Evidentiality below and above speech acts[†]

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This is a DRAFT, and comments are very welcome.

Abstract

This paper addresses the question whether evidentiality as a (cross)-linguistic category can and should be associated with either the illocutionary or the propositional (that is, truth-conditional) level of meaning. Faller (2002) analyses evidential enclitics in Cusco Quechua (CQ) as illocutionary operators, but for other languages it has been proposed that evidentials are modals and as such are propositional operators. It will be argued that these two ways of analysing evidentials are not incompatible with each other but reflect a genuine cross-linguistic difference. It will be shown through a comparison of the linguistic behaviour of the German reportative modal *sollen* with that of the CQ Reportative enclitic in a number of tests that the former is a propositional operator, whereas the latter is an illocutionary modifier.

1 Introduction

Despite the growing number of studies on evidentials and evidentiality, there are several questions in the theory of evidentiality which have not yet received satisfactory answers. One of them is whether it is possible to assign evidentiality as a linguistic category to a specific level within grammar conceived of as a hierarchical structure. Within semantics/pragmatics this question amounts to the question whether evidentials contribute to propositional content or whether they constitute a comment by the speaker on that content. In my own work, I have argued that Cusco Quechua (CQ) evidentials are of the latter type and have proposed analysing them as illocutionary modifiers (Faller 2002, *to appear*). For other languages, it has been claimed that evidentials are a type of epistemic modal, and as such contribute to propositional content (e.g. Ehrich 2001, Garrett 2000, Izvorski 1997). In this paper I will defend the hypothesis that these different ways of analysing evidentials capture a true difference in the nature of the elements analyzed. That is, I claim that some evidentials contribute to the speech act and others to propositional content. It is therefore not possible to tie the locus of evidentiality to a particular level of meaning. An alternative approach would assume that evidentiality necessarily belongs to either the speech act level or the level of propositional content, but I will show that this is not viable for at least the reportative type of information source. The discussion will focus on two Reportative markers: the CQ enclitic *–si*, and the reportative uses of the German modal *sollen*. Their distinct linguistic behaviour indicates that CQ *–si* operates on the level of speech acts, whereas German *sollen* operates below this level, that is, within propositional content. This accords with existing analyses of these two elements: Faller (2002, *to appear*) analyzes

CQ –*si* as an illocutionary modifier, and Ehrich (2001) analyzes reportative *sollen* within possible world semantics along the same lines as other German modals.

The article is structured as follows. Section two presents data illustrating the basic uses of the CQ Reportative evidential and German *sollen*. Section three discusses linguistic tests for distinguishing between illocutionary meaning and propositional content and applies these to the two Reportatives. The main conclusions are summarized in section 4.

2 The CQ and German Reportatives

Evidentiality is the linguistic marking of the speaker's source of information in assertions (or, in some languages, including CQ, the grounds for asking a question (Faller 2002)). One prominent evidential subcategory is the specification of the source as second-hand, that is, information that was acquired through reports by others. The focus of this paper are markers of this evidential category in CQ and German. The other two major categories are Inference and Direct evidence, where many languages combine Reported and Inference in a single Indirect evidential (Willett 1988).

As in my previous work, I take a narrow view of evidentiality as a distinct category from epistemic modality. Epistemic modals specify the speaker's degree of certainty and/or the necessity/possibility of the truth of the propositional content. Conceptually, the two categories are clearly distinct, though empirically it is often not easy to determine for a given morpheme whether it is an evidential or an epistemic modal. Neither the CQ Reportative nor German *sollen* necessarily express epistemic modality, though a degree of certainty may be implicated by both in certain contexts. Two criteria that are usually assumed for classifying a marker as an *evidential* are (i) that the maker in question encodes an evidential value as its primary meaning, and (ii) that it is a grammatical element (Anderson 1986, Aikhenvald 2004). The CQ Reportative fulfils both of these and can straightforwardly be classified as an evidential, though we will see in section 2.2 below that for German *sollen* the matter is less clear.

2.1 The Cusco Quechua Reportative

CQ[1] possesses three evidential enclitics: -*mi* (allomorph -*n*) indicates that the speaker has the best possible grounds in support of the proposition expressed p, which often amounts to having direct evidence for p; -*chá* marks that the speaker conjectures that p, and -*si* (allomorphs -*s*, -*sis*) indicates that the speaker was told that p. The examples in (1) illustrate the three evidentials in indicative sentences.[2] As shown in (1d), the evidential enclitics may be left out, in which case best possible grounds is implicated (Faller 2002).

(1) a. *Subrina-y-wan-**mi** tiya-sha-n*.
         niece-1-COM-BPG   live-PROG-3
         p='He is living with my niece.'
         EV: *s* saw that he is living with her niece.   (Conv)

   b. *Congresista-manta-s   haykuy-ta muna-n*
      congressman-ABL-REP enter-ACC want-3
      p='He wants to be a Congressman.'
      EV: *s* was told that *p*   (Conv)
   c. *Wañu-pu-n-ña-chá.*
      die-BEN-3-DISC-CONJ
      p='He will have died already.'
      EV: *s* conjectures that he died already (based on the fact that he was already very
          old when she knew him as a child)   (Conv)
   d. *Puklla-sha-n-ku kay uray-lla-pi.*
      play-PROG-3-PL   this down-LIM-LOC
      p='They are playing just down there.'   (Conv)

      The meanings of the three CQ evidential enclitics are described in Faller
(2002), and I will here only illustrate the meaning of the Reportative -*si* in some detail,
as it is the focus of this paper. The meaning of Reportative -*si* is easily described: the
speaker reports what someone else has said,[3] be it to talk about daily events as in (1b),
to tell stories as in (2a), or to report news as in (2b) (a news story about the mugging of
a tourist).

