

The Italian conditional: X-marking and beyond¹

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Abstract. Languages often use the same morphology (‘X-marking’ morphology, von Fintel and Iatridou 2023) to express counterfactual conditionals, wishes and weak necessity. We bring into the arena a use of X-marking, the reportative interpretation of the Italian conditional, which has received little attention in the formal semantics literature (but see Howell 2012 on the French *conditionnel*). We show that, on its reportative use, the Italian conditional patterns with reportative evidentials cross-linguistically. We propose that the reportative reading arises when conditional morphology interacts with a default assertoric modal operator, and performs two operations argued to be at work in other uses of X-marking: modal domain widening (as in counterfactual conditionals, von Fintel and Iatridou 2023) and modal domain restriction (as in weak necessity modals, von Fintel and Iatridou 2008).

Keywords: reportatives, Italian, X-marking, evidentiality

1. Introduction

Languages often use the same morphology to (i) mark ‘subjunctive / counterfactual’ conditionals, (ii) express wishes, and (iii) construct weak necessity modals. In recent work, von Fintel and Iatridou (2023) (henceforth, vFI) introduce the label ‘X-marking’ for this type of morphology. Some languages have dedicated X-marking morphology. In Hungarian, for instance, the morpheme *nA* distinguishes counterfactual conditionals (‘X-marked conditionals’ in vFI’s terms) from indicative (‘O-marked’) conditionals (as in (1)), is added to the verb ‘like’ to convey ‘wish’ (2), and gives rise to a weak necessity modal (‘ought’) when added to a strong necessity modal (3). This morpheme does not seem to have other functions in Hungarian. In other languages, X-marking morphemes have additional uses in other constructions. Some well-known examples of X-marking morphology include ‘fake past tense’ and ‘fake imperfective aspect’ (tense / aspect morphology that does not seem to contribute its regular temporal / aspectual meanings when used as X-marking) and subjunctive mood.

- (1) a. Ha János tudja a választ, Mari is tudja a választ.
if János knows the answer Mari too knows the answer
‘If János knows the answer, Mari knows the answer (too).’
b. Ha János tudná a választ, Mari is tudná a választ.
if János know.NA the answer Mari too know.NA the answer
‘If János knew the answer, Mari would know the answer.’

(von Fintel and Iatridou, 2023)

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- (2) Szeretném ha Marcsi tudná a választ.
 like.NA if Marcsi know.NA the answer
 ‘I wish Marcsi knew the answer.’ (von Fintel and Iatridou, 2023)
- (3) Péter-nek el kell-ene mosogat-ni-a az edényeket.
 Péter PART must.NA wash.INF the dishes
 ‘Péter ought to do the dishes.’ (adapted from von Fintel and Iatridou 2023)

vFI lay out a research program for X-marking, two of whose core questions are: (i) what other uses can X-marking have, across languages? and (ii) can these uses be given a unified account? The present paper contributes to this research program by focusing on the Italian conditional morphology (henceforth, ‘CD’). As has been noted in the literature (see Iatridou 2000; Howell 2012), the CD in some Romance languages (see, e.g., Howell 2012 on French and vFI on Spanish) has all the hallmarks of X-marking: it is used in the consequent of X-marked conditionals and in the expression of wishes and weak necessity. We bring into the arena an additional use of the CD as a reportative marker. This use is illustrated in (4), where CD morphology on the auxiliary ‘have’ indicates that the speaker has learned the proposition that Henry VIII had six wives and ten of lovers through a report.

- (4) Enrico VIII **avrebbe** avuto sei mogli e decine di amanti.
 Henry VIII have.CD.3SG had six wives and tens of lovers
 ‘Henry VIII allegedly had six wives and tens of lovers.’

While this reportative use of the CD is well documented in the descriptive literature (e.g., Squartini 2001; Giacalone-Ramat and Topadze 2007), it has received little attention in formal semantics work to date (but see Howell 2012 on the French *conditionnel*). Building on Squartini (2001), we will characterize the reportative CD as an evidential, and we will ask to what extent the reportative and X-marking uses of this form can be traced back to a common core. Our discussion will link two previously unconnected lines of research: vFI’s agenda on X-marking and recent work on reportative evidentials. On the one hand, vFI suggest that X-marking, across its different uses, manipulates the default domain of a modal operator. On the other, Faller (2019) argues that the reportative evidential in Cuzco Quecha switches default parameters associated with an illocutionary operator. Taking inspiration from Faller 2019, we will propose that the reportative reading arises when the CD interacts with a default assertoric operator. But, unlike Faller, we will take this operator to be modal, thus assimilating the reportative reading to other uses of X-marking.

The paper is organized as follows: Section 2 illustrates the CD’s X-marking profile. Section 3 shows that the reportative CD patterns with evidentials cross-linguistically. Section 4 spells out how the reportative interpretation can be derived by expanding and then restricting the domain of a covert ASSERT operator, and tentatively suggests that this strategy might also account for additional (non-reportative) readings of the CD in non-modal contexts. Finally, section 5 briefly takes stock and lays out issues for further research.

2. The CD as X-marking

2.1. X-marked conditionals

Traditionally, examples like (5a) are referred to as ‘indicative’ conditionals, whereas (5b) and (5c) are labelled ‘counterfactual’ or ‘subjunctive’ conditionals. vFI argue that these labels are misleading. First of all, the counterfactual inference (that the antecedent is false) is not always present in conditionals with the same morphological marking as (5b) and (5c). The well-known example in (6) can be felicitously uttered by a speaker that is convinced that Jones has taken arsenic. A future-oriented example like (7) (a ‘Future Less Vivid’ conditional, Iatridou 2000) does not convey that he will not take the syrup. Second, to form this kind of conditionals, subjunctive marking is neither required (e.g., Dutch lacks subjunctive morphology but can express conditionals like (5b) or (5c)) nor sufficient (e.g., in Icelandic the *past* subjunctive is needed). Given this, vFI propose to replace the traditional terms with the neutral label ‘X-marked’ conditional for (5b) and (5c) and ‘O-marked’ conditional for (5a).

