Submitted to a special volume of Linguistische Berichte on endangered languages, edited by Peter Austin and Andrew Simpson. Date of current version: January 2006.

Author's email: m.faller@manchester.ac.uk

The Cusco Quechua Reportative Evidential and Rhetorical Relations

Martina Faller
The University of Manchester

1 Introduction

Evidentiality has become the focus of an increasing number of studies in recent years, especially within the typological literature. This has resulted in several volumes of collected papers on evidentiality in individual languages or families as well as typological surveys (Chafe and Nichols 1986, Willett 1988, Johanson and Utas 2000, Dendale and Tasmowski 2001, Aikhenvald 2003, 2004). What stands out when perusing this literature is the enormous variety of evidential systems at all levels: the morpho-syntactic shape of evidentials, the number of evidentials in a system, the meanings expressed by evidentials, etc. Given this variety it is not surprising that formal accounts of evidentiality are still in their infancy, though here, too, an increase in interest can be observed, both within formal syntax (for an overview see Rooryck (2001a,b)) and formal semantics/pragmatics (Izvorski 1997, Ifantidou-Trouki 1993, Ehrich 2001, Garrett 2000, Faller 2002, 2004). Some studies take evidentials to be a kind of epistemic modal, while others assume that they operate on the level of speech acts. Given the cross-linguistic variety in the encoding of evidentiality, these differences in analysis may well reflect a genuine empirical distinction. In my own work, I have analyzed the Cusco Quechua (CQ)[1] evidential enclitics as illocutionary modifiers, and I will continue and deepen this approach here.[2]

The aim of the present paper is to explore the issues evidentials raise for current semantic/pragmatic theories by studying one evidential in depth. The CQ Reportative was chosen because of the three CQ evidentials it is the most interesting from the perspective of speech act theory. The main empirical observation driving the analysis to be developed is that sentences containing the

[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 data on which this paper is based 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.

CQ Reportative can take on all the speech act functions (e.g. to narrate, to provide answers) assertive sentences in English can take on, but without sharing their sincerity condition that the speaker believes the proposition expressed. To account for this it is necessary to separate the speech act participants' beliefs from the contribution of their speech acts to the discourse. Because the architecture of Segmented Discourse Representation Theory (SDRT, Asher and Lascarides 2003) provides such a separation and offers a comprehensive theory of relational speech act types such as *Narration*, the analysis of the CQ Reportative will be formulated using SDRT.

The paper is organized as follows. I first describe the meaning and main uses of the Reportative evidential in Cusco Quechua in section 2, and show that it can be used to express the same types of (relational) speech acts as standard assertives despite not expressing the speaker's belief that the proposition expressed is true. This section also provides data that support analyzing *-si* as an illocutionary modifier. In section 3, I provide background on the framework of SDRT, as well as two other recent ideas of extending dynamic semantics to the speech act level. Section 4 develops an analysis of the CQ Reportative as a cognitive modelling operator within SDRT, addressing the issues of evidential commitment, sincerity and belief transfer. Section 5 concludes with a summary of the main points. Before proceeding with the main body of paper, it should be clarified that I adopt a narrow definition of evidentiality, that is, as a grammatical category encoding the speaker's type of source of information.[3] This excludes elements that only encode the speaker's judgment of the proposition expressed as true (to a certain degree), that is, pure modals. Maintaining a sharp distinction between evidentials and epistemic modals (for which detailed arguments are provided in de Haan (1999), van der Auwera and Plungian (1998), and Faller (2002)) does however not preclude the possibility that some elements, for example, English *must*, may belong to both categories, that evidentials may implicate epistemic meanings, or that epistemic modals or tense/aspect markers may implicate or presuppose evidential meanings.[4]

2 Meaning and use of the CQ Reportative

CQ 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 has heard that *p*. The examples in (1)[5] illustrate the three evidentials in indicative

[3] See, for example, Anderson (1986) for a delineation of evidentials as a grammatical category.

[4] See Faller (2004) for a discussion of the CQ past tense marker *-sqa* with evidential implications.

[5] Unless otherwise indicated, the data presented in this paper are from 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. 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, AUG:augmentative, BEN: benefactive, BPG: best possible grounds, CAUS: causative, CIS: cislocative, COM: comitative, COND: conditional, CONJ: conjectural, CONT: continuative,

sentences.[6] As shown in (1), the evidential enclitics may be left out, in which case the meaning of *-mi* is implicated (Faller 2005).

(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 all 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. This section also provides empirical support for analyzing the Reportative *-si* as an illocutionary modifier and describes its effect, or rather absence thereof, on the speaker's belief system.

The meaning of Reportative *-si* is simple to describe: the speaker reports what someone else has said,[7] be it to talk about daily events as in (1b), to tell stories as in (2a),[8] or to report news as in (2b) (which is 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)

CONTR: contrastive, DAT: dative, DIM: diminutive, DISC: discontinuous, DUB: dubitative, FUT: future, GEN: genitive, HORT: hortative, ILLA: illative, IMP: imperative, IMPR: impressive, INCH: inchoative, INCL: inclusive, INF: infinitive, LIM: limitative, LOC: locative, NEG: negative, NMLZ: nominalizer, PL: plural, PROG: progressive, QUEST: question, REFL: reflexive, REP: reportative, PST1: past tense 1, PST2: past tense 2, PRT: participle, TERM: terminative, TOP: topic, TRANS: tranformative,

[6] All three enclitics can also occur in *wh*-questions. While I will not discuss this use here, the analysis presented is intended to be extendable to cover it as well.

[7] 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.

[8] Note that *-si* is usually used throughout a folktale (except where characters are speaking directly), not just at the beginning.

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, 17/05/00)

The Reportative is also used in messenger contexts such as (3), which is taken from a Quechua play.

(3) Context: a son announces to his father that a young man has come to see him. The father sends the son to let him in. The son comes back with more information saying:

Yaya-llá-y, *Apu K'anaq-pa* *churi-n-**si,*** *riqsi-y-ta-**s***
father-LIM-1 Apu K'anaq-GEN son-3-REP know-INF-ACC-REP
muna-sunki.
want-3s2o
p='Father, he's Apu K'anaq's son, he wants to meet you.'
EV: *s* was told *p* (by the young man) (Itier 1995:290)

The sender of the message, the messenger, and the recipient may even be present in the same speech act situation, when the message cannot be transmitted directly for some reason. For example, the mother-in-law of one of my consultants is very hard of hearing, and she would often not understand me. My consultant would then literally amplify me by repeating very loudly what I had said and in doing so she would use the Reportative. (4) is a constructed example, as, unfortunately, I have no direct transcriptions or recordings of these incidents.

(4) 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? '

2.1 *-si*, belief, and rhetorical relations

Use of the Reportative does not mean that the speaker does not believe the embedded proposition *p*. For example, the speaker of (5b) clearly believes *p*. He is recounting an incident in which he almost died. He only knows from others that he was making the noises described in (5b), but it is fairly clear from the surrounding context that he believes them.

(5) a. *Huk p'unchay ch'isiyaq mana-**n** simi-y t'oha-q-chu,*
one day all.day not-BPG word-1 explode-AG-NEG
mana mihu-ni-chu.
not eat-1-NEG
p='One day I didn't speak or eat all day.'
b. *Chay-**si** yanqa ...¡ qhaq ...qhaq ...qhaq ...qhaq! chay-lla ka-q.*
this-REP in.vain qhaq qhaq qhaq qhaq this-LIM be-AG
p='Then, in vain, only this: qhaq qhaq qhaq qhaq.'
c. *wañu-ru-na-y-paq-**mi** pinsa-ru-n-ku*
die-HORT-NMLZ-DAT-BPG think-HORT-3-PL
p='They thought I was going to die." (Espinoza 1997:236)

However, Reportative *-si* does also not necessarily mean that the speaker believes *p*, as shown in (6), in which the speaker first reports that 'they' are leaving her money with the Reportative to then immediately claim that they in fact do not leave her any money.

(6) 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-PP-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)

Rather, *-si* is simply silent about the speaker's beliefs regarding the truth of *p*. The messenger examples above underline the fact that what the speaker believes regarding *p* is not at issue, at least not primarily. Because of this, the speech act performed by indicative sentences with *-si* cannot be ASSERTION, if assertions are defined as having the sincerity condition that the speaker believes *p*. Faller (2002) therefore analyzed the speech act expressed with *-si* as PRESENTATION to capture the intuition that the speaker only presents *p* for discussion. For this speech act to be felicitous it is not necessary that the speaker believes *p*, but only that she believes that someone else said *p*.