(2) a. *Chayan-si ukuku uña-qa.   Punku-ta-s   taka-ku-n,*
      arrive-REP bear   baby.animal-TOP door-ACC-REP knock-REFL-3
      ch'in.Huk punku-ta-s   taka-ku-n,   ch'in.
      silent other door-ACC-REP knock-REFL-3 silent
      p='The son of the bear arrived. He knocked on a door, silence. He
      knocked on another door, silence.'
      EV: reportative information source.   (Itier 1999:44)
    b. *wakin-si maqa-mu-n-ku hayt'a-mu-n-ku, wakin-taq-si   riki*
      some-REP hit-CIS-3-PL   kick-CIS-3-PL   some-CONTR-REP right
      ch'usti-mu-sha-n-ku-ña
      take.away-CIS-PROG-3-PL-DISC
      p='Some hit and kicked (him), others, right, were taking (his things)
      EV: *s* was told that *p*   (Radio)

      As argued in Faller (2002), the use of -*si* does not necessarily convey a
diminished degree of certainty that the proposition embedded under it is true. For
example, if my sister tells me over the phone that my brother is working in Italy this
week, I would have to use –*si* to tell other people about it as in (3) despite the fact that I
would be entirely convinced that my brother is indeed working in Italy.

(3)   *Tura-y-qa Italia-pi-s llank'a-sha-n kay semana-pi.*
       brother-1-TOP Italy-LOC-REP work-PROG-3 this week-LOC
       p= 'My brother is working in Italy this week.'   (Faller 2002:139)
       EV: *s* was told that *p*

      All three evidential enclitics can also occur in content questions. (3) is an
example with the Reportative –*si*.

(4) *May-manta-**s**   chay runa ka-n-man*.
     where-ABL-REP this   man be-3-COND
     'Where could this man be from?'   (Itier 1995:290)

I will come back to the meaning of the Reportative in questions in section 3 where additional facts about *–si* will be presented that point towards analysing it as an illocutionary modifier.

     The three evidential enclitics are part of a slightly larger set of focus enclitics (Cusihuaman 1976, Muysken 1995), but form an identifiable subset defined by their evidential semantics. Because their primary meaning is evidential and because they are grammatical elements, the evidential enclitics clearly qualify as evidentials according to any definition. The case is less clear for German *sollen.*

2.2 The reportative use of German *sollen*

While German does not have a full-fledged system of evidentials, some modal verbs have uses with purely reportative meanings, including *sollen* and *wollen* illustrated in (6) (Diewald 1999, Ehrich 2001, Mortelmans 2000).

(6) a. Eine Zinssenkung *soll* unmittelbar bevorstehen.
         'A reduction in interest rates is said to be imminent.'
     b. Matthäus *will* in Bayern sehr beliebt sein.
         'Matthäus claims to be well liked in Bavaria.'   (Ehrich 2001: 167f)

Both (6a) and (6b) convey that the speaker obtained the information from someone else, but *wollen* is more specific than *sollen* in that it restricts this source to its subject, Matthäus in (6b). In the following, the focus will be on *sollen* as it is closer to the meaning of CQ *–si* and other reportative evidentials in languages with fully grammatical systems of evidentiality. Like CQ *–si*, the evidential use of *sollen* does not necessarily convey a low degree of certainty that *p* is true. Thus, Mortelmans (2000) observes with respect to (7) that the speaker "does not seem to doubt the fact that Honecker has made a particular statement."

(7) Selbst SED-Generalsekretär Erich Honecker soll gesagt haben, ween in der DDR
     das Salz rationiert werden müβte wie in der Sowjetunion, wäre er bereit über
     Perestrojka nachzudenken.
     'Even SED secretary-general Erich Honecker is claimed to have said that if in the
     GDR salt had to be rationed as in the Soviet Union, he would be willing to think
     about Perestrojka."   (Mortelmans 2000: 135)

     The "epistemic distance" that is often attributed to *sollen* arises, according to Mortelmans, in comparison with an unmarked indicative, but is not part of the meaning of evidential *sollen* itself. For example, suppose there is a meeting scheduled and Mo's partner calls me to say that she cannot attend because she is sick. I could excuse her at the meeting simply by saying *Mo ist krank*—'Mo is sick' or by saying *Mo soll krank sein.* The latter would normally be taken to imply that I did not trust the source enough

to assume responsibility for asserting *Mo ist krank*. This contrasts with CQ, where I would have to use the Reportative evidential, even if I completely trusted the source.

While *sollen* has the clearly evidential uses illustrated above, there is some debate whether or not it should be classified as an *evidential* in the technical sense. As mentioned above, some definitions require an evidential to have evidential semantics as its primary meaning and to be a grammatical element (Anderson 1986, Aikhenvald 2004). The indication of a reportative information source cannot be claimed to be the primary meaning of *sollen* in all its uses, as it has also deontic uses. Moreover, it is often claimed that the modal verbs in German do not form a grammatical class distinguishable on morphosyntactic grounds from content verbs (see e.g. Öhlschläger 1989). However, Diewald (1999:54ff) argues that one has to distinguish between two types of modal verbs, non- or only weakly grammaticalized modal verbs and grammaticalized modal verbs.[4] The former behave indeed like full content verbs, but the latter are deficient and can only be used as auxiliary verbs (see Diewald 1999 for details). Deontic modal verbs belong to the full content verb variety, whereas epistemic and evidential modals belong to the grammaticalized variety. Thus, the case can be made that, synchronically, there are two modals *sollen*, a deontic and a reportative one. As a reportative modal, *sollen* can be considered a grammatical element. Because the primary meaning of this variant is evidential its classification as an evidential, or, at least as what Aikhenvald (2004) calls an evidential strategy is justifiable.

Having described the basic uses of CQ *–si* and German *sollen* as reportative markers, I turn in the next section to the question to what level of meaning they contribute.

3 Distinguishing illocutionary from propositional Reportatives

As theoretical backdrop for this paper I assume the speech act theory of Searle (1969) and subsequent work in this tradition, in particular his concept of an illocutionary act, which "consists of an illocutionary force *F* and a propositional content *P*" (Searle and Vanderveken 1985). Illocutionary force contains propositional content, *F(P)*, and it is in this sense one can distinguish two different layers or levels of meaning: the illocutionary level and the propositional level. An illocutionary force has six components: illocutionary point, mode of achievement, propositional content, preparatory and sincerity conditions and a degree of strength. Linguistic elements may contribute to the propositional content *P* or to the illocutionary force *F*. Elements that modify any of the components of *F* will be called illocutionary modifiers. For example, the adverb *alas* in *Alas, he was killed* turns a simple assertion of *He was killed* into a lamentation by additionally "expressing both dissatisfaction and sadness" as part of the sincerity conditions (Vanderveken 1990:150).