- (5) a. If Miranda knows the answer, Emily knows the answer.
b. If Miranda *knew* the answer, Emily *would know* the answer.
c. If Miranda *had known* the answer, Emily *would have known* the answer.
(von Fintel and Iatridou, 2023)

- (6) If Jones had taken arsenic, he would show exactly the symptoms he is in fact showing.
(Anderson, 1951)

- (7) If he took the syrup, he would get better. (Iatridou, 2000)

Some languages use the same X-marking morphology in the antecedent and consequent of X-marked conditionals. As seen in (1), Hungarian, for instance, marks both antecedent and consequent with *-nA*. Other languages use distinct markings in antecedent and consequent. English, for example, uses past morphology in the antecedent and *would* (which has been argued to consist of the modal *woll* and past tense (Abusch, 1988; Ogihara, 1989)) in the consequent. This use of past morphology has been labelled ‘fake past’, since it doesn’t convey temporal backshift: (7) talks about future states of affairs, (5b) and (8) below are present-oriented. To express a past-oriented X-marked conditional, the past perfect is needed, as in (5c).

- (8) If I were in Rome now, I would visit my friends.

Italian also has distinct antecedent vs. consequent X-marking morphology. As the examples in (9) to (11) illustrate, the Italian CD realizes *consequent X-marking*, whereas antecedent X-marking is realized through imperfective subjunctive mood.

- (9) a. Se Sara *sapesse* la risposta, Lea **saprebbe** la risposta.
 if Sara know.SUBJ.IMP.3SG the answer Lea know.CD.3SG the answer
 ‘If Sara knew the answer, Lea would know the answer.’
 b. Se Sara *avesse* saputo la risposta, Lea **avrebbe** **saputo** la
 if Sara have.SUBJ.IMP.3SG known the answer Lea have.CD.3SG known the
 risposta.
 answer
 ‘If Sara had known the answer, Lia would have known the answer.’
- (10) Se *prendesse* lo sciroppo **starebbe** meglio.
 If take.SUBJ.IMP.3SG the medicine be.CD.3SG better
 ‘If s/he took the medicine, s/he would feel better.’
- (11) Se *fossi* a Roma adesso, **andrei** a trovare i miei amici.
 If be.SUBJ.IMP.1SG at Rome now go.CD.1SG to find the my friends
 ‘If I were in Rome now, I would go visit my friends.’

2.2. X-marked desires

In English, the clausal complement of *wish* displays antecedent X-marking (i.e., past tense), as illustrated in (12). Unlike English, many languages don’t have distinct lexical items for ‘want’ and ‘wish’. Instead, they convey the meaning of ‘wish’ by adding consequent X-marking morphology to a desiderative verb. Antecedent X-marking appears in the complement clause, as in English. The full pattern looks therefore as in (13) (Iatridou, 2000).

- (12) I wish I *were* a millionaire.
- (13) a. X-marked conditional: if p_{ant} then q_{cons}
 b. X-marked desire: I want_{cons} that p_{ant}

vFI introduce the term ‘transparent *wish* languages’ for those languages where the meaning of English *wish* is expressed by adding consequent X-marking to a desiderative predicate. Italian belongs to this category: to convey wishes, Italian employs consequent X-marking (CD morphology) on the verb *volere* (‘want’) and antecedent X-marking (imperfective subjunctive) in the complement clause. The example in (14) provides an illustration.²

- (14) **Vorrei** che Lia *fosse* più alta di quello che è.
 want.CD.1SG that Lia be.SUBJ.IMP.3SG more tall than it that be.IND.PRES.3SG
 ‘I wish Lea were taller than she is.’

²As observed across Romance, Italian displays obviation (see, e.g., Farkas 1992): the subject of a subjunctive clause must be disjoint in reference from the subject of the embedding predicate. When this condition is not met, the infinitive form is used in the embedded clause, as in (i):

- (i) Sara vuole / vorrebbe andare via.
 Sara want.IND.PRES.3SG / want.CD.3SG leave away
 ‘Sara wants / would like to leave.’

2.3. X-marked necessity

Languages often distinguish between strong and weak necessity modals (von Fintel and Iatridou, 2008; Rubinstein, 2012, 2021). In English, for instance, *must* and *have to* express strong necessity while *ought* and *should* express weak necessity. One of the features of weak necessity modals is that they can be combined with the negation of a strong necessity modal without contradiction (see Rubinstein 2021 for additional tests to identify weak necessity modals), witness the contrast between (15a) and (15b).

- (15) a. You ought to do the dishes but you do not have to.
b. #You must do the dishes but you do not have to. (von Fintel and Iatridou, 2008)

While the distinction between weak and strong necessity modals in English is conveyed by lexical means, many other languages, ‘transparent *ought* languages’ (von Fintel and Iatridou 2008), construct weak necessity modals by adding X-marking morphology to a strong necessity modal. Italian is one such language: as illustrated in (16), adding CD morphology (consequent X-marking) to the strong necessity modal *dovere* yields a weak necessity modal.

- (16) (Per fare questo lavoro) **dovresti** avere la patente, ma non
(To do this job) must.CD.2SG have the drivers-license, but not
è necessario.
be.IND.PRES.3SG necessary
‘(For this job), you should have a driver’s license, but it’s not mandatory.’

To sum up the discussion in this section: CD morphology in Italian has all hallmarks of (consequent) X-marking: it is used in the consequent of X-marked conditionals, it yields a ‘wish’ interpretation when added to *volere* (‘want’) and it forms weak necessity modals when added to the strong necessity modal *dovere* (‘must’).

3. The CD as a reportative marker

As previewed in section 1, the Italian CD can have a reportative interpretation. The example in (17), e.g., can be interpreted not only as an implicit counterfactual conditional (17a) but also as a report (17b). The examples in (18) to (20) provide further illustrations. Although on its reportative reading, the CD frequently appears accompanied by reportative markers (e.g., ‘according to’, as in (18)), a reportative interpretation is also possible in the absence of additional markers of reportativity, as in (17), (19) or the naturally occurring example in (20).

- (17) Al processo Gianni **avrebbe** detto la verità.
At-the trial Gianni have.CD.3SG said the truth
a. ‘Gianni would have told the truth.’ (e.g., if the mafia hadn’t threatened him).
b. ‘Gianni reportedly told the truth.’