However, this characterization does not capture the fact that, normally, a speaker is using a sentence with *-si* in order to perform a particular communicative act that goes beyond presenting *p*. Theories of discourse structure such as Segmented Discourse Representation Theory (SDRT), developed primarily by Asher and Lascarides (1993, 2001, 1998, 2003), employ the notion of *rhetorical relation* to describe the different functions performed by a sentence with respect to the preceding discourse. Sentences with the Reportative *-si* can be used for most, if not all rhetorical relations. For example, the sentences in (2a) are linked to each other via *Narration*, and so are (7a) and (7b) taken from a news report.

(7) a. *Chaymanta-pas willay-man-chis* […] *qaynuchay p'unchay-taq-**sis***
then-ADD tell-1O-PL yesterday day-CONTR-REP
*huk wayna arma-ntin-**sis** ka-n-man ka-ra-n*
one young.man weapon-INCL-REP be-3-COND be-3-PST1
hinaspa wañu-ra-chi-pu-sqa enamorada-n-ta.
then die-CAUS-BEN-PST2 girl.friend-3-ACC
'We are also told (the following). Yesterday there was a young man with a weapon, he then killed his girlfriend.'

b. *Chay-ta ruwa-ru-spa-taq-**sis** pay-pas ka-q*
this-ACC do-INCH-NMLZ-CONTR-REP he-ADD be- AG
wañu-ra-chi-ku-lla-sqa-taq.
die-INCH-CAUS-REFL-LIM-PST1-CONTR
'Having done this, he killed himself.' (Radio, 20/02/01)

The extract in (8) is part of a larger discourse describing the traditional custom of bull fighting, which uses condors tied to the bull's back. Afterwards, the condor is forced to drink wine in order to make it drunk. The narrator has never herself witnessed these events, and thus uses Reportative *-si* throughout. The two sentences in (8a) are connected by *Contrast*, those in (8b) by *Result*.

(8) a. *Mana-**s** phalay-ta ati-n-chu, ichaqa qucha-man-**si** apa-n-ku*
not-REP fly-ACC can-3-NEG but lake-ILLA-REP take-3-PL
urqu pata-cha-man.
mountain top-DIM-ILLA
'It cannot fly, but they take it to the lake, to the top of a small mountain.'

b. *tanqa-n-ku-**s**, hina-**s** kuntur macha-sqa huk chhikachan-ta phala-n*
push-3-PL-REP so-REP condor drunk-PRT one a.little-ACC fly-3
'They push (it), so the drunk condor flies a little bit.' (Conv)

A sentence marked with *–si* can be linked to a sentence based on a source of information other than reportative. For example, (9a) is based on direct evidence by implicature, while (9b) uses the reportative enclitic. The two sentences are linked by *Elaboration.*

(9) a. *Qusqu-pi hospital-pi ka-sha-n.*
Cusco-LOC hospital-LOC be-PROG-3
'She is in Cusco in hospital.'
Qhali-ya-ka-mu-nqa-chus mana-chus.
healthy-TRANS-REFL-CISL-3FUT-DUB not-DUB
'She might get better or not.'

b. *Lima-man-raq-**si** yawar-ni-n-pis ri-n.*
Lima-ILLA-CONT-REP blood-EUPH-3-ADD go-3
'Her blood even went to Lima.' (Conv)

An analysis of *-si* must capture the fact that utterances containing it can perform the same rhetorical functions as utterances with *-mi* or without an evidential, and I will explore how this can be achieved using SDRT in section 4. First, however, I will present some data in support of analyzing *-si* as an illocutionary modifier.

2.2 *-si* as an illocutionary modifier

Faller (2002) argues extensively that none of the CQ evidential enclitics contributes to the truth conditions of the proposition expressed. Arguments in support of this analysis are (i) that challenging the truth of what someone said does not affect the evidential meaning, (ii) that evidentials can only occur in illocutionary-force bearing environments, and (iii) that they always have wide scope over propositional-level operators such as negation.[9] The following examples support these claims for the Reportative.

(10) A: *Ines-qa qaynunchay ñaña-n-ta-**s** watuku-sqa.*
Inés-TOP yesterday sister-3-ACC-REP visit-PST2
p='Inés visited her sister yesterday.'
EV= Speaker was told that *p*
B: *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.'
B: *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.' (Faller 2002:196)

In (10), B challenges *A*'s claim by replying 'That's not true', but this challenge cannot deny that A has a reportative source, as shown by the impossibility of making the evidential basis explicitly the target of the denial. In contrast, it is felicitous to deny the propositional content explicitly.

That *-si* can only occur in illocutionary force bearing environments is shown by the fact that it cannot be embedded in the antecedent of a conditional:

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

(12) illustrates that *-si* always has wide scope over negation.

(12) *Ines-qa **mana-s** qaynunchaw ñaña-n-ta-**chu** watuku-rqa-n.*
Inés-TOP not-REP yesterday sister-3-ACC-NEG visit-PST1-3
p='Inés didn't visit her sister yesterday.'
EV: (i) *s* has reportative evidence that Inés did not visit her sister
(ii) # *s* does not have reportative evidence that Inés visited her sister yesterday (Faller 2002:221)

[9] All three of these tests have been used by previous researchers to argue that certain elements do not operate on the propositional level. For the challengeability test see e.g. Lyons (1977), Papafragou (2000), Faller (2002); for the negation test see e.g. de Haan (1999), who uses it to distinguish evidentials and modals, for the embedability test see e.g. Ifantidou-Trouki (1993). Note, however, that these tests are not unproblematic. For discussion see Asher (2000), Faller (2002), and Papafragou (in press).

A further argument in favour of the illocutionary analysis of *-si* is the fact that it can be anchored to either the speaker or the addressee in questions. This is a property *-si* shares with illocutionary adverbs in English such as *honestly, frankly*. For example, my consultant in (4b) asks the question on my behalf, but it is also possible to use *-si* in a question to o convey that its answer is expected to be based on a reportative source. This is exemplified by (13), which is asked by the speaker of (3) after his son has gone to let the visitor in.[10]

(13) *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)

Some of these properties are also exhibited by epistemic modals, but Faller (2002) argues at length that the CQ Reportative evidential should not be analyzed as such. For reasons of space, I will not repeat the argument here, and I will assume for the remainder of the paper that *-si* is an illocutionary modifier.

3 Speech acts in a dynamic setting

In traditional theories such as Searle's (1969, 1975), speech acts are characterized statically along a number of dimensions. For example, in Searle's theory, assertives have the *illocutionary point* of representing an actual state of affairs, they show words-to-world *direction of fit*, they have the *sincerity condition* that the speaker believes *p*, which more or less corresponds to Grice's first Maxim of Quality (Grice 1989:27), and they have the *preparatory condition* that the speaker has evidence or reasons for the truth of *p*, which corresponds to Grice's second Maxim of Quality (Grice 1989:27). In recent years, a number of semanticists have begun to extend dynamic semantic theories to the level of illocutionary acts. Of these, the framework of SDRT developed by Asher and Lascarides (1993, 2001, 1998, 2003) and their collaborators is most worked-out; other studies in this line of inquiry include Zeevat (2003a,b) and Krikfa (2001, 2004). The dynamic meaning of a speech act is its context change potential, that is, a speech act is analyzed as a function from an input context to an output context, where the output context incorporates the meaning of the speech act. What exactly the input and output contexts are varies between the approaches. Since I will use the framework of SDRT to analyze the meaning of the CQ Reportative in section 4, the next two sections provide some background on this framework in as much as it is relevant to the current paper. For a full introduction, I refer the reader to Asher and Lascarides (2003) (A&L in the following).

[10] This example is moreover interesting because the question does not seem to be addressed to the son, but seems to be a question the speaker is asking himself (the context does not make this entirely clear, however). But it is clear at the point the question is asked that neither the questioner nor his son know the answer, but will obtain it from someone else, namely the young man in question. When he eventually comes in, one of the first questions he is asked is indeed *Where are you from?*

3.1 Rhetorical relations in SDRT

The framework of SDRT is an extension of the dynamic semantic theory of DRT. It uses DRT to build up discourse representation structures (DRS) of the propositional content of the discourse, and adds to these the rhetorical relations *R* holding between utterances. These rhetorical relations are part of extended DRSs, called S(egmented) DRSs (SDRS), and they have truth-conditional effects. For example, the sentences in the discourse in (14a) are related by *Explanation*, while those in (14b) are related by *Narration*.