Illocutionary conditions also take the form of propositions (e.g., *alas* conveys 'I am sad that *P*'), which may be true or false in their own right, and it may therefore be slightly misleading to call *P* the propositional content, or, as is sometimes done, truth-conditional content. I will nevertheless continue to use the term propositional content as it is fairly standard usage, but do thereby not intend to deny that illocutionary conditions are propositional in their own right. Now, making a theoretical distinction between these two levels of meaning may suggest that there is a strict division of what kinds of meaning are expressed on what level. However, this is not the case. In the example

above, *alas* expresses more or less the same meaning on the illocutionary level as *I am sad that* does on the level of propositional content. In fact, the two levels often share the same linguistic resources. For example, the same verbs that are used to describe speech acts, and which are therefore part of the asserted proposition, can be used to perform those acts, for example, *I baptise you John* vs. *He baptized him John* (Bierwisch 1980). Krifka (2001) argues that the conjunction *and* and universal quantifiers such as *every guest*, which are usually analyzed as belonging to the level of the propositional content, can also be used for speech-act conjunction and speech-act quantification respectively. Against this background, the hypothesis defended in this paper that in some languages evidentials contribute to the illocutionary level whilst in others (or even different evidentials the same language) they contribute to the propositional content is not surprising, but rather expected. What is needed, then, are linguistic tests for deciding which level of meaning a particular element contributes to. This question has been addressed in some depth already in the literature on epistemic modals and several tests have been proposed for determining in particular whether or not subjective epistemic modals contribute to the propositional content. The tests include (i) embedability in conditional antecedents, (ii) assent/dissent from other speakers, (iii) scope in questions, and (iv) interaction with propositional-level operators. Some of these tests are however not accepted by all researchers to show what they purport to show. For example, Faller (2002) argued that the embedability test only shows whether an element can be used descriptively, "m-performatively", or both, not necessarily whether or not it contributes to propositional content. Papafragou (*in press*) argues along similar lines that the tests that separate subjective and objective epistemic modals do so because subjective epistemic modals are indexical and rely for their interpretation on the current speaker and the here and now of the utterance.[5] I briefly summarise the main arguments regarding the embedability test in section 3.1, and apply it and the other tests to the CQ and German Reportatives in the subsequent sections. The results of the tests support the analysis of CQ *–si* as an illocutionary modifier proposed in Faller (2002) as well as the analysis of reportative *sollen* as propositional operator within possible worlds semantics proposed by Ehrich (2001).

3.1 Embedability, m-performativity, and propositional content

For the embedability test, the element in question is embedded in the antecedent of a conditional. If it falls under the scope of *if,* it is a truth-conditional element, otherwise it is not (Wilson 1975). (8) shows that the English epistemic modal *may* can not be embedded under *if.*

(8)   ?If Max may be lonely, his wife will be worried.   (Papafragou *in press*)

      In contrast, as shown in (9), objective epistemic modals can be embedded.

(9)   a. If it might be heads or it might be tails, then you should not place a bet
       b. If the gardener could be the thief, then we should watch her carefully.
                                                                    (Faller 2002:217)
The crucial observation about (9) is that it is not necessarily the speaker's assessment that there is a possibility of it being heads or tails or the gardener being the thief, but

that this possibility follows from objective facts available to anybody. The speaker of (9b) may in fact be completely certain that the gardener is not the thief. In contrast, (8) is an attempt of using *may* subjectively. Nuyts (2000) describes this distinction as one between the *descriptive* and *performative* uses of modal expressions. This terminology captures the parallelism with performative verbs, which acquire a purely descriptive meaning when embedded:

(10)   a. I conclude that the Earth is flat.
      b. If in the future I conclude that the Earth is flat, then I'm in trouble.

<div align="right">(Papafragou in press)</div>

In (10a), the speaker is performing a conclusion at the time of utterance, whereas in (10b) the act of her performing such a conclusion in the future is only described. Since epistemic modals are not performatives as such but involve a "*mental* act of evaluation of a state of affairs" (Nuyts 2000:40, *my emphasis*), I have adapted Nuyts' terminology slightly in Faller (2002) and argued that the embedding test eliminates those elements that can only be used *m*-performatively and the m-performative uses of elements that can be used both descriptively and m-peformatively such as the English epistemic modals.[6]

      Regarding the question whether or not a given element contributes to propositional content, the test is partly inconclusive. If an element does fall under the scope of *if* then we can conclude that it is used descriptively and contributes to the propositional content. However, if it fails this test, we can only conclude that it cannot be used descriptively, not necessarily that it does not contribute to propositional content.[7] Thus, this account allows for elements that are used m-performatively while at the same time contributing to propositional content.[8] The English subjective epistemic modals are arguably such elements. Papafragou (*in press*) provides a number of arguments in support of their truth-conditional analysis, three of which I will briefly present here. First, consider the sentences in (11).

(11)   a. My grandfather must be sick
      b. My grandfather may be sick
      c. My grandfather is sick.   (Papafragou *in press*)

If the epistemic modals do not contribute to truth conditions, these sentences should all express the same proposition, that is, they should be true or false in the same circumstances. However, the falsity of (11c) does not entail the falsity of (11a) or (11b). Secondly, if *may* in *Sally may come and then again she may not come* does not contribute to truth conditions, the proposition expressed by this sentence would have to be 'Sally will come and she will not come.' This proposition is contradictory, but the sentence with *may* is not. Thirdly, if epistemic modals do not contribute to propositional content, one would expect them to always have scope over propositional-level operators. But certain epistemic modals can, and even prefer to scope under negation. For example, in *John need/can not be the prime suspect* negation has scope over *need* and *can*.

      In summary, the embedding test does not distinguish elements that contribute to propositional content from those that do not, but between those that can be used descriptively and those that can not. Elements that are used m-performatively can

nevertheless contribute to propositional content. Thus, while the test does not allow us to conclude that an element does not contribute to propositional content if it fails the test, it does allow us to conclude that it contributes to propositional content when it can be embedded. In the following sections, this and the other tests will be applied to the CQ and German Reportatives.