- (18) Secondo le ultime informazioni, il presidente **avrebbe** lasciato Roma
 According-to the latest news, the president have.CD.3SG left Rome
 ieri.
 yesterday
 ‘According to the latest news, the president (allegedly) left Rome yesterday.’
 (Squartini 2001, gloss and translation ours)
- (19) A: Perché è stato espulso Carlo?
 why be.IND.PRES.3SG been expelled Carlo
 ‘Why was Carlo expelled?’
 B: Perché **avrebbe** fumato in bagno.
 Because have.CD.3SG smoked in restroom
 ‘Because he allegedly smoked in the restroom.’
- (20) Tik Tok **starebbe** pensando ad un servizio streaming musicale.
 Tik Tok. be.CD.3SG thinking at a service streaming musical
 ‘Tik Tok is allegedly thinking about a musical streaming service.’³

The reportative reading of CD morphology has been extensively discussed in the descriptive literature on Italian and other Romance languages,⁴ but hasn’t received much attention in theoretical work. Squartini (2001) proposes that the reportative CD across Romance should be treated as an evidential marker. In this section, we will provide support for this claim by showing that the Italian reportative CD indeed patterns with reportative evidentials across languages.

Evidential markers encode the source of evidence that an individual has for a given proposition. Following standard terminology, we will refer to the individual whose evidence is tracked (in root declaratives, always the speaker) as the *origo*, to the proposition that the *origo* has evidence for as the *scope proposition*, and to the type of evidence the *origo* has as the *evidential component*. In the Cuzco Quechua examples in (21), for instance, the evidential component is that the speaker (the *origo*) has direct / reportative / conjectural evidence for the scope proposition (that it is raining).

- (21) Para-sha-mi / -si / -cha
 rain-PROG-3-DIR / REP / CONJ
 ‘It is raining, I see / I heard / I gather.’ (Faller, 2002)

There is a wide consensus that, across languages and types of evidentials, the scope proposition is at-issue content, but the evidential component is not at-issue (Izvorski, 1997; Faller, 2002; Murray, 2010, 2017; Faller, 2019).⁵ Furthermore, a widely attested cross-linguistic pattern is that reportatives, unlike other evidentials, are compatible with denials of the scope proposition

³<https://gamelegends.it/bytedance-la-societa-di-tik-tok-starebbe-pensando-ad-un-servizio-streaming-dedicato-alla-musica/>

⁴The reportative reading is also available for the French and Portuguese CD. In Spanish, a reportative interpretation of the CD is restricted to journalistic contexts (see Squartini 2001 and references therein).

⁵This is not completely uncontroversial. See Korotkova 2016 for a different view.

(see AnderBois 2014 for typological evidence and discussion of potential counterexamples). In what follows, we will see that the reportative CD behaves like reportative evidentials on both of these counts.

3.1. (Not)-at-issueness

In this section, we show that the reportative component of the CD comes out as not-at-issue and the reported proposition as at-issue with respect to a number of tests for (not)-at-issueness proposed in the literature.

The QUD test. According to this test, a proposition is at-issue if it can answer a Q(uestion) U(nder) D(iscussion) (Papafragou, 2006; Tonhauser, 2012; Faller, 2019). The examples in (22) and (23) apply the QUD test to the reportative CD. In (22), the reported proposition (that Carlo smoked in the restroom) successfully addresses the QUD. However, B's attempt to use the reportative component to address A's question in (23) (i.e., B knows *because she was told*) results in infelicity. Compare this with the alternative, felicitous, reply in B' (with propositional speech reports, both the attitude and the embedded proposition can be at-issue, Simons 2007).

- (22) *Context:* Carlo was expelled from school. B heard a rumor that Carlo was caught smoking in the restroom and thinks that this was the reason for his expulsion.

A: Perché è stato espulso Carlo?
 why be.IND.PRES.3SG been expelled Carlo
 'Why was Carlo expelled?'

B: **Avrebbe** fumato in bagno.
 have.CD.3SG smoked in restroom.
 'He smoked in the restroom, I heard.'

- (23) *Context:* Carlo was expelled from school. B says he was expelled because he was caught smoking in the restroom.

A: Come lo sai?
 How it know.IND.PRES.2SG
 'How do you know this?'

B: # Lo **avrebbe** fatto.
 it have.CD.3SG done
 'He did it, I heard.'

B': Me lo hanno detto.
 to.me it have.IND.PRES.3PL said
 'I was told that he did it.'

Challengeability. A second test for (not-)at-issueness rests on the assumption that only at-issue-content can be directly challenged. Accordingly, a proposition is said to be at-issue if it can be targeted by direct denials such as *that's not true* (Faller, 2002; Papafragou, 2006; Tonhauser, 2012). While the challengeability test and the QUD test do not always align (see Koev 2018 for discussion), they do yield the same results for the reportative CD: according to the challengeability test, the reported proposition again comes out as at-issue since it can be directly challenged, as in (24), and the reportative component as not-at-issue, witness (25).

(24) *Context:* A is convinced that the rumor about Carlo is false — Carlo is not a smoker.

B: Carlo **avrebbe** fumato in bagno

Carlo have.CD.3SG smoked in restroom

‘Carlo smoked in the restroom, I heard.’

A: Non è vero. Carlo non fuma.

not be.IND.PRES.3SG true Carlo not smoke.IND.PRES.3SG

‘That’s not true. Carlo doesn’t smoke.’

(25) *Context:* A is convinced that B hasn’t really heard a rumor about Carlo smoking.

B: Carlo **avrebbe** fumato in bagno.

Carlo have.CD.3SG smoked in restroom

‘Carlo smoked in the restroom, I heard’

A: # Non è vero. Nessuno ti ha detto questo.

not be.IND.PRES.3SG true nobody to.you have.IND.PRES.3SG said this

‘That’s not true. Nobody told you that.’

Positive / negative answers. Another test for (not-)at-issueness relies on the assumption that the set of alternatives in a question denotation is determined only by the at-issue content (Tonhauser, 2012). This entails that *yes/no* answers followed by a positive / negative continuation will only be felicitous if the continuation confirms / denies at-issue content. The example in (26) applies this test to the reportative CD.

As is common for evidentials cross-linguistically, the reportative CD displays interrogative flip: the origo switches from the speaker to the hearer (Garrett, 2001). As a result, B’s question in (26) conveys that the *hearer* has reportative evidence regarding the issue of whether Carlo smoked, and asks the hearer to answer the question on the basis of that evidence. A negative answer that denies that Carlo smoked (as in B) is completely felicitous. In contrast, a negative reply that denies the evidential component (that the hearer has reportative evidence regarding whether Carlo smoked) is distinctly odd, witness C. Hence, the reportative component patterns once more as not-at-issue while the scope proposition is at-issue.