(14) a. Max fell. Moritz pushed him.
b. Max fell. He got up and continued running.

The semantics of *Explanation* specifies that the event denoted by the second sentence temporally precedes that denoted by the first sentence, while *Narration* contributes the opposite temporal relation to the semantic representation. These temporal effects are not derivable from the tense information in the sentences alone, as they are all past tense, and they can therefore only be calculated on the basis of the particular rhetorical relation.

Formally, rhetorical relations are represented as relational symbols which take as their arguments *labels*, where "a label will 'tag' the content of a clause and also bigger linguistic units" (A&L:136).[11] Thus, *Narration*(π_1,π_2) says that the rhetorical relation *Narration* holds between two sentences the DRSs of which are labeled π_1 and π_2 respectively. In the standard DRT box notation, an SDRS takes the form in Fig. 1 (where $K_{\pi n}$ is the DRS labeled by π_n). The SDRS labeled π_0 can itself become the argument of a rhetorical relation.

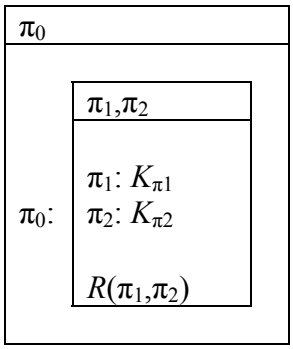

Figure 1: SDRS schema

The computation of rhetorical relations may involve a number of information sources, including lexical and compositional semantics, intonation, domain knowledge, and information about the discourse participants' beliefs and intentions (A&L:180). A&L present a default glue language,[12] the axioms of which are used to infer the rhetorical relations. For example, there is an axiom

[11] Readers wishing to know the reasons for using labels instead of propositions should consult A&L (135ff).

[12] "The glue language is so-called because it's the language in which reasoning is performed to glue together the logical forms of clauses to form a logical form for discourse—i.e., an SDRS (A&L:184).

according to which *Narration* is inferred in the absence of information to the contrary. For *Explanation* to hold, there must be a causal relation between the events described by β and those described by α. Thus, the *Explanation* axiom stipulates that, if there is evidence in the discourse that such a causal relationship holds, then *Explanation* is inferred. This evidence may come from any of the sources; in the case of (14a) it comes from the lexical semantics of the two verbs *push* and *fall*: if you push someone, then that might cause them to fall (A&L:204). The precise formulation of these axioms is not relevant to the purposes of this paper.

Rhetorical relations *R* may be veridical or non-veridical, where *R* is veridical iff the following is valid (α, β are variables ranging over labels) (A&L:157):

(15) $R(\alpha, \beta) \Rightarrow (K_\alpha \wedge K_\beta)$

That is, if a relation $R(\alpha, \beta)$ is veridical, then the propositions it relates are true (A&L:361). *Narration*, *Explanation*, *Elaboration* etc. are all veridical. Non-veridical relations will not be discussed in this paper.

In later versions of SDRT, rhetorical relations are conceived of as relational speech acts types:

> Explanations, elaborations, giving backgrounds or describing results are all things that speakers *do* with utterances. Moreover, in rhetorical theories of discourse, these illocutionary contributions are defined via not only an individual utterance, but also an antecedent utterance in the discourse context (A&L:305).

These relational speech acts are subtypes of the traditional speech act types. Thus, *Moritz pushed him* in (14a) is an assertion in the standard sense, but it also explains why Max fell. However, SDRT departs from traditional theories in defining these speech act supertypes purely on truth-conditional grounds. In Searle's theory, for example, assertions are distinguished from questions by their *illocutionary point*, that is, by what the speaker intends to achieve by the speech act. In SDRT by contrast, assertions are distinguished from questions because "they denote different kinds of semantic objects: a proposition and a set of propositions respectively. Requests are also different, since they denote actions" (A&L:304). Crucially, rhetorical relations are part of the discourse content.

3.2 Cognitive modelling in SDRT

The intentions and beliefs of the discourse participants are also modelled within SDRT, but within a separate cognitive module. The cognitive modelling language of SDRT is *shallow* and not intended as a full logic of the speech act participants' attitudes and how these change over time. It is just powerful enough to allow reasoning about other participants' cognitive states to the extent that they are necessary for interpreting discourse including implicatures (A&L:375ff). It is at this level that intentions associated with speech acts are captured such as the speaker's intention in asserting *p* that the hearer adopt the belief that *p*. Within this framework then, speech acts have effects on two levels: the discourse level

and the cognitive level. One important difference between these two levels is that while rhetorical relations are essential for interpreting discourse, "cognitive modelling is often not needed," though it "occasionally affects semantics and coherence" (A&L:377). Thus, in the examples (14), it is not necessary to compute anything about the speaker's intentions to understand how the second sentence in each relates to the first.[13] The cognitive effects of speech acts are calculated using a modal language, which is distinct from the glue language used to calculate rhetorical relations. The vocabulary of this language includes the belief operators $\mathcal{B}_A$, $\mathcal{B}_B$, etc., and the intention operators $\mathcal{I}_A$, $\mathcal{I}_B$, etc., where the subscripts refer to the discourse participants. A&L model a number of claims and observations made in pragmatics, including Grice's Cooperative Principle and (some of) Searle's components of illocutionary acts. Cooperativity is interpreted by A&L (p. 391) as the principle of goal or intention transfer, which is modelled by the following two default axioms:[14]

(16) a. $\mathcal{I}_A(\delta\phi) \;>\; \mathcal{I}_B(\delta\phi)$
agent *B* adopts *A*'s goals
b. $(\mathcal{I}_A(\delta\phi) \;\wedge\; \neg\mathcal{I}_B(\delta\phi)) \;>\; \mathcal{I}_B\mathcal{B}_A\,\neg\mathcal{I}_B(\delta\phi)$
if *B* doesn't adopt *A*'s goals, she indicates this to *A*

For assertions, there is a corresponding principle of belief transfer, that is, the intention of the speaker that the hearer adopt the belief that *p*. This is captured by the two default axioms Sincerity and Competence.[15]

(17) Sincerity:
$R(\alpha, \beta, \lambda) \;>\; \mathcal{B}_{S(\beta)}R(\alpha, \beta, \lambda)$

Note that Sincerity is not formulated for isolated speech acts, but for rhetorical relations. (17) says that "if the SDRS that's labelled λ contains the condition $R(\alpha,\beta)$, then $S(\beta)$ [i.e., the speaker of β] believes this" (A&L:397) . For veridical relations *R*, the following monotonic inference is valid:

(18) $\mathcal{B}_{S(\beta)}R(\alpha, \beta, \lambda) \;\rightarrow\; \mathcal{B}_{S(\beta)}(p_\beta) \;\wedge\; \mathcal{B}_{S(\beta)}(p_\alpha)$

This follows from the semantics of the belief operator, which is closed under implication. That is, if one believes ϕ, then one also believes the logical consequences of ϕ. Because veridical relations by definition entail the truth of the propositions they link (see (15)), one who believes that the relation holds is thereby also committed to the truth of the related propositions. (18) derives the standard sincerity requirement that the speaker believes an assertion from the

[13] See A&L for examples that require reference to cognitive modelling for the computation of discourse content.

[14] A=speaker, B=interpreter, δϕ: "the action of seeing to it that ϕ is true" (A&L:456), *A* > *B*: default implication, "if A then normally B" (A&L:189).

[15] In the glue language, rhetorical relations have three arguments, the two SDRS labels that are connected by it (α, β), and the label of the bigger SDRS (λ) of which the relation is part.

'lifted' Sincerity condition in (17). So, for the speaker of (14a), we (and the addressee) can infer that she believes that Max fell, that Moritz pushed him (before that), and that Max fell because Moritz pushed him.

The speaker's intention of belief transfer mentioned above is modelled by the Competence axiom together with Sincerity (A&L:389):

(19) Competence:
$\mathcal{B}_A\phi > \mathcal{B}_B\phi$
If *A* believes ϕ (as indicated by what *A* says), then, normally, *B* believes ϕ.