3.2 Embedability of the CQ and German Reportatives

Let us see how the CQ and German Reportatives fare with respect to the embedability test. As shown in (12), embedding *–si* in the antecedent of a conditional is ungrammatical.[9]

(12)　　*(Sichus) Pidru-cha　ña　　　iskay t'anta-ta-ña-(*s) mikhu-rqa-n　chayqa*
　　　　　if　　　Pedro-DIM　already　two　roll-ACC-DISC-REP eat-PST1-3　　then
　　　　　ama　huq-ta　　qu-y-chu.
　　　　　don't other-ACC give-IMP-NEG
　　　　　'If Pedro already ate two rolls, don't give him another one.'　　　(Faller 2002:221)

In light of the discussion of the previous section, we can only conclude from this that *–si* cannot be used descriptively, but not that it does not contribute to propositional content. It might be an element that can only be used m-performatively but still contributes to propositional content. However, the ungrammaticality of (12) with *-si* is entirely compatible with its illocutionary analysis: antecedents of conditionals lack illocutionary force, and it is therefore not surprising to find that an illocutionary modifier cannot occur in the absence of that force. A similar observation has been made by Krifka (2004), who uses this test to argue that the German modal adverbs *wohl* and *wahrscheinlich* operate on the illocutionary and propositional level respectively, because only *wahrscheinlich* can be embedded in conditional antecedents:

(13)　　Wenn es wahrscheinlich/??wohl regnen wird, sollten wir Schirme mitnehmen.
　　　　　'If it will probably rain we should take umbrellas with us.'　　(Krifka 2004)

　　　　Turning now to *sollen*, it can be embedded in conditional antecedents, as shown by the following examples found on the internet.

(14)　　*Wenn es über Nacht regnen soll....* und Sie am nächsten Morgen Turnier haben
　　　　　lassen Sie den Platz auf keinen Fall trocken und locker liegen.
　　　　　'If it is said to rain over night… and you have a tournament the next morning, do under no circumstances let the arena lie dry and loose.'
　　　　　　　　　(http://www.reitverein-karben.de/seite2.htm, last accessed 15/03/06)

In (14) the antecedent is used as a heading in a list of issues arising in the maintenance of the ground in horse riding arenas. Despite it being used as a heading, the continuation after the dots completes it into a fully grammatical conditional. The interpretation of this sentence is that one should not leave the arena dry if it is said (by the weather forecast, for example) that it will rain overnight. Thus, *sollen* here is in the scope of *wenn.* Similarly, in (15) the response by FAHRBACH to F.C.B.F.A.N**.**'s utterance

(interspersed with other comments) puts *sollen* in the scope of *wenn*: if it is said to snow there, then it will also snow here.

(15) a. F.C.B.F.A.N.: Bei uns soll es heute schneien!!
              'It is said to snow near us today.'
    b. FAHRBACH: Also *wenn es bei dir schneien soll*, dann schneit es bei mir auch.
              'If it said to snow near you, then it will snow near me as well.'
        (http://www.kc-forum.com/archive/index.php/t-45696, last accessed 15/03/06)

       We can therefore conclude that *sollen* does contribute to propositional content. At the same time, it should be noted that *sollen* in these cases is not used m-performatively but descriptively, as it is not indexed to the speaker. Thus, the reader of (14) is advised to take the described measures if they, not the writer, have heard that it will rain. In (15), it is the addressee who has heard that it is supposed to snow where they are, not the writer. This is of course just as expected.
       There are, however, also examples in which *sollen* is not in the scope of *wenn*, as shown in (16) and (17).

(16) *Wenn Präzession keinen Einfluß auf die Rotations- und Umlaufsperiode der Erde haben soll*, welche gegenüber der Sonne und den Sternen gemessen werden, wie kann Präzession dann eine Differenz in der Rotations- und Umlaufszeit von mehr als 3 Sekunden pro Tag verursachen?
     'If *(as it is alleged) precession has no influence on the period of rotation and revolution of the Earth*, which can be measured in comparison with the sun and the stars, how then can precession cause a difference in the rotation and revolution period of more than 3 seconds per day?
      (http://www.siriusresearchgroup.com/artikel/zeit2.shtml, last accessed 15/03/06)

The question how precession can cause a difference of 3 seconds arises not on the basis of it being *said* that precession does not have an influence, but on the basis that this claim is true, as is reflected in the English paraphrase with a reportative parenthetical such as 'as it is alleged.' Similarly in (17):

(17) a. Interviewer: Von manchen Fleischessern hört man die Rechtfertigung:
              "Aber in der Bibel steht doch: Macht euch die Erde untertan... ".
              Oder: "Jesus hat doch auch Fleisch gegessen! "
     'From some meat eaters one hears the justification: "But in the Bible it says: Dominate the Earth …" Or: "But Jesus has also eaten meat"
    b. B.H.: *Wenn Jesus Fleischesser gewesen sein soll*, müsste er entweder ein Weggucker gewesen sein und gesagt haben: "Schlachtet die Tiere, aber macht die Tür zu, ich kann das nicht sehen!"
    '*If Jesus was a meat eater (as it is alleged)*, he would either have had to be someone who looks the other way and said: "Slaughter the animals, but close the door, I can't look at it!"
    (http://www.brennglas.com/der_tierleichenfresser/11_interview_hoecker.html, last accessed 15/03/06)

(17) does not mean 'If it is *said* that Jesus was a meat eater, then …" but again a paraphrase with 'as it is alleged' is more appropriate. But also in these cases, where *sollen* is not in the scope of *if,* is it used descriptively. Thus, in (17), it is not B.H. who has heard that Jesus was a meat eater, but the interviewer. S*ollen* is therefore parallel to English epistemic modals, which have been argued in the previous section to lose their m-performativity in conditional antecedents.[10]

  In conclusion, the embedability shows that German *sollen* contributes to propositional content and lends support to the hypothesis that CQ *–si* is an illocutionary modifier.
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3.3 The assent/dissent test

The second major test used in the literature to determine whether or not an element contributes to propositional content is what Papafragou (*in press*) calls the assent/dissent test (In Faller (2002), I have called this test challengeability, but Papafragou's term captures the nature of the test better). This test, which is based on observations first made by Lyons (1977), may be stated as in (18).

(18) If an element can be questioned, doubted, rejected or (dis)agreed with, it
   contributes to the truth conditions of the proposition expressed. Otherwise, it does
   not.   (Faller 2002:110), slightly reformulated)

  Before applying this test to the two Reportatives, let me discuss its utility with respect to epistemic modals which has been questioned by Papafragou (*in press*). Applying this test to epistemic *must* as in (19) appears to show that it does not contribute to propositional content (Lyons 1977, Sweetser 1990, Palmer 2001).