(26) A: Carlo **avrebbe** fumato in bagno?

Carlo have.CD.3SG smoked in restroom

‘Did Carlo smoke in the restroom, given what you heard’

B: No, non ha fumato in bagno.

No not have.IND.PRES.3SG smoked in restroom

‘No, he didn’t smoke in the restroom.’

C: # No, ho visto che ha fumato.

No have.IND.PRES.1SG seen that have.IND.PRES.3SG smoked

‘No, I *witnessed* that he smoked.’

3.2. Lack of Commitment

A widely attested cross-linguistic pattern is that a speaker uttering a sentence with a reportative evidential needs not be committed to the reported proposition (AnderBois, 2014). This is also

true for the Italian reportative CD (see, e.g., Greco 2020). In (27), the speaker follows up her reportative claim with a denial of the reported proposition (that Carlo smoked in the restroom).⁶

(27) *Context:* B has heard that Carlo smoked in the restroom, but is convinced that the rumor is false — Carlo is not a smoker.

A: Perchè è stato espulso Carlo?
 why be.IND.PRES.3SG expelled Carlo
 ‘Why was Carlo expelled?’

B: **Avrebbe** fumato in bagno, ma io non ci credo.
 have.CD.3SG smoked in restroom but I not it believe.IND.PRES.1SG
 ‘He allegedly smoked in the restroom, but I don’t believe it.’

Let’s take stock. Section 2 demonstrated that the Italian CD has all the hallmarks of X-marking. In this section we have shown that, on its reportative use, the CD patterns with reportative evidential markers cross-linguistically. The discussion so far raises the question of whether the reportative reading of the CD can be assimilated to some extent to its X-marking uses. We turn to this question next.

4. Unifying constructions

Our aim in this section is to explore an analysis of the reportative CD that accounts for its profile as an evidential marker and is at the same time consistent with its X-marking uses. To do so, we will bring together vFI’s research program and recent work on reportative evidentials. In particular, we will take inspiration from Faller’s (2019) analysis of the Cuzco Quechua reportative *-si*. The key idea can be summarized as follows: (i) in the uses discussed by vFI, X-marking operates on the domain of a (covert or overt) modal, (ii) Faller (2019) argues that reportatives switch default parameters associated with an illocutionary operator, (iii) we will propose that, on its reportative use, the CD interacts with an *assertoric* operator, but unlike Faller, we will take this covert operator to be a *modal* quantifier (in keeping with the X-marking profile of the CD). We will furthermore hypothesize that this interaction involves two operations argued to be at work in other X-marking uses: domain widening (as in X-marked conditionals) and domain narrowing (as in weak necessity modals).

In the next two sub-sections we will (briefly and informally) summarize the core ingredients of Faller’s proposal (section 4.1) and vFI’s discussion (section 4.2). Section 4.3 presents our proposed interaction of the CD with the assertoric operator. Section 4.4 introduces a non-reportative reading of the CD and tentatively suggests how the proposal in section 4.3 might be extended to account for this reading.

4.1. Faller 2019

Faller (2019) shows that while the Cuzco Quechua reportative *-si* doesn’t signal speaker commitment to the scope proposition, the speaker can use the reported proposition to resolve the QUD. The examples in (28) and (29) illustrate these two properties. In (28), the speaker first utters a sentence marked with *-si* and then proceeds to explicitly deny the reported proposition.

⁶See, e.g., Dendale 1993 for similar examples with the French *conditionnel*.

In the example in (29), the speaker, Pilar, uttered a reportative-marked sentence to resolve the question of whether Mario was hungry. This intention was recognized by the addressee and the conversation moved on to what Mario could eat.

- (28) Pay-kuna=s qulqi-ta saqiy-wa-n. Mana=má, ni un sol-ta
 (s)he-PL=REP money-ACC leave-1O-3 no=IMPR not one Sol-ACC
 saqi-sha-wa-n=chu.
 leave-PROG-1O-3=NEG
 ‘They left me money (I was told). (But) no, they didn’t leave me one sol.’
 (Faller, 2002)

- (29) *Context:* a family with speakers of different languages are sitting around a table. Mario says to his mother in English: ‘I’m hungry.’ Pilar, a friend, conveys this to Mario’s grandmother, who does not speak English, in Quechua (names changed):
 Mario-ta=s yarqa-sha-n.
 Mario-ACC=REP be.hungry-PROG-3
 ‘Mario is hungry (he says).’ (Conversation)
 (Faller, 2019)

This behavior poses an analytical challenge. On the one hand, the fact that the speaker needs not be committed to the reported proposition *p* indicates that reportative sentences don’t involve an assertion of *p*. On the other hand, *p* can behave as an asserted proposition in that it can be proposed and accepted for inclusion in the Common Ground. Faller’s goal is to resolve this tension. In what follows, we will sketch the gist of her proposal informally. For a formal implementation using the Table Model (Farkas and Bruce, 2010), the reader is referred to Faller’s paper.

Faller proposes that declarative sentences are associated with an illocutionary operator, PRESENT, whose only hard-wired effect is to put a proposition *p* up for discussion. Additionally, PRESENT is associated with two defaults: (simplifying slightly) (i) that the speaker is committed to the truth of *p*, and (ii) that the speaker has adequate evidence for *p* (in the sense of Grice 1989). When these defaults apply, the resulting speech act is assertion. But defaults can be overridden by contextual clues or by dedicated linguistic markers. For instance, (30a) is a case of pure presentation, the hedge in (30b) overrides (ii), and rising intonation in (30c) (Farkas and Roelofsen, 2017) overrides (i).

- (30) a. Eating chocolate is unethical. Discuss.
 b. I don’t have evidence, but I definitely believe a clear and positive purpose will attract like-minded external talent. (<https://tinyurl.com/yatw9crs>)
 c. Amalia left?
 (Faller, 2019)

Evidential markers are among the devices that can override the defaults associated with PRESENT. Specifically, Faller proposes that reportative *-si* does so by (a) assigning commitment to *p* to a third party ‘principal’ (distinct from the speaker), and (b) signaling that the speaker’s evidence for *p* is reportative. Absence of commitment on the part of the speaker follows directly from (a). To explain why a speaker can use a reportative-marked sentence to resolve a QUD with the reported proposition, Faller relies on a pragmatic principle that conversational participants

are expected to observe, Walker's (1996) Collaborative Principle in (31). Given this principle, if the speaker doesn't explicitly and promptly express disagreement with the reported proposition, they will be taken to accept it, i.e., to be committed to it from that point on (albeit with a weaker commitment than if they had asserted it, see Gunlogson 2008 on 'source' vs. 'dependent commitments').