This axiom is called *Competence* because belief transfer as a result of verbal communication relies on the assumption that the speaker is competent on the information she conveys. If I tell you that it will be sunny two months from today, you will probably not believe me, knowing that I have no grounds on which to base such a prediction, that is, I am incompetent with respect to this information. But assuming Competence and Sincerity, and assuming that *B* has no conflicting information, then, normally *B* will believe what *A* tells her (cf. Davidson's (1968) notion of charity, cited in (A&L:398)). This, at least, seems to be part of what participants pretend to be happening. Thus, if *B* does not express disbelief or doubt (as required by (16b)), then *A* will normally think that *B* has adopted the belief that ϕ as a result of her utterance.

At this point, it is important to emphasize the distinction made in SDRT between discourse structure/information content and the modelling of cognitive states for the discourse participants, which is captured in SDRT by the fact that two distinct logical languages are used to model them. SDRT departs here from other discourse modelling theories where changes in the information content directly bring about changes in the participants' beliefs. Keeping the two modules apart has the following advantage:

> An important feature of SDRT is that the reasoning an agent does to compute discourse content and the reasoning he does with his own beliefs about (contingent) states of affairs (e.g., whether he believes this content to be true) are kept separate: the two logics are related, but unlike Hobbs *et al.* (1993) the logic in which *A* constructs the logical form of the discourse has only restricted access to his own beliefs. This means that even when *A* doesn't believe what *B* says, *A* can still construct the interpretation that *B* intended, *without* reasoning about what *B* actually believes or intends at all (A&L:299)

A&L give the example in (20) to illustrate this point:

(20) a. A: Max is in jail.
b. B: Yeah, he was caught embezzling company funds.

Here, *B* offers (20b) as an explanation for why Max is in jail. This discourse if perfectly coherent (at least up to this point), even in a situation in which *A* does not believe that Max is in jail because he was caught embezzling company funds. Despite there being a clash between *A*'s beliefs and the veridicality requirement

on *Explanation*, *A* will infer that it is this rhetorical relation that holds between the two utterances. This is possible precisely because *A* will construct an SDRS of the discourse solely from the compositional semantics and the glue language, without referring to his or *B*'s beliefs or intentions. In continuing this discourse, *A* may then of course challenge the truth of (20b) or the claim that (20b) is the reason for Max's being in jail, but the information expressed in (20b) is integrated into the SDRS of the discourse.

It is this distinction between discourse content and cognitive modelling that helps make sense of the CQ Reportative and the fact that it can be used in all kinds of rhetorical relations without the speaker simultaneously expressing the belief that the embedded propositions are true, though this requires the revision of the Sincerity axiom as well as the taxonomy of speech acts, as outlined in section 4. First, however, I briefly present Zeevat's (2003b) and (Krifka 2004)'s proposals, as some of their ideas will be relevant for the analysis of *-si* as well. In particular, these two authors discuss the notion of an illocutionary modifier, whereas A&L do not.

3.3 Illocutionary modifiers

The notion of illocutionary modifier is well established in the literature. For example, Bach and Harnish (1979) analyse adverbs such as *frankly, honestly* as illocutionary adverbs, Waltereit (2001) analyzes modal particles in German and French as operating on the preparatory conditions of the speech act, and Pavlidou (1988), as cited in Ifantidou (2001), analyzes the Modern Greek particle *taha*, which appears to be an indirect evidential with reportative interpretations, as cancelling the sincerity condition of the speech act it occurs in. An illocutionary modifier is thus a linguistic element that contributes its meaning not to the main proposition expressed, but to the speech act. It does not determine the illocutionary force of the speech act (assertive, commissive, etc.), but modifies this force in some way. While illocutionary modifiers have been recognized as a type of operator, few formal theories have analyzed them. For example, Vanderveken analyzes certain adverbs, e.g. *alas*, as modifying the primary illocutionary force indicator to derive a complex indicator "which expresses the illocutionary force obtained from the assertion by adding the condition they express" (Vanderveken 1990:128). More recently, Zeevat (2003a,b) analyzes particles in a number of different languages as illocutionary modifiers which map speech acts onto speech acts. Zeevat takes speech acts to be update functions on the common ground, and represents their meaning as a set of parameters which may put conditions on the input context or specify the context changes the speech act brings about. Most of these parameters correspond more or less transparently to Searle's components of illocutionary force. For example, there is a parameter INTENTION, which for assertion has as its value the speaker's intention to make *p* part of the common ground, and a parameter MINIMAL EFFECT, which specifies what the minimal effect of the speech act is on the common ground and which for assertion is roughly 'the speaker believes the asserted proposition', that is, this parameter corresponds to sincerity. One important feature of Zeevat's account is that the parameters have default settings, which together specify the standard type of assertion. All other types are hypothesized to be derivable from assertion by overriding one or more of the default settings. Illocutionary modifiers are one

device to explicitly override these defaults. Of immediate interest to the current paper is the parameter OPERATOR, which "is the operator under which the assertion is to be entered into the common ground. Evidentiality is the main target of this parameter, distinctions between hearsay, direct evidence, belief and possibilities should be made here." The setting for assertions is 'nil', but an overt evidential such as the CQ Reportative can specify a different value. If it has a value other than 'nil', the propositional content *p* is not directly entered into the common ground, but embedded under this operator.

For Krifka (2001), speech acts are functions from sets of social commitments *c* (Searle 1969) to sets of social commitments. A speaker performing an assertion of *p* "takes on the commitment to produce evidence or arguments for the truth of [*p*], if required" (Krifka 2004). This captures the first of Searle's preparatory conditions on assertions that the speaker should have evidence or reasons supporting *p*. The speaker also commits to the truth of *p*, capturing sincerity:

(21) a. A: Why are you late?
B: The bus had an accident
b. ASSERT [HAD ACCIDENT(THE BUS)](c):
c + speaker commits to the truth of the proposition HAD ACCIDENT(THE BUS) and to back it up

Illocutionary modifiers can affect the speaker's commitments. For example, the German adverb *wohl*,[16] exemplified in (22a), attaches to the illocutionary force indicator ASSERT and weakens the sincerity commitment as indicated in (22b):

(22) a. Es wird wohl regnen.
'It will probably rain.'
b. WOHL-ASSERT [RAIN](c)
= c + speaker commits to truth of the proposition RAIN, but to a lesser than usual degree

This system easily accommodates evidentials such as CQ *-si* as operators on ASSERT which constrain the evidential commitment as in (23b).

[16] *Wohl* is similar in meaning to the adverb *wahrscheinlich*—'probably'. They differ with respect to the level of meaning at which they apply: *wahrscheinlich* operates within the propositional level, but *wohl* on the illocutionary level. This is evidenced by the fact that only the latter can be embedded in the antecedent of conditionals (cf. for the impossibility of embedding CQ evidentials discussed in section 2.2):

(i) Wenn es wahrscheinlich /??wohl regnen wird, sollten wir Schirme mitnehmen
'If it probably going to rain, we should take umbrellas with us.'

(23) a. Para-sha-n-**si**.
rain-PROG-3-REP
'It is raining'
b. SI-ASSERT [RAIN](c)
= c + speaker commits to backing up the proposition RAIN by identifying a reportative source

However, I will argue in section 4.1 that the commitment to produce the kind of evidence for *p* indicated by an evidential, if required, is not the primary or main commitment taken on by the speaker. Rather, by using an evidential, the speaker commits herself to possessing the indicated type of evidence at the time of speaking.

4 CQ *-si* as a cognitive modelling operator

A&L do not explicitly discuss illocutionary modifiers, but it is not too difficult to see how they could be incorporated into the SDRT framework. Recall from section 3.1 that rhetorical relations take as their arguments labels of DRSs, for example, *Narration*(π_1,π_2). Given that rhetorical relations are speech act types, these labels can in fact be thought of as *speech act discourse referents* (A&L:137). An illocutionary modifier is then simply a linguistic element that puts conditions on such a discourse referent. Fig. 2 shows the condition contributed by the CQ Reportative.