(19) a. Alfred must be secretly seeing Barbara.
   b. Is that so? / I (dis)agree / I don't believe it.

The responses in (19b) only challenge the truth of the proposition that Alfred is secretly seeing Barbara, not the modal force of necessity. However, Faller (2002) argues that it is in fact possible to challenge the epistemic modal itself in some cases, for example, (20).

(20) A: If it's snowing down here, Truckee must be buried in snow.
   B: That's not true. A hundred years or so ago, it snowed down here, but not a
     single flake in Truckee. So, it could well be that it's not snowing now in
     Truckee.   (Faller 2002:112)

B does not challenge the truth of the proposition *Trucke*e *is buried in snow*, but A's claim that it is *necessarily the case that* Truckee is buried in snow.

  Papafragou (*in press*) argues that the results of the test in (19) are "orthogonal to the issue whether subjective epistemic modality contributes to truth conditions." The assenting/dissenting replies in (19b) are infelicitous because "subjective epistemic modality […] is *externally inscrutable*." In order to challenge (19a), one would have to

have access to the speaker's beliefs on the basis of which the inference in (19a) is drawn. In (20), A makes the premises from which they draw the conclusion partially explicit in the conditional antecedent *If it is snowing down here*, (the second necessary premise, that it normally snows at higher altitudes when it snows at lower altitudes, can be inferred). As a result, B can challenge the conclusion by pointing out that A overlooked a crucial piece of information and that therefore the conclusion does not follow. Another example in which inscrutability has been lifted is (21).

(21)   Clark Kent must be Superman. Wait a minute, no, that's not true: Clark Kent is afraid of heights. So Clark Kent *can't be* Superman.   (Papafragou *in press*)

Here, the speaker challenges her own conclusion, which is possible because speakers have of course access to their own beliefs. Thus, the assent/dissent test only shows that an element does not contribute to propositional content in those cases in which inscrutability is lifted, and should therefore be reformulated as follows.

(22)   If an element can be questioned, doubted, rejected or (dis)agreed with, it contributes to the truth conditions of the proposition expressed. Otherwise, it either does not contribute to the truth conditions or it is inscrutable.]

     (23) shows the application of this test to the CQ Reportative (based on Faller (2002:195f)).

(23)   a. *Ines-qa qaynunchay ñaña-n-ta-s watuku-sqa.*
          Inés-TOP yesterday sister-ACC-BPG visit-PST2
          p='Inés visited her sister yesterday.'
          EV= speaker was told that *p*
       b. *Chiqaq-chu.*
          true-QUEST
          'Is that true?'
       c. *Mana-n chiqaq-chu. Manta-n-ta-lla-n watuku-rqa-n.*
          not-BPG true-NEG mother-3-ACC-LIM-BPG visit-PST1-3
          'That's not true. She only visited her mother.'
       d. *Mana-n chiqaq-chu. # Mana-n chay-ta willa-rqa-sunki-chu.*
          not-BPG true-NEG not-BPG this-ACC tell-PST1-3s2O-NEG
          'That's not true.You were not told this.'

The question in (23 b) only accesses the propositional content of (23a), that is (23b)'s speaker wants to know whether it is true that Inés visited her sister yesterday, not whether or not the speaker has indeed learnt this information from someone else. Likewise, an explicit challenge of the truth of (23a) can only target the truth of the propositional content. Thus, it is only possible to continue 'That's not true' as for example in (23b), making explicit what about the propositional content is being challenged, but not as in (23c), which is an attempt at directly challenging the speakers type of source of information. A naturally occurring example in which a speaker first presents a claim made by others with –*si* and then immediately challenges the truth of the propositional content of that claim is given in (24).

(24) a. *Pay-kuna-s ñoqa-man-qa qulqi-ta   muntu-ntin-pi saqiy-wa-n*,
          (s)he-PL-REP I-ILLA-TOP   money-ACC lot-INCL-LOC leave-1o-3
          p_1='They leave me a lot of money.'
          EV$_1$: s has a reportative source for p_1
      b. *mana-**má** riki riku-sqa-yki ni un sol-ta   centavo-ta-pis*
          not-IMPR right see-PRT-2   not one Sol-ACC cent-ACC-ADD
          saqi-sha-wa-n-chu
          leave-PROG-1O-3-NEG
          p_2='(but) that's not true, as you have seen, they don't leave me one
              sol, not one cent.'
          EV$_2$: s has direct evidence for p_2 (Conv)

According to this test, then, CQ –*si* does not contribute to the propositional content.
German Reportative *sollen* also allows the challenging of the propositional content
embedded under it, as shown in (25).

(25) Dass wir das erreicht haben sollen, habe ich auch gelesen. Nur stimmt das so
      nicht.
      'I have also read that we are said to have accomplished this. But this is not true in
      this way.'
      (http://www.rhetorik.ch/Aktuell/Aktuell_Jul_18_2004.html, last accessed 20/03/06)

Here, the speaker denies the claim that "we have accomplished this." But if *sollen* is
part of the propositional content itself, we would also expect that the reportative
meaning is open to challenge. Generally, this does not appear to be possible, B's answer
in (26) is just as strange as its CQ counterpart in (23).

(26) A: Inés soll gestern ihre Schwester besucht haben.
          Inés is said to have visited her sister yesterday.
      B: Nein, das stimmt nicht. #Das hat Dir niemand erzählt..
          'No, that's not true. Nobody has told you that.'

        However, as argued by Papafragou (*in press*) for English subjective epistemic
modals, this may not be due to the fact that *sollen* does not contribute to propositional
content, but to the fact that it is inscrutable. Often, as in (26), the evidential basis of a
claim will indeed be inscrutable, but in some contexts it is not. While I have not found a
natural example for *sollen* in which its reportative base is open to scrutiny and
challenged, the constructed example in (27), the felicity of which has been confirmed
with other native speakers of German, is such a case.

(27) A: Laut Polizei soll die Gärtnerin die Juwelen gestohlen haben.
          'According to the police, the gardener is said to have stolen the jewels.'
      B: Nein, das stimmt nicht. Das ist die Presse, die das behauptet.
          'No, that's not true. It is the press who is claiming this.'

Here, B's reply targets not the propositional content of A's assertion, but *sollen* itself, more precisely the specific source associated with *sollen* identified through the phrase *laut Polizei*.