- (31) COLLABORATIVE PRINCIPLE: Discourse participants must provide evidence of a detected discrepancy in commitment as soon as possible.

(Faller 2019, adapted from Walker 1996)

4.2. von Fintel & Iatridou 2023

While vFI leave open the question of whether a unified account of the different uses of X-marking is possible, they suggest that the common denominator in all the uses they discuss is that X-marking interacts with a modal and signals a departure from the default domain of quantification of this modal. In the case of conditionals, X marking *widens* the default domain; in the case of necessity modals, X-marking instead *restricts* the modal domain.⁷

Conditionals and domain widening vFI's characterisation of the contribution of X-marking in conditionals crucially builds on Stalnaker's work (Stalnaker, 1968, 1975). The key insight is that O-marked conditionals operate within the context set (the set of worlds compatible with all the propositions presupposed in the conversation), whereas X-marked conditionals may reach out of this domain.

vFI reformulate the idea within a Kratzerian semantics for conditionals (Kratzer, 1986), where (i) *if* p , q conditionals involve a modal operator, and (ii) the *if*-clause restricts the domain D of this modal to a subset of D where the antecedent, p , is true. On this view, O-marked conditionals without an overt modal (32) are taken to include a covert epistemic modal operator ranging over the speaker's epistemic set (the set of worlds compatible with what the speaker knows⁸). This accounts for the fact that a speaker uttering the conditional in (32) takes the proposition that Mary is going out to be a live possibility.

- (32) If Mary goes out, Sue will go out.

In X-marked conditionals the modal base may not be entirely contained within the epistemic set. When the antecedent is known to be false, this widening is necessary to include worlds where the antecedent is true (e.g., worlds where Mary went out in (33)). In the case of (6), (repeated below as (34)), the idea is that we place ourselves in a situation where Jones is showing the symptoms that he is in fact showing. The conditional is used to convey that if we were in such a situation and then supposed that Jones took arsenic we would be able to predict his symptoms (Stalnaker, 2014).

- (33) If Mary had gone out, Sue would have gone out.

⁷vFI suggest that X-marking on desire ascriptions also signals domain widening, but discuss several issues that would need to be resolved for this idea to be maintained.

⁸vFI refer to Mackay 2019 for arguments against the context set version of this idea.

- (34) If Jones had taken arsenic, he would show exactly the symptoms he is in fact showing.
(Anderson, 1951)

Weak necessity and domain restriction One family of accounts of weak necessity (von Fintel and Iatridou 2008; Rubinstein 2012, 2014, see Rubinstein 2021 for an overview) proposes that the relative weakness associated with modals like *ought* arises through domain restriction. Leaving aside technical details, the gist of the proposal is as follows: Both strong necessity modals (*must* / *have to*) and weak ones (*ought*) are taken to be universal quantifiers over worlds. As is standard, *must* quantifies over the modal base worlds that are best with respect to an ordering source (Kratzer, 1981, 1991). Instead, *ought* quantifies over a subset of that domain (the additional restriction comes about through a secondary ordering source). As the domain of universals is a downward entailing environment, this restriction leads to a weaker claim.

As an illustration, consider the examples in (35). Intuitively, (35a) says that using Route 2 is the only way of going to Ashfield; (35b) says that using Route 2 is the best way of going to Ashfield *by some measure*. The domain restriction approach captures this intuition in the following way. Both examples involve a circumstantial modal base and a teleological ordering source. (35a) conveys that all the worlds selected by the modal base (i.e., worlds where the relevant geographical facts obtain) that are best with respect to the ordering source (where the goal of going to Ashfield is achieved) are worlds where the prejacent is true (the addressee uses Route 2). (35b) conveys that all the worlds in the modal base where the goal is achieved and *which are optimal by an additional measure* (e.g., considerations such regarding speed, comfort, price, scenery...) are worlds where the prejacent is true.

- (35) a. To go to Ashfield, you have to / must use Route 2.
b. To go to Ashfield, you ought to /should use Route 2.
(von Fintel and Iatridou, 2008)

4.3. The reportative CD as X-marking

In this section, we will pursue the idea that the reportative interpretation arises when the CD interacts with a default assertoric operator (in the spirit of Faller⁹), which we will take to be a modal operator (in line with vFI on other uses of X-marking).

We will adopt the common assumption that assertions are implicitly modalized (Hacquard, 2006; Alonso-Ovalle and Menéndez-Benito, 2010; Chierchia, 2013; Meyer, 2013), and propose that the covert modal associated with assertions (ASSERT) quantifies over worlds compatible with the speaker's reliable evidence. This is meant to encode the intuition that by asserting a proposition *p* the speaker signals that they have reliable evidence for *p* (cf. Faller's adequate evidence requirement). Our proposed denotation for ASSERT is thus as in (36), where $Ev(sp)(w)$ stands for the set of worlds compatible with the speaker's reliable evidence in the world of evaluation (henceforth, the 'evidence set').

- (36) $\llbracket \text{ASSERT} \rrbracket = \lambda p. \lambda w. Ev(sp)(w) \subseteq p$

⁹It should be mentioned that Faller (2019) argues against a modal account for the Cuzco Quechua reportative. What we are taking from her proposal is the idea that reportatives can switch the settings associated with a default operator.

We will further assume that when CD morphology operates on ASSERT, it performs both domain expansion and domain restriction. Kratzer (2012) argues that the reportative reading of modals involves an informational conversational background, defined as in (37). She proposes, e.g., that the German modal *sollen*, on its reportative reading, is interpreted with respect to a realistic modal base and an informational ordering source.¹⁰ Following Kratzer, we will assume that the reportative reading of the CD also involves an informational ordering source.