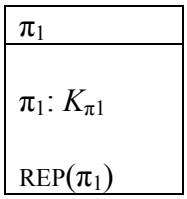

Figure 2: SDRS schema containing the CQ Reportative

The contribution of the evidential is here represented using small caps instead of the italics used for rhetorical relations. This is a typographical device to highlight one fundamental difference between the conditions evidentials put on speech act referents and those introduced by rhetorical relations: evidentials in CQ do not contribute to the truth conditions of the discourse content (see section 2.2), but the latter do. Informally, the truth conditions for veridical rhetorical relations *R* say that "*R*(π_1,π_2) is true if and only if $K_{\pi 1}$, $K_{\pi 2}$ and some 'extra stuff' ...are true too" (A&L:157), where the 'extra stuff' is the truth conditional contribution by the rhetorical relation itself such as the requirement that the event described by π_2 occurs after the event described by π_1 for *Narration*. Since the CQ Reportative does not contribute to the informational content, its truth conditions, again informally, simply say that REP(π) is true iff K_π is true. That is, they simply

'pipe through' the truth conditions of their arguments, without adding to them.[17] This approach to evidentials in CQ differs from Asher's (2000) analysis of parentheticals such as *John, Mary assures us/I hear, can be trusted*. In his account, the parenthetical is represented as its own SDRS, which is then linked to the SDRS representing the main clause *John can be trusted* with a rhetorical relation *R*. In this case *R* will be calculated using the glue language axioms to be *Evidence*. Since *Evidence* as a rhetorical relation is a speech act type this means that a speaker performs two speech acts when using a parenthetical: that of asserting the main clause and its relation to the preceding discourse and that of asserting the *Evidence* relation between the parenthetical and the main clause. Asher appears to intend his analysis of parentheticals to extend also to grammatical evidentials such as the Sissala hearsay particle discussed by Blass (1989), and by extension presumably also to the CQ evidentials. However, for CQ evidentials, I see no reason to distinguish such a separate evidential speech act in addition to the main rhetorical relation. If there were such a separate speech act, it should be possible to challenge it (A: *John, as Mary assures us, is trustworthy*, B: *That's not true. Mary has said no such thing.*), but as shown in section

[17] This vacuity appears to be necessary under the assumption that the meaning of any linguistic item must be represented in the SDRS constructed for the sentence it occurs in, even if it doesn't contribute to truth-conditional meaning. Otherwise it could not feed cognitive modelling.

2.2, evidential meaning is not challengeable. Moreover, A&L require rhetorical relations to have truth-conditional effects, but, as far as I have been able to ascertain, there are no truth-conditional effects of the CQ Reportative on discourse content.[18] This is not the place to delve into the issue of what the relationship between grammatical evidentials and parentheticals is, however.[19] Keeping in mind that this in an open issue to be studied further, I will in the following explore the idea that the semantics of the Reportative is entirely located on the level of cognitive modelling. There are three aspects of cognitive modelling that are affected by *-si*: (i) the speaker's evidential commitment, (ii) the speaker's sincerity, and (iii) belief transfer, each of which will be discussed in the following subsections.

4.1 The evidential commitment of *-si*

Following Krifka (2004), I assume that a speaker who asserts *p* thereby takes on the commitment (i) that *p* is true, and (ii) that they can "produce evidence or arguments for the truth of [*p*], if required." As briefly discussed in section 3.3, evidentials can then be analyzed as restricting the kind of evidence that the speaker commits herself to producing if required. Thus, a speaker using the CQ evidential for best possible grounds *–mi* commits herself to producing direct evidence when the event described is observable, and a speaker using the Reportative *-si* commits herself to identifying her source.

In Krikfa's (2004) formulation (21b) the evidential commitment undertaken by a speaker making an assertion is a commitment to a future action, and this could be modelled in SDRT using the intention operator. For example, the intention of a speaker using CQ *-si* is to identify her source for α: $\mathcal{I}_{S(\alpha)}(\mathit{IdentifySource}(\alpha))$. However, it seems to me that the *primary* commitment is to possessing such evidence/reasons at the time of speaking, from which the *secondary* commitment to producing this evidence if requested follows. This primary evidential commitment is, in my view, a type of sincerity: a speaker who does not possess the indicated type of evidence is insincere. In this, I depart from Searle's proposal that having evidence/reasons for *p* is a *preparatory* condition on assertion. I do so because preparatory conditions are assumed to be presupposed, but evidential meaning is not presupposed (Faller 2002:117f). Moreover, we find an evidential variant of Moore's paradox; a sequence of the form "*p*-**si**, but I wasn't told *p*" is infelicitous in the same way as a sequence of the

[18] Note that having truth-conditional effects on discourse content should be distinguished from the evidential having truth conditions. Thus, it may or may not be true that a speaker using the CQ Reportative has a reportative source of information, but this is not part of the main proposition expressed. This view agrees with that of Jayez and Rossari (2004), who argue that parentheticals do not contribute to truth-conditional content, using similar tests as I applied to CQ *-si* in section 2.2, and instead analyze parentheticals as conventional implicatures. They state: "Being propositions, implicatures can correspond (or not) to the facts. Then, they are truth-conditional and we agree with Asher (2000) on this point. Moreover, implicatures are 'dynamic', that is, they can be added to the belief states of the discourse participants. In these two respects, implied propositions do not differ from asserted propositions. However, in contrast to asserted propositions, implied propositions are not added to the common ground." In fact, most of illocutionary meaning fits this description.

[19] But see Rooryck (2001a) for a brief discussion of this issue.

form "*p*, but I don't believe *p*" is infelicitous (Faller 2002:200). I will therefore model the evidential commitment as a sincerity axiom using the belief operator $\mathcal{B}$.

In addition to $\mathcal{B}$ and $\mathcal{I}$, the cognitive modelling language contains the function symbol *Say*(α), which maps labels into action terms and which "should be interpreted as the action of the utterer of α uttering α" (A&L:387), and the modal operator *Done*, which takes action terms to WFFs," (A&L:386), that is, propositions, and which requires that the action denoted by the action term was done. Put together, these two operators express that a speech act of α was performed: *Done*(*Say*(α)). I will use this expression for capturing the meaning of CQ *-si* as follows:

(24) Evidential Sincerity for *-si*:
REP(α) > $\mathcal{B}_{S(\alpha)}(\exists S_3[Done(Say_{S3}(\beta)) \wedge \beta \rightarrow \alpha])$

This axiom captures the speaker's primary evidential commitment when using the CQ Reportative that she believes that some speaker S_3 at some point said β, from which α follows.[20] Here, S_3 is to be understood to be subject to the condition "$S_3 \neq S(\alpha) \wedge S_3 \neq H(\alpha)$" to capture the fact that it is not normally felicitous to use *-si* to report something the speaker herself had previously said or to repeat something the hearer has said back to her. In the simplest case, β=α, but it is also felicitous to use the Reportative when the speaker has drawn a conclusion from what S_3 said. For example, if Marya had told me on a Monday that she was going to Lima on the following Saturday (=β), and a friend suggested to me on that Saturday that we should go visit her at her home in Cusco, I could answer with (25), because being in Lima entails not being in Cusco.

(25) *Marya-qa mana-**s** wasi-n-pi-chu*
Marya-TOP not-REP house-3-LOC-NEG
p='Marya's not at home.'
EV: *s* was told that *p* (elicited)

[20] The evidential sincerity axiom may be too restrictive in that it requires that someone has actually performed an utterance of β, but *-si* may also occur with verbs of thinking as in (i).

(i) *Marya-qa uma-n-pi hap'i-sha-n mana-**s** universidad-man*
Marya-TOP head-3-LOC grasp-PROG-3 not-REP university-ILLA
hayk'u-n-man-chus hina.
enter-3-COND-DUB
'Marya thinks that she might not get into university.' (elicited)

However, examples like this do not pose a serious challenge to (24), since, as one of my consultants pointed out, one can only know what another person thinks, if that person tells you. Quite possibly *-si* may occur with other verbs of propositional attitude, though more research is needed to determine which ones exactly. In Sissala, for example, the hearsay particle may be embedded under a variety of propositional attitudes, including 'think', 'believe', 'hope', 'want' etc. (Blass 1989).

4.2 Reportative *-si* and speaker's belief

Having modelled the evidential sincerity commitment undertaken by a speaker using the CQ Reportative, we can now turn to the problem posed by this evidential for the current formulation of Sincerity in (24). As discussed in section 2, the speaker of an utterance with *-si* does not express her commitment to the truth of *p* or her commitment to the falsity of *p*. Nevertheless, as shown in section 2, *-si*-sentences combine with the same rhetorical relations as sentences with another or no evidential.

Consequently, Sincerity cannot be maintained in its current formulation, repeated here as (26a) for convenience, because, as discussed in section 3.2, it directly licenses the inference that the speaker believes the content of the DRS linked by a veridical *R*, repeated here as (26b).