To complete the argument, we also have to test whether CQ –*si* can be challenged once it has been laid open to scrutiny. Unfortunately, I have not been able to obtain relevant data for –*si* as it is not as easy to make one's source explicit as part of the clause in which –*si* occurs as in the German example (27). The natural way of making one's source explicit is by using the main verb *niy*—'say'. Any challenge of the kind in (27) would therefore target that verb, not the reportative enclitic. However, it is fairly straightforward to construct a context in which claims to direct evidence can be laid open to scrutiny. For example, I might be the only witness to Marya's eating all the rolls. If José were then to claim that Marya ate all the rolls using the Direct evidential, as in (28a), I could be sure that his evidential basis is not what he indicates it is. If –*mi* contributed to propositional content, one would therefore expect that I can challenge José's evidential claim directly, as in (28b).

(28) a. Marya-qa llipin t'anta-ta-**n** mikhu-rqa-n.
          Marya-TOP all roll-ACC-BPG eat-PST1-3
          p='Marya ate all the cookies'
          EV: speaker saw that *p*
      b. Mana-**n** chiqaq-chu.
          not-BPG true-NEG
          'That's not true.'

However, despite the evidential base being open to scrutiny in this context, my challenge in (28b) can still not access the evidential itself. (28b) can only mean that I deny the truth of Marya eating all the rolls. I hypothesize that if a similar context can be constructed for a reportative source, -*si* will likewise remain inaccessible to assent/dissent.

In summary, the dissent/assent test also supports the hypothesis that German *sollen* contributes to propositional content, while CQ –*si* does not.

3.4 The two Reportatives in questions

The third piece of evidence in support of the present paper's hypothesis that CQ –*si* is an illocutionary operator, while German reportative *sollen* is a propositional operator is their different behaviour in questions. As mentioned already in section 2.1, the three CQ evidentials can occur in content questions. (29) illustrates this for –*si* (repeated from (4)).

(29) *May-manta-**s**   chay runa ka-n-man*.
       where-ABL-REP this   man   be-3-COND
       'Where could this man be from?'   (Itier 1995:290)

The context of the story from which (29) is taken makes it clear that the speaker expects the addressee to base his answer on reportative evidence. That is, the evidential is not anchored to the speaker as in assertions, but to the addressee. The same observation

holds for German *sollen*. The following is a conversation from a novel by Karl May between a doctor and a patient who has lost his memory.

(30)   D: So besinnen Sie sich also auf gar nichts, betreffs des gestrigen Abends?
            'So, you can't remember anything about yesterday evening?'
        P: Nicht auf das Geringste.
            'Not the least.'
        D: Sie sollen einmal getanzt haben.
            'You're said to have danced once.'
        P: Getanzt? Das wäre fast ein Wunder. Ich pflege nicht zu tanzen. *Wer soll denn meine Tänzerin gewesen sein*?
            'Danced? That would almost be a miracle. I don't normally dance. *Who is said to have been my dance partne*r?'
    (http://karlmay.leo.org/kmg/primlit/roman/sohn/sohnl096.htm, last accessed 19/03/06)

The doctor tells the patient that he has allegedly danced once during the night in question, and the patient asks back who his dance partner was supposed to be according to the doctor's sources. This 'interrogative flip' (Speas and Tenny 2003) is well-known to occur with Reportatives cross-linguistically, as well as with well-studied speech act modifiers such as *honestly.* Thus, a speaker uttering *Honestly, why did she not turn up*? asks the addressee to be honest in her answer. However, the interrogative flip by itself does not necessarily mean that a linguistic element exhibiting it is a speech act modifier. Thus, Speas and Tenny (2003) take the evidential interrogative flip only as evidence that evidentials occupy a syntactic position just below the functional projection for speech acts (so that the hearer index can be co-indexed with the anchor of the evidential), but are not part of it. Similarly, we have seen in footnote (10) that English evidential adverbs *allegedly* and *reportedly* are propositional-level operators according to the embedability test, but they, too, participate in the interrogative flip:

(31)   What has Mary allegedly/reportedly done now?

The speaker of (31) wants to know what the addressee heard about what Mary is supposed to have now. Thus, the interrogative flip in itself does not distinguish between propositional-level and illocutionary operators, as both types can participate in it.
        However, CQ *–si* allows another reading in questions which requires an illocutionary analysis. This is its use to ask a question on someone else's behalf.[11] For example, it has often happened in my fieldwork that I asked a question of someone without being understood. Someone else would then often repeat the question using *–si.* (31) is such an example (constructed from memory) where I address a question to the mother-in-law of one of my language consultants:

(31)   a. MF to mother-in-law:
            *Imayna-**n** ka-sha-nki*.
            how-BPG be-PROG-2
            'How are you? '
        b. Consultant to mother-in-law:
            *Imayna-**s** ka-sha-nki*.
            how-REP be-PROG-2

'(She says) How are you? '

Such uses require *–si* to take the question as a speech act in its scope, that is, it has to be analyzed as an illocutionary modifier.

Note that the fact that both *sollen* and *–si* participate in the interrogative flip but that they are analyzed here as propositional and illocutionary operators respectively has the consequence that the interrogative flip cannot receive a uniform analysis, at least not along the lines proposed in Speas and Tenny (2003) and Tenny (*to appear*). Following Cinque (1999), they argue that syntactic structure contains a speech act and an evidential functional projection, the latter of which is contained within the former. The speech act projection contains indices for speaker and hearer, and in assertions, it is the speaker index which is co-indexed with the anchor of an evidential. In the interrogative flip however, it is the hearer index which is co-referential with the evidential anchor. This analysis may well work for *sollen*. However, CQ *–si* as an illocutionary operator takes the entire speech act as its argument, and its anchor can therefore not be bound by the hearer index. Instead, I analyze *–si* as always taking the speaker of the speech act it applies to as its anchor. In interrogative flips, its argument is the answer speech act, in questions asked on behalf of someone else, the argument is the question act itself (cf. Faller 2002:237).

In summary, the fact that both CQ *–si* and German *sollen* participate in the interrogative flip does not distinguish them as operators on different levels. However, the fact that CQ *–si* can be used to ask a question on somebody else's behalf is a strong argument for analysing it as an illocutionary modifier.