- (37) An informational conversational background is a function f s.t. for any w in the domain of f , $f(w)$ represents the intentional content of some source of information in w .
(Kratzer, 2012)

Additionally, we will take the domain of ASSERT to be minimally expanded to ensure that the modal base is diverse with respect to the prejacent p (that is, that the modal base includes both p and $\neg p$ worlds, Condoravdi 2002), and thus that the ordering source does not make a trivial contribution. We model this as in (38), where $Sim_w(p)$ stands for the set of p -worlds that resemble w no less than any other p -world (Heim, 1992).¹¹ Given that any world is maximally similar to itself, p -worlds will only be added if $Ev(sp)(w)$ does not already contain p -worlds (and likewise for $\neg p$ -worlds). It is the (potentially) expanded modal domain, $Ev^+(sp)(w)$, that is then restricted by the informational ordering source.

$$(38) \quad \begin{aligned} & Ev^+(sp)(w) = Ev(sp)(w) \cup \\ & \{w' : \exists w'' [w'' \in Ev(sp)(w) \ \& \ w' \in Sim_{w''}(p)]\} \cup \\ & \{w' : \exists w'' [w'' \in Ev(sp)(w) \ \& \ w' \in Sim_{w''}(\neg p)]\} \end{aligned}$$

The resulting truth conditions for an example like (39) are given in (40): (39) will be true iff Carlo smoked in all the worlds in the expanded modal base that best conform to the content of a salient report.

- (39) Carlo **avrebbe** fumato.
Carlo have.CD.3SG smoked
'Carlo smoked, I heard.'

$$(40) \quad \lambda w. BEST_{info(w)}(Ev^+(sp)(w)) \subseteq \{w' : smoke(C)(w')\}$$

Let's now see how this accounts for the properties of the reportative CD discussed in section 3. Recall that assertions with the reportative CD are consistent with denials of the reported proposition p (section 3.2). A case in point is B's reply in (27), repeated below as (41). This denial indicates that the speaker considers the report unreliable. If so, the speaker's reliable evidence must rule out p (that Carlo smoked in the restroom). This is correctly predicted to be possible: (40) can be true even if p is false throughout the original modal base (the set of worlds compatible with the speaker's reliable evidence).

¹⁰Faller (2017) takes reportative *sollen* to involve instead an informational *modal base*. Kratzer (2012) (see footnote 6, Ch.2) argues that informational conversational backgrounds should be ordering sources, since they don't necessarily represent consistent information.

¹¹A similar operation has been proposed for the doxastic modal base of desire predicates (see Villalta 2008; Rubinstein 2017; Grano and Phillips-Brown 2022 on *want*).

- (41) (Carlo) **avrebbe** fumato in bagno, ma io non ci credo.
 Carlo have.CD.3SG smoked in restroom but I not it believe.IND.PRES.1SG
 ‘Carlo allegedly smoked in the restroom, but I don’t believe it.’

The fact that the reported proposition is at-issue (section 3.1) is also consistent with our proposed semantics above. Given (40), this proposition is the prejacent of a modal. And it is well-known that the prejacent of modals can be at-issue (von Stechow and Gillies, 2008). The example in (42), from Faller (2019), illustrates this. The prejacent of *must* in B’s reply (that Louise has left town) passes two standard tests for at-issueness: it addresses A’s question and is directly challenged by C’s reply.

- (42) A: Why has Louise not been coming to our meetings recently?
 B: She must have left town. (QUD test)
 C: No, she hasn’t. (Challengeability) (Faller, 2019)

That the reportative component is not-at-issue (section 3.1) follows since the fact that there was a report is not part of the proposition expressed. This contrasts with propositional speech reports: A’s assertion in (43) is true iff *there is an event of saying* by John such that Carlo smoked in the restroom in all the worlds compatible with what was said. Given this, B can felicitously challenge the existence of the report.

- (43) A: John said that Carlo smoked in the restroom
 B: That’s not true. Nobody said that.

The proposal makes a further prediction: we are assuming that sentences with the reportative CD are modal. Therefore, we should be able to challenge the modal claim, as is generally possible with modals. For instance, in (44), from Faller (2002), B denies the modal claim and not the prejacent (B’s reply does not rule out that Jo is, after all, the thief). As expected, challenging the modal claim is also possible with the reportative CD. In the example in (45), B’s reaction to A’s CD-marked statement denies that the mayor accepting the bribe follows from the content of the report, not that the mayor accepted the bribe.¹²

- (44) A: Jo must be the thief.
 B: That’s not true. There are other plausible suspects. Jo may be entirely innocent.
 (Faller, 2002)

¹²Interestingly, Faller (2017) reports that this kind of denial is not possible for the German modal *sollen*, on its reportative reading. According to Faller, it is not possible to reply to the sentence in (ii) below with *That’s not true. It doesn’t follow from what was said that a thief stole 500 mops*. We do not know what the source of this difference between *sollen* and the Italian CD might be. (Faller attributes the impossibility of denying the modal claim in the case of *sollen* to the fact that the informational background is a modal base in her analysis. The reader is referred to her paper for discussion).

(ii) Ein Dieb soll 500 Wischmopps entwendet haben.
 A thief SOLL 500 mops stolen have.PRES.3PL
 ‘A thief reportedly stole 500 mops.’

- (45) *Context:* A and B are commenting the content of a recent editorial that attempts to reconstruct an intricate political scandal involving the mayor.

A: E così il sindaco **avrebbe** accettato la mazzetta dal partito rivale.
 and so the mayor have.CD.3SG accepted the bribe from-the party rival
 ‘So, the mayor allegedly accepted a bribe from the rival party’

B: No, ti sbagli. Questo non si evince
 no you be.wrong.IND.PRES.2SG this not REFLEX follow.IND.PRES.3SG
 da quello che c’è scritto.
 from what that there.be.IND.PRES.3SG written
 ‘No, you are wrong. That doesn’t follow from what was written.’

The discussion so far raises an obvious question: if the reportative reading of the CD comes about by manipulating a default domain of quantification, we might expect the CD to give rise to additional readings if a different kind of ordering source (i.e., non-reportative) is contextually salient. In the next section, we will suggest that this expectation is met. We will discuss a non-reportative reading of the CD, and tentatively propose that this reading might arise through the same mechanism we have proposed in this section for the reportative interpretation.

4.4. A non-reportative reading: the Pictionary example

Suppose that A and B are playing Pictionary. At some point in the game, B draws the picture in Figure 1¹³. After the sand in the hourglass runs out, the dialogue in (46) takes place.



Figure 1: B’s drawing

- (46) A: Cos’è questo?!
 what.be.IND.PRES.3SG this
 ‘What’s this?’
- B: Questo **sarebbe** un uomo che con il telescopio osserva le stelle.
 this be.CD.3SG a man that with the telescope observe.PRES.3SG the stars
 ‘This is supposed to be a man that looks at the stars with a telescope.’