(26) Sincerity Axioms:

a. $R(\alpha, \beta, \lambda) \; > \; \mathcal{B}_{S(\beta)}R(\alpha, \beta, \lambda)$

b. $\mathcal{B}_{S(\beta)}R(\alpha, \beta, \lambda) \; \rightarrow \; \mathcal{B}_{S(\beta)}(p_\beta) \; \wedge \; \mathcal{B}_{S(\beta)}(p_\alpha)$

While a speaker does not necessarily believe *p* embedded under the CQ Reportative, she does nevertheless seem to be committed to the rhetorical relation holding. For example, it is the speaker of (8a) who has decided to connect the second sentence to the preceding one via *Contrast*, not whoever her source for the information is. Or consider the following (elicited) exchange in a context in which *A* is about to travel to Puno, to which neither *A* or *B* have been before.

(27) A: *Apay-man-chu punchu-y-ta*.
take-1-COND-QUEST poncho-1-ACC
'Should I take my poncho? '
B: *Nishu-ta-**s** chiri-n Punu-pi*.
a.lot-ACC-REP be.cold-3 Puno-LOC
p='It is very cold in Puno'
EV: *s* has heard that *p*

Speaker *B* is offering her utterance as a piece of information that might help *A* to decide whether or not to take a poncho, that is, she is connecting her utterance to *A*'s via the relation *IQAP* (*Indirect Question Answer Pair*, (A&L:313)). But because she is using the Reportative, she is not expressing her belief that it is cold in Puno, at least not directly.

Thus, it is possible to perform a speech act of narrating, answering, elaborating etc. without believing that the content of the so related sentences is true. Because of the validity of (27), however, commitment to the rhetorical relation cannot be separated from commitment to the related propositional content for veridical relations. Giving up veridicality when the relation is modified by *-si* is not an option, since veridicality is needed to build up the discourse content, which is the same for discourses embedded under *-si* and discourses embedded under other evidential operators. The separation of discourse content from the speaker's beliefs is precisely the advantage SDRT offers in the analysis of evidentials.

Instead I propose to make commitment to *R* conditional on the truth of the proposition. The intuitive idea is that we can paraphrase what *B* is committed to as "If it is true that it is cold in Puno (and I am not saying that I believe it to be true), then my utterance indirectly answers your question." Likewise, the speaker's commitment in (28) (repeated from (8b), can be paraphrased as: "If it is true that the condor flies a little bit (and I am not saying that I believe it to be true), then this is a result of them pushing it."

(28) *tanqa-n-ku-**s**, hina-**s** kuntur macha-sqa huk chhikachan-ta phala-n*
push-3-PL-REP so-REP condor drunk-PRT one a.little-ACC fly-3
'They push (it), so the drunk condor flies a little bit.' (Conv)

That is, speakers using *-si* are *conditionally* committed to the rhetorical relation and its logical consequences holding. The reportative variant of the Sincerity axiom in (29) captures this.[21]

[21] This analysis is to some extent comparable to Jayez and Rossari's (2004) analysis of the French parenthetical *paraît-il*—'I hear' as in (i).

(i) Jean a eu un accident, **paraît-il**
'John had an accident, I hear.'

They argue that it, like other parentheticals, does not contribute to the main proposition expressed *p=John had an accident* in (i), but gives rise to the conventional implicature that the speaker heard that *p* from some source *x*. *p* itself is entered into the common ground under the modal operator AGR, which they gloss as 'If one agrees with *x*, then *p*. The account proposed here differs from theirs in (a) that the speaker's commitment to the rhetorical relation holding is made dependent on

(29) Reportative Sincerity

$R(\alpha,\beta,\lambda) \ \wedge \ \text{REP}(\beta) > \mathcal{B}_{S(\beta)}(\beta \ \rightarrow \ R(\alpha, \beta, \lambda))$

Note that (29) does not substitute the axiom in (26a)—this is still needed for sentences without evidentials—but, because it is more specific than (26a), (30) will apply instead of (26a) in cases in which an SDRS contains the condition REP(β).[22]

To summarize so far, the separation of discourse content from the (shallow) modelling of the speech participants' cognitive states offered by SDRT allows us to account for the fact that CQ texts containing the Reportative *-si* are as coherent as texts containing another evidential or texts in other languages without evidentials. The discourse content of a text in CQ contains the truth-conditional information expressed by the sentences plus the rhetorical relations linking them. For example, the discourse content of (28) is: "The condor flies a little bit as a result of them pushing it." The conditionality expressed in (29) only becomes relevant when the speaker's commitments are calculated.

The CQ data moreover suggest that the rhetorical relations introduced by indicative sentences can not be considered subtypes of ASSERTION,[23] since assertions by definition express the speaker's belief that *p*. Instead, I propose to label the supertype PUT,[24] which stands for putting a proposition forward for being added to the discourse content. Thus, *Narration, Elaboration, Result* etc. are all subtypes of PUT, regardless of whether they are modified by a Reportative or not. Standard assertion is derived from PUT by applying the Sincerity defaults in (26) in the absence of overt indication to the contrary such as the CQ Reportative, which triggers the more specific default in (29). This account thus partly captures Zeevat's (2003b) hypothesis that assertion is the default speech act and that its parameter settings can be overridden by illocutionary modifiers.

While cognitive modelling does not directly contribute to discourse content, the SDRT architecture allows information about the speech act participants' cognitive states to have some indirect effect on discourse content. We may therefore expect to find such effects also with the CQ Reportative. So far, I have not encountered any examples that show how the Reportative indirectly contributes to the SDRS built up to the point at which it is used (though future

---

the truth of α and β, whereas in their account the condition is agreement with a source, and (b) that the conditionality is to be found only at the cognitive modelling level, not the level of discourse content as in theirs.

[22] That is, I assume that A&L's (p. 210) Specificity Principle ("one default clue about rhetorical structure is overridden by a conflicting more specific default clue") holds for cognitive default axioms as well.

[23] Unless one is willing to duplicate all relations with a reportative flavor, which would then be subtypes of a reportative supertype.

[24] As the source for the term PUT I acknowledge Kai von Fintel, who proposed in a talk given at a UMass Linguistics Colloquim in 2003 that one possible way of analyzing epistemic modals involves decomposing ASSERTION into the primary illocutionary force indicator PUT and a modifier. Epistemic modals can then be analyzed as such illocutionary modifiers which apply to PUT and derive stronger or 'assertions'. In the absence of illocutionary modifiers, an ASSERT operator applies. This proposal is very similar to the ones made by Krifka (2004) and Zeevat (2003b)) briefly described in section 3.3, as well as to the proposal made here.

work may of course reveal that such effects exist), but it does seem to have an effect on felicitous continuations of the discourse. For example it is generally not felicitous to have a monologic discourse of the form "*p*, (but) ¬*p*", that is, a speaker asserting *p* cannot contradict herself. Such a discourse is however permissible when the second sentence is uttered by a different speaker, thus "A: *p*, B: (But) ¬*p*/*p* is not true" is fine. In SDRT, *B*'s utterance would be connected to *A*'s utterance via the rhetorical relation *Correction*. A speaker may correct herself, of course, but she would have to say something to the effect that she was mistaken in asserting what she did. For example, (30b), taken from a post to a web log, was sent as an immediate follow-up to correct the typo in (30a) in a previous post by the same writer:

(30) a. I did giant robots and tanks 'n' stuff. I'm weird that way.
b. Oops. I meant to say, "I dig giant robots". I never did 'em, I swear.
(http://blogs.guardian.co.uk/games/archives/2004/10/14/
women_in_games.html, accessed October 5, 2005)

When embedding *p* under the CQ Reportative however, the speaker can directly negate *p*, without contradicting herself as shown by example (6), repeated here in slightly shortened form as (31).

(31) a. *Pay-kuna-**s** ñoqa-man-qa qulqi-ta [...] saqiy-wa-n*,
(s)he-PL-REP I-ILLA-TOP money-ACC leave-1o-3
p_1='They leave me a lot of money'
EV_1: *s* has reportative evidence for p_1
b. *mana-**má** [...] ni un sol-ta [...] saqi-sha-wa-n-chu*
not-IMPR not one Sol-ACC leave-PROG-1O-3-NEG
p_2='(but) that's not true, they don't leave me one sol.'
EV_2: *s* has direct evidence for p_2 (Conv)

While the content of (31b) contradicts the content of (31a), the speaker is not contradicting herself. In the proposal developed here this is unproblematic due to the separation of discourse content and cognitive modelling. The SDRS will contain the rhetorical relation *Correction*(π_1,π_2). On the level of cognitive modelling (31b) will trigger the inference to $\mathcal{B}_{S(\beta)}(\beta \rightarrow R(\alpha, \beta, \lambda))$ by (29), but (31b) asserts ¬β, thereby blocking the inference to $\mathcal{B}_{S(\beta)}R(\alpha, \beta, \lambda)$, and consequently to $\mathcal{B}_{S(\beta)}R(\beta)$.[25]

Thus, the Reportative contributes to discourse content indirectly by allowing a single speaker to link two sentences via *Correction*. It is a matter of further research to determine whether there are other ways in which this and other evidentials may constrain subsequent discourse.