3.5 Interaction with negation and other propositional operators

In general, one would expect speech act operators to take scope over propositional-level operators, and propositional-level operators to exhibit scope interactions with other propositional-level operators. Thus, the hypothesis defended in this paper that CQ *–si* is a speech act operator and that German *sollen* is a propositional-level operator predicts that the former should always have scope over propositional operators whereas the latter should be able to scope under at least some of them. In this section, these expectations are discussed for negation and tense. These were chosen because the relative scope of evidentials and negation is often discussed in the literature and because *sollen* can scope under tense. It is therefore enough to strengthen the point that *sollen* pertains to propositional content.

3.5.1 Negation
It has been claimed by de Haan (1997, 1999) that, cross-linguistically, evidentials always take wide scope over negation.[12] This is confirmed for CQ *–si* as well as for German *sollen*, as shown in (32) and (33).

(32) *Ines-qa **mana-s** qaynunchaw ñaña-n-ta-**chu** watuku-sqa.*
Inés-TOP not-REP yesterday sister-3-ACC-NEG visit-PST2
p='Inés didn't visit her sister yesterday.'
EV: (i) *s* has reportative evidence that Inés did not visit her sister

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(ii) # *s* does not have reportative evidence that Inés visited her sister yesterday

(32) only has the interpretation in (i); (ii), in which the negation takes scope over –*si* is not available. Ehrich (2001) asserts that *sollen* in its reportative used always has wide scope with respect to negation. The following is an example.

(33)   Das Buffet im Burj Al Arab soll nicht soo schlecht sein, hab ich mir sagen lassen.
        The buffet in Burj Al Arab is said to not be too bad, I have been told.
        (http://www.londonleben.co.uk/london_leben/restaurants_and_food/, last accessed 19/03/06)
     (i) *s* has reportative evidence that the buffet at Burj Al Arab is not too bad.
     (ii) #*s* does not have reportative evidence that the buffet at Burj Al Arab is too bad.

In this regard, reportative *sollen* differs from German epistemic modals, which, as demonstrated by Ehrich (2001), can scope under negation. An example is given in (34).

(34)   Sie müssen nicht wirklich blöd sein, wenn Sie nichts verstehen.
        'You don't really have to be stupid, if you don't understand anything.' (=It does not necessarily follow that you're stupid)
                    (Mannheimer Morgen (COSMAS)/410.06835, cited in Ehrich (2001))

However, the fact that *sollen* does not scope under negation does not force us to give up the propositional analysis. Other elements that contribute to propositional content such as English epistemic *must* can also not be within the scope of negation. For example, *She must not be the thief* can only mean that it is necessarily the case that she is not the thief. Thus, the scope facts with respect to negation do neither argue for nor against a propositional-level analysis.

3.5.2 Tense
If an evidential can scope under tense, we expect it to receive its time reference from it. If it scopes over tense, we expect its time reference to be indeterminate. CQ –*si* only has the latter possibility. Consider the past tense example in (35) (repeated from (23a)) .

(35)   *Ines-qa qaynunchay ñaña-n-ta-s watuku-sqa*.
        Inés-TOP yesterday sister-ACC-REP visit-PST2
        p='Inés visited her sister yesterday.'
        EV= speaker was told that *p*

In (35), the past tense locates the event of Inés' visit at some time in the past (specified as yesterday by the adverb). The speaker may have heard about this yesterday or today, that is, the time reference of the evidential is open. Therefore, tense does not scope over –*si*.

        Temporal indeterminacy is also possible with German *sollen.* Thus, in (36) the past tense primarily affects the proposition, and locates the plans to abduct the son of Blair in the past. The speaker may have heard the reports at the time of the planned abduction or at a later stage, potentially at/around the time at which the article from which (36) is taken was written.

(36) Blair-sohn sollte angeblich entführt werden.
  'Blair-son allegedly was to be kidnapped.'

      However, in (37), *sollen* can be in the scope of past tense.

(37) Übermäßiger Kartoffelgenuss sollte angeblich zu Schwindsucht, Rachitis,
  Bauchgrimmen oder gar Syphilis führen.
  'The consumption of too many potatoes was said to allegedly cause consumption,
  rachitis, stomach ache or even syphilis.'
   (http://www.biosicherheit.de/kartoffeln/24.doku.html, last accessed 22/03/06)

The most prominent interpretation of (37) is that it was alleged in the past that eating
too many potatoes had negative effects on health. The other interpretation, that it is
alleged that eating too many potatoes had these effects in the past is very difficult, if not
impossible, to get.
      In summary, reportative *sollen* exhibits scope ambiguities with tense, but not
with negation, whereas CQ *–si* always has scope over both propositional-level
operators. These observations again support the hypothesis that *sollen* contributes to
propositional content.

4 Conclusion

The main claim of this paper is that evidentiality cannot be assigned to a particular level
of meaning, because some evidentials contribute to speech act meaning and others to
propositional content. I have argued through the application of a number of tests that the
CQ reportative enclitic *–si* is of the former type and that German reportative *sollen* is of
the latter type. While not all of the tests discussed allow us to say that a given element is
not a propositional-level operator if it does not behave in a certain way, they do give us
a very good handle on classifying an element as a propositional operator if it does.
Thus, if an element can have narrow scope with respect to a conditional antecedent,
negation or tense, we can conclude that it pertains to propositional content. Reportative
s*ollen* behaves like a propositional-level operator with respect to almost all the
discussed tests, with the exception of narrow scope with negation. In fact, *sollen* is very
similar to English epistemic *must*.
      While CQ *-si* fails these tests, this is not by itself a sufficient argument for
saying that it is an illocutionary argument. However, in conjunction with other tests,
they lend support to this analysis. The strongest argument for this analysis is the fact
that *–si* can be used to ask a question on someone else's behalf, in which case it is still
anchored to the speaker. Another strong argument is the impossibility of assenting or
dissenting with the evidential meaning directly.
      There is also cross-linguistic evidence that evidentiality in some languages is a
propositional-level phenomenon. Thus, the fact that the Akha visual evidential
(Aikhenvald 2004:256) can scope under negation as well as Aikhenvald's (2004:101)
claim that evidentials in some languages have their own time reference independent
from the time reference of the event support this claim. More research on other

languages is needed to determine which types of evidential belong to the speech act, and which ones to the propositional level of meaning.