B’s reply, whose verb bears CD morphology, clearly doesn’t involve a report. We would like to tentatively suggest that this use of the CD also involves the expansion-restriction mechanism we have invoked for the reportative CD. The idea would be as follows: in this case, the salient evidence comes from the picture. The proposition *p* (that the picture represents a man that looks at the stars with a telescope) doesn’t follow from the evidence, and may even be inconsistent

¹³<https://www.slideshare.net/slideshow/creatividad-final-12053788/12053788>

with it. B — the speaker — is aware of that, and would therefore shy away from plainly asserting this proposition (i.e., from uttering ‘This *is* a man that...’). Using the CD makes sure that the modal domain includes p worlds, without committing the speaker to the truth of p . The expanded modal domain would then be restricted by an ordering source related to the speaker’s intentions (rather than a reportative one).¹⁴

5. Concluding remarks

Our discussion of the Italian reportative CD makes a twofold contribution. On the empirical side, we have provided evidence that the reportative CD patterns with evidentials cross-linguistically, thus supporting Squartini’s (2001) characterization of the CD as an evidential marker. On the theoretical side, we have explored how this reportative reading fits with the general picture of X-marking outlined by vFI. We have argued that the reportative reading of the Italian CD (and potentially also the non-reportative reading discussed in section 4.4) can be plausibly derived by means of two strategies that have been taken to be at work in other uses of X-marking: modal domain expansion and modal domain restriction. However, we have not provided an implementation that spells out how CD morphology introduces these operations in the semantic composition and explains why its effect differs in other environments.

At the end of their programmatic paper, vFI leave the development of a formal implementation of their core insight — that X-marking signals a departure from a default value of a modal parameter — as an open challenge. Our goal in this paper has not been to meet this challenge. Instead, our contribution to this research program has been to show that the reportative CD can be taken to instantiate what vFI take to be the common denominator underlying other uses of X-marking. Future work will have to assess whether a unified meaning for the Italian CD can be maintained, and to what extent the proposal can be extended / parametrized to account for differences between closely related languages (e.g., for the fact that, in Spanish, the reportative reading of CD morphology is limited to journalistic contexts and Pictionary-like examples like (46) are not available.¹⁵) Another pressing question has to do with the types of ordering sources that can restrict the domain of ASSERT. While section 4.4 shows that non-reportative readings are available, we don’t seem to find, e.g., ordering sources related to likelihood. Further research is needed to determine what the range of possible readings is and what explains the attested restrictions.

¹⁴German *sollen* has similar uses. Hinterwimmer (2013) argues that *sollen* requires the existence of a previous intentional act (of which reports are just one example). This condition is argued to underlie also root uses of *sollen* as in (iii). See Bochnak and Csipak 2018 and Hinterwimmer et al. 2019 for alternative views, and Hinterwimmer 2019 for diachronic evidence for a unified analysis of the different uses of *sollen*.

(iii) *Context*: Nobody has said anything about what people should bring to the party. I ask you: What should everybody bring?

Peter soll Brötchen mitbringen.

Peter SOLL bread.rolls bring.with

‘Peter is supposed to bring bread rolls.’

(Hinterwimmer et al., 2019)

¹⁵Arregui and Rivero (2018) discuss other differences between the Spanish and Italian CD, which they suggest can be traced back to the internal composition of this morphological form— they assume that the Spanish CD is inherently imperfective while the Italian CD seems to be perfective-based (Squartini, 1999). Further research is needed to determine whether this morphological difference might have an impact on the availability of the reportative reading.

References

- Abusch, D. (1988). Sequence of tense, intensionality and scope. In H. Borer (Ed.), *Proceedings of the 7th West Coast Conference on Formal Linguistics*, pp. 1–14.
- Alonso-Ovalle, L. and P. Menéndez-Benito (2010). Modal indefinites. *Natural Language Semantics* 18(1), 1–31.
- AnderBois, S. (2014). On the exceptional status of reportative evidentials. In T. Snider, S. D’Antonio, and M. Weigand (Eds.), *Proceedings of the 24th Semantics and Linguistic Theory conference*, pp. 234–254.
- Anderson, A. R. (1951). A note on subjunctive and counterfactual conditionals. *Analysis* 12 (2), 35–38.
- Arregui, A. and M. L. Rivero (2018). Unconditional readings and the simple conditional tense in Spanish: inferentials, future-oriented intentionals, future-in-the-past. *Probus* 30(2), 305–337.
- Bochnak, M. R. and E. Csipak (2018). Reportative deontic modality in English and German. In R. Truswell, C. Cummins, C. Heycock, B. Rabern, and H. Rohde (Eds.), *Proceedings of Sinn und Bedeutung* 21, pp. 199–214.
- Chierchia, G. (2013). *Logic in grammar*. Oxford: Oxford University Press.
- Condoravdi, C. (2002). Temporal interpretations of modals: Modals for the present and for the past. In D. I. Beaver, L. D. Casillas Martinez, B. Z. Clark, and S. Kaufmann (Eds.), *The Construction of Meaning*, pp. 59–87. Stanford: CSLI.
- Dendale, P. (1993). Le conditionnel de *l’information incertaine*: Marqueur modal ou marqueur évidentiel? In H. Gerol (Ed.), *Actes du XXe Congrès International de Linguistique et Philologie Romanes*, pp. 165–176.
- Faller, M. (2002). *Semantics and pragmatics of evidentials in Cuzco Quechua*. Ph. D. thesis, Stanford University.
- Faller, M. (2017). Reportative evidentials and modal subordination. *Lingua* 186–187, 55–67.
- Faller, M. (2019). The discourse commitments of illocutionary reportatives. *Semantics and Pragmatics* 12, 1–46.
- Farkas, D. (1992). On obviation. In I. A. Sag and A. Szabolcsi (Eds.), *Lexical Matters*, pp. 109–137. Stanford: CSLI.
- Farkas, D. and K. B. Bruce (2010). On reacting to assertions and polar questions. *Journal of Semantics* 27(1), 81–118.
- Farkas, D. F. and F. Roelofsen (2017). Division of labor in the interpretation of declaratives and interrogatives. *Journal of Semantics* 34, 237–289.
- von Fintel, K. and A. S. Gillies (2008). CIA leaks. *The Philosophical Review* 117(1), 77–98.
- von Fintel, K. and S. Iatridou (2008). How to say ‘ought’ in foreign: the composition of weak necessity modals. In J. Guéron and J. Lecarme (Eds.), *Time and Modality*, pp. 115–141. Springer.
- von Fintel, K. and S. Iatridou (2023). Prolegomena to a theory of X-marking. *Linguistics and Philosophy* 46, 1467–1510.
- Garrett, E. J. (2001). *Evidentiality and assertion in Tibetan*. Ph. D. thesis, UCLA.
- Giacone-Ramat, A. and M. Topadze (2007). The coding of evidentiality: a comparative look at Georgian and Italian. *Rivista di Linguistica* 19, 7–38.
- Grano, T. and M. Phillips-Brown (2022). (Counter)factual want ascriptions and conditional belief. *Journal of Philosophy* 119(12), 641–672.