[25] I refer the reader to A&L and Asher and Gillies (2003)) for the effects *Correction* has on the SDRS being built.

4.3 Reportative *-si* and Belief Transfer

Recall from section 3.2 that a speaker asserting a veridical relation such as *Narration* is in SDRT, as in other speech act theories, taken to intend her addressee to believe the asserted content *p* (or at least that the addressee adopt the belief that the speaker believes *p*). Belief transfer is achieved on the assumption that the speaker is competent on the information conveyed by her utterance. This is modelled in SDRT by the Competence axiom in transfer, repeated here as (32), in conjunction with Sincerity.

(32) Competence:
$\mathcal{B}_A\phi > \mathcal{B}_B\phi$

This axiom obviously does not apply to *-si*-sentences, as they do not give rise to the inference that the speaker believes ϕ, the antecedent is therefore not satisfied. Another way to look at the Reportative *-si* is therefore as an explicit indication by the speaker that she 'signs away' her claim to competence on the information in question to someone else. Since a speaker using *-si* neither claims competence nor expresses her belief that ϕ, it cannot be the intention of the speaker of an indicative sentence with *-si* that the hearer adopt the speaker's belief. What, then, is the point of making an utterance with *-si*? First, we can observe that speakers using *-si* are still adhering to Grice's Cooperative Principle:

(33) Cooperative Principle:
Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged. (Grice 1989:26)

Consider again example (27). The accepted purpose of this exchange, as established by *A*'s question, is to decide whether or not *A* should take her poncho to Puno. While *B* cannot make any direct claims about the weather there, she is nevertheless being cooperative and trying to contribute to the purpose of the exchange by providing relevant information she has acquired second-hand. One possible outcome of the exchange is therefore that *A* will take a poncho to Puno, that is, it is plausible that *A* will adopt the belief that it is very cold in Puno. In many circumstances, this would indeed be the speaker's intention, but it is not a necessary condition for *B*'s speech act to be successful. Thus, the following English example using *allegedly* for lack of an example in CQ is perfectly coherent.

(34) A: Should I take a poncho to Puno?
B: Well, it can allegedly get very cold there, but I personally can't quite believe that, after all, it's in South America! Mind you, I have never been there myself.

Here, *B* is not intending for *A* to adopt her belief, but is offering *A* a choice, her illocutionary point being to provide *A* with all the available information. A paraphrase of *B*'s intention is therefore: "I believe one thing, but I don't have

good evidence for it, so you should also take into consideration what other people have said on the topic." That the intention of belief transfer is not the illocutionary point of reportative utterances is even clearer in messenger scenarios such as the ones presented in section 2. For example, the speaker of (3b) may or may not believe *p* and may or may not intend for the recipient to adopt the belief that *p*. His only point in making the utterance is to convey the information. In these cases, the speaker's beliefs are simply irrelevant.[26] But in other cases the speaker's intention is that the hearer does *not* adopt the belief that *p*, as for example in (31). But even in such a case, Cooperativity is still adhered to: the speaker of (31b) makes clear by her utterance that (31a) containing *-si* was only uttered in order to introduce the claim that they leave her money into the discourse for the purpose of immediately refuting it.

In summary, belief transfer is not the speaker's intention when making a speech act with the CQ Reportative *-si*, but it is her intention to contribute to the purpose of the talk exchange to the best of her abilities.

4.4 The effect of *-si* on the common ground

In the account presented here, the CQ Reportative does not contribute directly to discourse content. It only affects cognitive modelling. That is, the discourse is simply updated with *p*. Alternative proposals have assumed that propositions embedded under an evidential operator are entered into the common ground with that operator. As mentioned in section 3.3, Zeevat (2003b) introduces a parameter OPERATOR which may receive its value EV from an evidential. The common ground is then updated with EV(*p*).[27] Similarly, Jayez and Rossari (2004) assume that propositions embedded under the French parenthetical *paraît-il*—'I hear' are entered into the common ground under the modal operator AGR glossed 'If one agrees with *x*, then *p*' (see footnote 20). In addition, *paraît-il* gives rise to the conventional implicature that the speaker heard that *p* from some source *x*. That is, the meaning of *paraît-il* is represented twice, which seems unnecessary. In SDRT, this can be avoided, as it separates cognitive modelling from discourse content: CQ *-si* only contributes to the former, and the discourse is updated with just *p*. If neither the speaker nor the hearer follow up an utterance with *-si* with a *Correction* or another type of speech act challenging the truth of *p*, *p* will become *settled* (A&L, Asher and Gillies 2003) just as an asserted proposition. This makes, amongst other things, the prediction that *p* can be presupposed in subsequent discourse, and this is indeed the case, as is shown by (35).

---

[26] In this type of example, belief transfer may perhaps be said to have taken place between the original information source and the addressee. The main difference between this "third-party" belief transfer and the transfer between speaker and hearer captured by the Competence axiom competence is that it does not seem to be automatic in the absence of an expression of disbelief on *A*'s. Thus, if *B* had asserted that it can get very cold in Puno using the evidential for best possible grounds, and *A* had not challenged the truth of this, it would have become a mutual assumption that *B* has adopted the belief that *p*. In the case of (27), this is probably too strong an assumption since an addressee cannot be assumed to feel as charitable towards an undisclosed source as she feels towards the speaker (or at least pretends to be). Further research is necessary to confirm this.

[27] Zeevat does, however, not spell out what effect entering a proposition under an evidential operator has on the common ground.

(35) A: *Secuta-**s** puñu-sqa-ku*.
dry-REP sleep-PST2-PL
'They slept dry (=deeply).'
B: *Hasta illarimuy-kama*?
until dawn-TERM
'Until dawn? '
A: *Illamuy-ta-ña-**s** rikch'a-ri-sqa-ku*.
dawn-ACC-DISC-REP wake.up-INCH-PST2-PL
'They woke up when it was already dawn' (Conv)

The last utterance by *A* presupposes that 'they' were asleep, which was introduced into the discourse by her first utterance. This confirms the analysis presented here that propositions embedded under *-si* enter the common ground in the same way as asserted propositions.

5 Conclusion

Reportative sentences in Cusco Quechua have two, at first sight contradictory properties: (i) they participate in veridical rhetorical relations such as *Narration*, *Result*, etc., but (ii) the speaker does not express that she believes the propositional content *p*. In this paper, an analysis that resolves this apparent conflict was presented using the framework of SDRT, which makes a clear distinction between discourse information and information about the speech act participants' beliefs and intentions. Veridicality is a property of discourse content, but does, in the first instance, not require the speaker's belief. Only at the level of cognitive modelling is a link between veridicality and beliefs established via axioms such as Sincerity and Competence. It was proposed that reportative sentences in CQ differ from assertions in that the former trigger the application of reportative sincerity axioms, which do not entail that the speaker believes *p*. While the presented account is a first attempt at capturing the meaning of the CQ Reportative formally and will undoubtedly have to be revised in the future, I hope to have shown that an analysis of it as an illocutionary modifier within SDRT is not only possible but fruitful. The paper suggests some immediate future explorations, for example, a fuller formalization, the extension of the account to cover the other two CQ evidentials, and the question whether evidentials in other languages are amenable to a similar analysis. It also raises bigger questions such as what exactly is the difference between illocutionary meaning and propositional-level meaning? Illocutionary modifiers are identified as such because they behave differently from expressions contributing to the proposition expressed in a number of tests. However, as briefly discussed in footnote 17, they are nevertheless truth-conditional: it is either true that the speaker has a reportative source or it is not. Thus, the distinction does not correspond to a distinction between truth-conditional and non-truthconditional meaning. The account presented here suggests that one difference between the two levels is that propositional-level information[28] is what the discourse is *about*, whereas illocutionary information is secondary information concerning the speaker's attitudes towards the discourse

[28] Talk of 'proposition expressed' etc. as used in this paper, is therefore somewhat misleading, given that information about the speaker's attitudes is also propositional.

and what it is about. Attitudes can of course be made part of what the discourse is about, but for that linguistic expressions have to be used that may contribute to the discourse level such as *I believe, people say*. This characterization does however not capture one major aspect of speech act theory, namely that speech acts are what speakers do with words (Austin 1962). Within SDRT, what speakers do with words is captured by the rhetorical relations: speakers narrate, elaborate, provide background etc. These speech act types contribute to both levels, however: they constrain the truth conditions of the propositions they relate and feed the cognitive modelling process. In contrast, traditional speech act types such as Assertion are defined in terms of the speaker's intentions and beliefs. The questions how these different "levels" are related and interact, and what the right conception of speech acts and illocutionary meaning is will certainly keep researchers busy for a while to come.

