suggests that the inference of a possible or necessary association between p and q, as well as the inference of q itself, are justified by relations of economic causality – similarly to example (1) discussed earlier, which contains in fact an analogous causative construction.

When *potrebbe*-predictions are justified by arguments that are given in the preceding or in the following co-text, these are quite varied.

On the one hand, argumentation often includes causal reasoning of a more complex kind, with multiple causes and hints towards *endoxa*. In (12), for example, the journalist does not only name a cause (i.e. reaching 6000 points) that could lead to a healthy short-term pause, but provides further reasons to justify this expectation. In particular, he activates *endoxa* that are typical for the kind of economic forecast in (12), i.e. for so-called technical analysis. He starts out by introducing the *terminus medius* "psychological threshold", which is then, in the first *potrebbe*-prediction, referred to anaphorically by "un riferimento grafico di tale rilevanza" ("proprio il raggiungimento di un riferimento grafico di tale rilevanza *potrebbe* determinare una salutare pausa di consolidamento"). The second part of the prediction ("con le quotazioni che *potrebbero* così ricoprire il gap rimasto aperto attorno a quota 5.920 prima di provare una nuova accelerazione") is construed as a further development of the initiated reasoning process: not only is it tightly linked to the preceding co-text by a special type of subordination ('*with* NP + relative clause') and by the causal-argumentative connective *così* ('in this manner', 'thus'), but it contains, moreover, a further hint towards *endoxa* related to technical analysis, namely the metaphor of a "gap" left open in the graph representing the development of stock prices, which is likely to subsequently be "filled" by the line of the curve.

On the other hand, argumentation may be other than causal. In (12), for instance,

the third *potrebbe*-prediction, introduced by the connective "in questo senso" ('in this sense'), combines causal argumentation and argumentation from analogy: it follows from the same line of reasoning as the predictions before, and this line of reasoning is reinforced by the similarity ("una dinamica molto simile", "un analogo gap") between the German and the French situation. In other cases, causal argumentation is supported by arguments from authority, referring explicitly to economic-financial theories and approaches, to experts and analysts, or to opinions and announcements of key economic actors.

The analysis of all 63 tokens of *potrebbe* in the corpus examined suggests that the choice of an argument-conclusion configuration – proposition internal causal argumentation or proposition externally given arguments of various kinds – is closely related to the choice of a particular construction type, and thus to the degree of inferentiality of the *potrebbe*-construction (see table 2 below), matching quite well the semantic properties of the construction types identified in section 2 of this paper. These results are compatible with Rocci's (2008, 2010) hypothesis stating a close relationship between the type of argumentative relation signaled by a modal and the presence vs. absence of the feature /inferential/.

Construction type	Total number of tokens	event noun + causative verb	arguments present in co-text
potere in the scope of COND (type 1)	6	6	0
Conditional conjecture (type 2)	21	10	17
Agent-oriented possibility (type 3)	2	0	1
Simple conjecture (type 4)	33	5	29
Total	63		

Table 2. Arguments given proposition-internally and proposition-externally with different construction types of potrebbe.

Type 1 is always combined with a causative construction, whereas it is never accompanied by arguments or hints to further premises given in the surrounding

co-text. Causal verb constructions seem to converge with non-inferential *potere* in the construction of relations between specific states of affairs on the level of propositional content.

As to type 2, conditional conjectures, *potrebbe* combines both with causal verbs (present in about half of the tokens) and, very regularly, with arguments given in the larger co-text (present in 17 out of 21 tokens). It can be argued that these various elements converge in locating the modal source of inferential *potere* in a process of primarily causal reasoning.

Simple conjectures, in turn, in which the attenuating COND foregrounds and reinforces the inferential interpretation of *potere*, are even more often accompanied by arguments and hints given in the larger co-text (such arguments lack in only 4 out of 33 cases), whereas causative verbs are present in as little as 5 out of 33 tokens. This finding is compatible with the hypothesis that inferential *potrebbe* in simple conjectures indicates primarily an argumentative premise-conclusion relation, and not a relation on the level of propositional content. In the reasoning process, causal relations may play an important role, but primarily as instances of more general patterns, and in combination with other argumentative resources the speaker mobilizes.

4. Conclusion

In this paper, inferential and non-inferential construction types of the Italian modal *potere* in its conditional form (*potrebbe*) have been distinguished on semantic grounds and have been examined as to their distribution in a corpus of economic-financial news.

The corpus study, which has focused on problems of text coherence and cohesion, has shown a regular co-occurrence of inferential constructions with portions of the immediate co-text that are interpretable as premises in an argumentation. This distribution supports the analysis of these modals as relational operators presupposing a reasoning process. According to this analysis, the relation between co-textually expressed premises and the modal is in fact not one of mere co-occurrence, but an anaphoric link between an argument slot presupposed by the modal's semantic frame – the modal source – and suitable textual antecedents that partially fill this argument slot. Which kinds of textual antecedents occur and in which range of co-text (proposition-internal vs. external) depends on the construction type. If we find textually expressed partial antecedents for the modal

source in all cases, these are different in simple conjectures, in conditional conjectures and in non-inferential modal constructions.

Modals differ from connectives such as *therefore* by the fact that, like other presupposition triggers (cf. Van der Sandt 1989, Sbisà 2007, as well as the discussion, in 2.3. above, of presuppositions triggered by the COND's canonical readings), they do not obligatorily require textually given antecedents matching the presuppositions in question; presuppositions may be entirely or partially accommodated. Moreover, as the *potrebbe* example shows clearly, modals interact with morphology and syntax in even more complex ways than lexicalized connectives, whose polysemy and context dependency is widely acknowledged in the field of discourse marker studies (cf. e.g. Bazzanella 2006 and Miecznikowski et al. 2009). Despite these differences, the small corpus study presented here confirms the proximity between modals and argumentative connectives. It suggests that at least in the written text genres examined, the reasoning process presupposed by inferential modals is quite regularly made partially explicit, such that *de facto* textual antecedents are present and cohesive links between different portions of the argumentative texts are established.

NOTES

[i] The corpus is part of the larger text corpus currently studied in the project *Modality in argumentation. A semantico-argumentative study of predictions in Italian economic-financial newspapers* (Swiss National Foundation grant n° 100012-120740), directed by Andrea Rocci at the Università della Svizzera italiana (Lugano).

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