Note that the claim that evidentiality is not tied to a unique level of meaning poses a challenge for syntactic theories that postulate a fixed position in a layered structure or a specific functional projection for evidentiality (Cinque 1999, Hengeveld 1990, Speas and Tenny 2003, Tenny *to appear,* van Valin and LaPolla 1997). While these theories recognize that evidentiality is very high in the syntactic structure it is generally assumed to be below the speech act layer/projection. It is unclear how such theories would account for the CQ reportative which takes a speech act as its argument.

The question of what level of meaning evidentiality belongs to has not received much attention in the literature, which has so far mainly focussed on the question whether evidentiality is a category in its own right or should be subsumed under epistemic modality. These two questions are connected, however, and it is probably no coincidence that the language-specific evidentials that have been analyzed as contributing to propositional content are often part of the TAM system or have other uses as (epistemic) modals. The question of levels of meaning has however been widely debated for (subjective) epistemic modality, and researchers generally argue that it either is part of propositional content or constitutes only a comment on that content. The two sides of this debate align to quite some extent with theoretical affiliation: formally oriented semanticists generally argue for a propositional-level account whereas functional and typological theorists tend to adopt the view that subjective epistemic modality is outside propositional content (von Fintel 2005). However, if this paper's claim is correct for evidentiality, it is reasonable to hypothesize that epistemic modality is not tied to a particular level either, a possibility which is also entertained by von Fintel (2005) and Krifka (2004). Thus, the English epistemic modals have convincingly been argued by Papafragou (*in press*) to be part of the propositional content. But at least some German epistemic modal adverbs are best analyzed as speech act operators (Krifka 2004). One interesting issue to explore in future research would be whether there is a correlation between the morphosyntactic properties and the relevant level meaning. Possibly, evidentials associated with the verbal domain are always propositional operators, whereas items associated with the entire clause such as sentence adverbs or the CQ enclitics may be illocutionary or propositional operators.

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Notes

† This title was inspired by the title of Manfred's Krifka's paper presented at a Stanford Colloquium in 2004, cited below.

1   Cusco Quechua belongs to the A or II branch of the Quechua language family (Cusihuaman 2001[1976]:29). While Quechua as a whole still has an estimated number of 10 million speakers, sociolinguists agree that it is endangered due to the "contraction of Quechua domains and a gradual cessation of intergenerational transmission" (King and Hornberger 2005:1).

2 The CQ data in this paper were largely collected during a total of 11 months of fieldwork between 1999-2001 in the Department of Cusco, Peru, funded in part by the

NSF, grant no. BCS_9980223, as well as subsequent fieldwork visits to this region. I am indebted in particular to my main bilingual consultants Inés Callalli, Gloria Canal, Rocio Moscoso and Edith Zevallos, as well as to several other (some monolingual) speakers that allowed me to record their conversations with Inés Callalli and Gloria Canal. Unless otherwise indicated, the data presented in this paper are my own. I use '(Conv)' to indicate that the example is part of a conversation, and '(Radio)' for data transcribed from the daily radio programme *Warmikuna rimanchis*. Other examples were elicited. When citing examples from other authors, their orthography is maintained. I adopt the convention of presenting the evidential value EV of an utterance on a separate line from the proposition *p*. Abbreviations used in glosses (labels largely based on Cusihuaman (2001[1976]): 1, 2 ,3: first, second, third person, 1O: first person object, 3S2O: third person subject second person object, ABL: ablative, ACC: accusative, ADD: additive, BEN: benefactive, BPG: best possible grounds, CIS: cislocative, COM: comitative, COND: conditional, CONJ: conjectural, CONTR: contrastive, DIM: diminutive, DISC: discontinuous, ILLA: illative, IMP: imperative, IMPR: impressive, INCL: inclusive, LIM: limitative, LOC: locative, NEG: negative, PL: plural, PROG: progressive, QUEST: question, REFL: reflexive, REP: reportative, PST1: past tense 1, PST2: past tense 2, PRT: participle, TOP: topic.

3 In Wanka Quechua, the Reportative enclitic can also be used for irony, and in riddles (Floyd 1999). Formulaic riddles in CQ also use -*si*, but I have not encountered any uses of irony in CQ.

4 Please see Diewald (1999) for a discussion of the grammaticalization paths of modal verbs along the path of subjectivization.

5 Embedability in conditional antecedents is not the only embedability test. Others include the embedability of an element under factive verbs and verbs of saying. The results of these are parallel to the test with conditional antecedents, and they will therefore not be discussed here. The reader is referred to Papafragou (*in press*) and Faller (2002) for more discussion.

6 As mentioned above, Papafragou (*in press*) takes the main factor that excludes subjective epistemic modals from conditional antecedents to be their indexical nature. However, she appears to include the notion of m-performativity in her definition of the relevant type of indexicality: "If subjective epistemic modal expressions are indexical (in the sense of the previous section), this restriction is explained. The environment inside the conditional cannot be an environment in which the speaker can be performing a mental evaluation of a proposition with respect to her belief-set" (Papafragou *in press*). Since m-performativity entails indexicality, I maintain that it is the relevant property.

7 Asher (2000) has also argued that elements that do not embed are not necessarily outside the proposition. He shows that the test as stated by Wilson (1975) wrongly predicts that non-restrictive relative clauses and appositive NPs should be non-truth-conditional. For example, in (i) the non-restrictive relative clause *which Jane attended* must be outside the scope of *if*, but it nevertheless contributes to the overall truth conditions.

(i) If the party, which Jane attended, is over, then we should find some where else to get a drink.

8 The analysis of the results of the embedding test also allow for the possibility that an element may have exclusively m-performative uses but still contribute to propositional content. I do not know whether such elements exist.

9 This is also the case for the other two evidential enclitics (Faller 2002:221).

10 This is also the case for English evidential adverbials. Ifantidou (2001:104f) argues that they are truth-conditional elements because they can scope under *if* as in (i).

(i) If the cook has allegedly/reportedly poisoned the soup, the police should make an inquiry.

According to Ifantidou, the speaker of (i) is saying that the police should make an inquiry if it is alleged/reported that the cook has poisoned the soup. As with *sollen* these adverbs are not used m-performatively when embedded as it may well be someone other than the speaker who has heard the claim that it was the cook who poisoned the soup.

11 I have not seen this type of use discussed for reportatives in other languages.

12 This claim has been disputed by Aikhenvald (2004:256) who presents data from Akha showing that its visual evidential can be negated.