References

Aikhenvald, Alexandra Y. (Ed.). (2003): *Studies in Evidentiality*. Oxford: John Benjamins Publishing Company.

Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford: Oxford University Press.

Anderson, Lloyd B. (1986): "Evidentials, paths of change and mental maps: Typologically regular asymmetries." In: W. Chafe and J. Nichols, eds., *Evidentiality: The Linguistic Coding of Epistemology*, 273–312. Norwood: Ablex Publishing Corporation.

Asher, Nicholas. (2000): "Truth conditional discourse semantics for parentheticals." *Journal of Semantics* 17:31–50.

Asher, Nicholas, and Anthony Gillies. (2003): "Common ground, corrections, and coordination." *Argumentation* 17:481–512.

Asher, Nicholas, and Alex Lascarides. (1993): "Temporal interpretation, discourse relations and commonsense entailment." *Linguistics and Philosophy* 16(5):437–494.

Asher, Nicholas, and Alex Lascarides. (2001): "Indirect speech acts." *Synthese* 128:183–228.

Asher, Nicholas, and Alexis Lascarides. (2003): *Logics of Conversation*. Cambridge: Cambridge University Press.

Austin, J.L. (1962): *How to do things with words*. Cambridge: Harvard University Press.

van der Auwera, Johan, and Vladimir Plungian. (1998): "On modality's semantic map." *Linguistic Typology* 2:79–124.

Bach, Kent, and Robert M. Harnish. (1979): *Linguistic Communication and Speech Acts*. Cambridge, MA: MIT Press.

Blass, Regina. (1989): "Grammaticalisation of interpretive use: The case of *re* in Sissala." *Lingua* 79(4):299–326.

Chafe, Wallace, and Johanna Nichols (Eds.). (1986): *Evidentiality: The Linguistic Coding of Epistemology*. Norwood: Ablex Publishing Corporation.

Cusihuaman, Antonio. (2001[1976]): *Gramática Quechua: Cuzco-Collao*. Lima: Ministerio de Educación/Instituto de Estudios Peruanos.

Dendale, Patrick, and Liliane Tasmowski (Eds.) (2001): *Journal of Pragmatics*. Vol. 33. Elsevier.

Ehrich, Veronika. (2001): "Was *nicht müssen* und *nicht können* (nicht) bedeuten können: Zum Skopus der Negation bei den Modalverben des Deutschen." In: R. Müller and M. Reis, eds., *Modalität und Modalverben im Deutschen*, Vol. 9 of *Linguistische Berichte Sonderhefte*, 149–176. Hamburg: Buske.
Espinoza, Darío. (1997): *Tanteo puntun chaykuna valen*. Lima: CHIRAPAQ-Centro de Culturas Indias. (Transcription and translation into Spanish of an autobiographical narration by Ciprian Phuturi Suni).
Faller, Martina. (2002): *Semantics and Pragmatics of Evidentials in Cuzco Quechua*. PhD thesis, Stanford University.
Faller, Martina. (2004): "The deictic core of "non-experienced past" in Cuzco Quechua." *Journal of Semantics* 21(1):45–85.
Faller, Martina. (2005): "Evidential implicatures." Unpublished ms., The University of Manchester.
Floyd, Rick (1999): *The Structure of Evidential Categories in Wanka Quechua.* Dallas: SIL and The University of Texas at Arlington Publications in Linguistics
Garrett, Edward. (2000): *Evidentiality and Assertion in Tibetan*. PhD thesis, University of California, Los Angeles.
Grice, Paul. (1989): *Studies in the Way of Words*. Cambridge: Harvard University Press.
de Haan, Ferdinand. (1999): "Evidentiality and epistemic modality: Setting boundaries." *Southwest Journal of Linguistics* 18(1):83–101.
Ifantidou, Elly. (2001): *Evidentials and Relevance*. Amsterdam: John Benjamins Publishing Company.
Ifantidou-Trouki, Elly. (1993): "Sentential adverbs and relevance." *Lingua* 90:69–90.
Itier, César. (1995): *El Teatro Quechua en el Cuzco*. Cuzco and Lima: Centro de Estudios Regionales Andinos "Bartolomé de las Casas" and Institut Français D'études Andines.
Itier, César (collector). (1999): *Karu Ñankunapi*. Cusco: Centro de Estudios Regionales Andinos "Bartolomé de Las Casas".
Izvorski, Roumyana. (1997): "The present perfect as an epistemic modal." In: A. Lawson and E. Cho, eds., *SALT VII*. Cornell: CLC Publications.
Jayez, Jacques, and Corinne Rossari. (2004): "Parentheticals as conventional implicatures." In: F. Corblin and H. de Swart, eds., *Handbook of French Semantics*. Stanford: CSLI Publications.
Johanson, Lars, and Bo Utas (Eds.) (2000): *Evidentials*. Berlin: Mouton de Gruyter.
King, K. A., and N. H. Hornberger. (2004). "Introduction. Why a special issue about Quechua?" *International Journal of the Sociology of Language* 167:1–8.
Krifka, Manfred. (2001): "Quantifying into question acts." *Natural Language Semantics* 9:1–40.
Krifka, Manfred. (2004): "Semantics below and above speech acts." Unpublished ms., Handout of Colloquium presented at Stanford University.
Lascarides, Alex, and Nicholas Asher. (1998): "Questions in dialogue." *Linguistics and Philosophy* 23(3):237–309.
Lyons, John. (1977): *Semantics. 2 vols.* Cambridge: Cambridge University Press.

Papafragou, Anna. (2000): *Modality: Issues in the Semantics-Pragmatics Interface*. Amsterdam: Elsevier.
Papafragou, Anna. (in press): "Epistemic modality and truth conditions." In: A. Klinge and H. Müller, eds., *Approaches to Modality (provisional title)*.
Pavlidou, Theodosia. 1988. "Ta distahtika epirimata." *Studies in Greek Linguistics* 527–546.
Rooryck, Johan. (2001a): "Evidentiality, part I." *GLOT* 5(4):125–133.
Rooryck, Johan. (2001b): "Evidentiality, part II." *GLOT* 5(5):161–168.
Searle, John R. 1969. *Speech Acts*. Cambridge: Cambridge University Press.
Searle, J.R. (1975): "A taxonomy of illocutionary acts." In: K. Gunderson, ed., *Language, Mind, and Knowledge*, Vol. VII of *Minnesota Studies in the Philosophy of Science*. University of Minnesota Press.
Valderrama Fernandez, R., and C. Escalante Gutierrez. (1982): *Gregorio Condori Mamani, Autobiografia*. Cusco: Centro de Estudios Rurales Andinos "Bartolomé de Las Casas".
Vanderveken, Daniel. (1990): *Meaning and Speech Acts, Vol. 1. Principles of language use*. Cambridge: Cambridge University Press.
Waltereit, Richard. (2001): "Modal particles and their functional equivalents: A speech-act theoretic approach." *Journal of Pragmatics* 33:1391–1417.
Willett, Thomas. (1988): "A cross-linguistic survey of the grammaticization of evidentiality." *Studies in Language* 12(1):51–97.
Zeevat, Henk. (2003a): "Particles: Presupposition triggers, context markers or speech act markers." In: Blutner and Zeevat, eds., *Optimality Theory and Pragmatics*, 163–199. X: Palgrave MacMillan.
Zeevat, Henk. (2003b): "The syntax semantics interface of speech act markers." In: *Proceedings Diabruck, 7th Workshop on the Semantics and the Pragmatics of Dialogue,* Wallerfangen.