- Greco, P. (2020). On the political use of the reportative conditional in Italian newspapers. *Anuari de filologia. Estudis de lingüística* (10/2020), 105–121.
- Grice, H. P. (1989). *Studies in the way of words*. Cambridge, MA: Harvard University Press.
- Gunlogson, C. (2008). A question of commitment. *Belgian Journal of Linguistics* (22), 101–136.
- Hacquard, V. (2006). *Aspects of modality*. Ph. D. thesis, MIT.
- Heim, I. (1992). Presupposition projection and the semantics of attitude verbs. *Journal of Semantics* 9(3), 183–221.
- Hinterwimmer, S. (2013). The semantics of German *sollen*. Talk presented at the 19th International Congress of Linguists, University of Geneva.
- Hinterwimmer, S. (2019). Diachronic evidence for a unified semantics of the German modal verb *sollen*. Talk presented at *Formal Diachronic Semantics 6*, Universität zu Köln.
- Hinterwimmer, S., L. Matthewson, and H. Truckenbrodt (2019). Competition between the German root modal *sollen* and the imperative. In M. Espinal, E. Castroviejo, M. Leonetti, L. McNally, and C. Real-Puigdollers (Eds.), *Proceedings of Sinn und Bedeutung 21*, pp. 515–532.
- Howell, J. (2012). On modal interpretations of the French *conditionnel*. In S. Lima, K. Mullin, and B. Smith (Eds.), *Proceedings of the 39th Annual Meeting of the North East Linguistic Society*, pp. 401–413.
- Iatridou, S. (2000). The grammatical ingredients of counterfactuality. *Linguistic Inquiry* 31(2), 231–270.
- Izvorski, R. (1997). The present perfect as an epistemic modal. In B. Jackson (Ed.), *Proceedings of the 12th Semantics and Linguistic Theory conference*, pp. 222–239.
- Koev, T. (2018). Notions of at-issueness. *Language and Linguistic Compass* 12(12), 1–16.
- Korotkova, N. (2016). *Heterogeneity and uniformity in the evidential domain*. Ph. D. thesis, UCLA.
- Kratzer, A. (1981). The notional category of modality. In H. Eikmeyer and H. Rieser (Eds.), *Worlds, Words, and Contexts*, pp. 38–74. Berlin and New York: de Gruyter. Reprinted in Kratzer (2012), chapter 3.
- Kratzer, A. (1986). Conditionals. *Chicago Linguistics Society* 22(2), 1–15.
- Kratzer, A. (1991). Modality. In A. von Stechow and D. Wunderlich (Eds.), *Semantics: An International Handbook of Contemporary Research*, pp. 639–650. Berlin: de Gruyter.
- Kratzer, A. (2012). *Modals and conditionals. New and revised perspectives*. Oxford University Press.
- Mackay, J. (2019). Modal interpretation of tense in subjunctive conditionals. *Semantics and Pragmatics* 2(12), 1–29.
- Meyer, M.-C. (2013). *Ignorance and grammar*. Ph. D. thesis, MIT.
- Murray, S. (2010). *Evidentiality and the structure of speech acts*. Ph. D. thesis, Rutgers University.
- Murray, S. (2017). *The Semantics of evidentials*. Oxford Studies in Semantics and Pragmatics. Oxford University Press.
- Ogihara, T. (1989). *Temporal reference in English and Japanese*. Ph. D. thesis, University of Texas Austin.
- Papafragou, A. (2006). Epistemic modality and truth conditions. *Lingua* 116, 1688–1702.
- Rubinstein, A. (2012). *Roots of modality*. Ph. D. thesis, University of Massachusetts Amherst.

- Rubinstein, A. (2014). On necessity and comparison. *Pacific Philosophical Quarterly* 4(95), 512–554.
- Rubinstein, A. (2017). Straddling the line between attitude verbs and necessity modals. In A. Arregui, M. L. Rivero, and A. Salanova (Eds.), *Modality across syntactic categories*, pp. 109–131. Oxford: Oxford University Press.
- Rubinstein, A. (2021). Weak necessity. In D. Gutzmann, C. M. Lisa Matthewson, H. Rullmann, and T. E. Zimmermann (Eds.), *The Wiley Blackwell Companion to Semantics*, pp. 1–44. Wiley Blackwell.
- Simons, M. (2007). Observations on embedding verbs, evidentiality, and presupposition. *Lingua* 117(6), 1034–1056.
- Squartini, M. (1999). Riferimento temporale, aspetto e modalità nella diacronia del condizionale italiano. *Vox Romanica* (58), 57–82.
- Squartini, M. (2001). The internal structure of evidentiality in Romance. *Romance Studies in Language* 25, 297–334.
- Stalnaker, R. (1975). Indicative conditionals. *Philosophia* 5(3), 269–286.
- Stalnaker, R. (2014). *Context*. Oxford University Press.
- Stalnaker, R. C. (1968). A theory of conditionals. In N. Rescher (Ed.), *Studies in Logical Theory*, pp. 98–113. Oxford: Blackwell.
- Tonhauser, J. (2012). Diagnosing (not-)at-issue content. In E. Bogal-Allbritten (Ed.), *Proceedings of the Sixth Conference on the Semantics of Under-Represented Languages in the Americas* 6. University of Massachusetts Amherst: GLSA.
- Villalta, E. (2008). Mood and gradability: An investigation of the subjunctive mood in Spanish. *Linguistics and Philosophy* 31, 467–522.
- Walker, M. A. (1996). Inferring acceptance and rejection in dialog by default rules of inference. *Language and Speech* 2-3(29), 265–304.