1

The rhetorical attachment of questions and answers

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1.1 Introduction

Placing ourselves within the tradition of dynamic semantic approaches to discourse in natural language Kamp and Reyle (1993), Groenendjik and Stokhof (1991), we investigate here how some of the principles underlying these approaches can be extended to the study of human dialogue, taking over some hypotheses of Asher and Lascarides (1998, 2003). In this perspective, a dialogue is made of segments just like any discourse; the semantics of each one of these segments is represented in a logical framework and linked to other segments by so-called rhetorical relations Hobbs (1985) that also carry semantic or intentional content, in the spirit of Segmented Discourse Representation Theory Asher (1993). Thus can be integrated linguistic phenomena tackled by formal semantics and more dialogue-specific characteristics such as turn-taking conventions or common ground establishment.

We will focus here on the issue of question/answer pairs and on the way they structure some of the established conversational content. More specifically, we have focused on Yes/No questions (questions for which the expected answer can be Yes or No, possibly with some additional material). In order to do so, we have collected a corpus of dialogues from phone conversations in a specific, constructed setting. This corpus is made of 21 transcribed 21 conversations. Phone conversations eliminate deictics and gestures as well as facial expressions in order to focus on verbal communication. Each dialogue involves a "giver" and a "receiver":

the giver explains to the receiver how to go from one place to another, in the same city. The global subject or topic of this kind of discussion is the explained route.

After a brief introduction to SDRT (section 1.2.1), we will look in section 1.2.2 at the classical proposals of this theory for attaching yes/no questions in the rhetorical structure of a dialogue, and pursue with a critical analysis of these solutions. Section 1.3 will focus on the link between question/answer pairs and the other rhetorical relations. In the process we will introduce and stress the need for a set of additional relations, especially for treating interrogative narration or correction and request for confirmation. We will then propose a new solution (section 1.4) for attaching questions and answers.

1.2 SDRT and Dialogue

1.2.1 SDRT : the basics

We will give here a very rough outline of Segmented Discourse Representation Theory Asher (1993) and its extension to dialogue. Asher's theory assumes that a dialogue is a kind of discourse involving two participants. SDRT also assumes, as the RST of Mann and Thompson (1987), that a discourse can be seen as a set of segments linked with rhetorical relations. These relations can be hierarchical or not. Hierarchical relations between segments induce a tree structure which imposes constraints on the interpretation of current utterances (e.g. anaphora resolution can be limited to certain segments of the current interpretation).[1] More generally, constraints based on the structure induced by the segmentation determine what is a coherent dialogue. New utterances will be attached to some segment incrementally within an already existing dialogue structure as they come, by taking into account lexical semantics, world knowledge and semantic-pragmatic rules selecting an appropriate relation in context, see Asher and Lascarides (1998). These aspects –which are often taken for granted in theories taking as primitives propositions and speech acts related to these propositions– makes SDRT perspective more fine-grained than that of game-based or intentional analyses. In spite of the latest proposal made in Asher and Lascarides (2003) we believe that there is room to improve some aspects related to dialogue and we will question some of its choices on the attachment of questions. We will therefore keep the following principles, while leaving aside the presently less stable aspects of the theory:

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[1]Rhetorical relations are thus either *subordinating* in the tree structure, or *coordinating*, i.e. linking two daughters of a same mother node.

- the global representation of a dialogue is composed of a set of labelled speech acts (SAs) and rhetorical relations between these occurrences of SAs. A speech act will be of the form ⟨ Speaker,Mood,Content ⟩, where the mood can be interrogative(?), declarative(.) or imperative(!). A basic semantic content will be a DRS, cf. Kamp and Reyle (1993), that is a set of linguistic referents and of conditions (predicates) on those referents. Speech acts, seen in other frameworks as having an intentional content, take on an intentional dimension only when linked together by relations bearing an intentional content.

- We have divided them into the following categories :

  —**monologic relations** : The set of these relations is given in the work of Asher (1993) updated in Busquets et al. (2001); it is composed of subordinating relations (*elaboration, explanation,...*) and coordinating ones (*narration,...*).

  —**dialogic relations** : The set of these relations coming from Asher and Lascarides (1998) has been updated in Asher et al. (2001), Asher and Gillies (2003); it is composed of *Plan-elaboration, Question-elaboration , Question-Answer-Pair*[2], *Not-Enough-Information, Acknowledgement, Correction.*. In Asher and Lascarides (2003) a systematic account of mood is added to the relations. Each indicative relation of monologue can now be uttered with interrogative (e.g *narration$_q$, elaboration$_q$*[3],...) or imperative mood. There are also some additional relations (e.g *Plan-correction, ...*).

1.2.2 Attachment of questions

Examples (1.1-1.3) and their discourse structure (Fig. 1) shows how questions and answers can be related by different relations, A_3 A'_3, A''_3 and A'''_3 being possible continuations of A_1-B_2. Here π_i is the label of the speech act made in turn i (each turn being here only one segment). Graphically, we will represent a subordinating relation with a vertical segment between two labels, and a coordinating relation with an horizontal one.

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[2]Noted QAP, with a distinction as proposed in Karttunen (1977) between QAP, Indirect QAP (IQAP) and Partial QAP (PQAP).

[3]The interrogative nature of these relations makes them subordinating.

(1.1) A_1 Tu prends la rue de la Pomme
                  You take the Pomme street.
         B_2 C'est la rue qui mène à la Place Salengro ?
                  Is it the street leading to the Salengro square?
         A_3 Oui.
                  Yes.
(1.2) A_3' Non.
                  No.
(1.3) A_3'' Je ne sais pas.
                  I don't know.
(1.4) A_3''' il y a une fontaine sur cette place ?
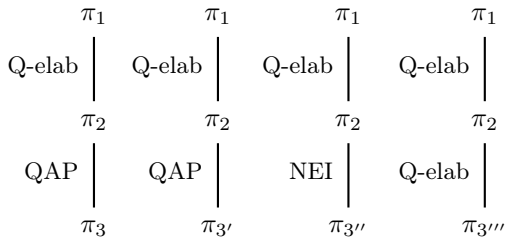   *Is there a fountain on this square?*

FIGURE 1 Discourse structures for examples 1.1, 1.2, 1.3, 1.4

Initially, SDRT's proposal was to attach questions using a single relation, namely *Q-elab*. This relation is the interrogative version of *plan-elab*.

Plan-elab(α, β): It holds just in case β's content provides information which elaborates a plan for achieving the α's SARG (Speech Act Related Goal).

Q-elab(α, β): It holds if all correct answers to β elaborate a plan for achieving the α's SARG.

As we can see, these relations pertain to the cognitive modelling module of SDRT. They attempt to model Intentions and Beliefs of the dialogue participants. They are similar to *discourse plans* presented in Litman and Allen (1990) and to *intentional structure* proposed by Grosz and Sidner (1986).

In a Asher and Lascarides (2003), another level is introduced for the attachment of questions: the **content level** (the one used for monologue). At this level relations link utterances by way of inferences on events and individuals. Those relations are *elaboration$_q$, narration$_q$...*

which are interrogative versions of classical indicative ones (e .g $elab_q$).

elab$_q$(α, β): It holds if all correct answers γ to β satisfy $elab(\alpha, \gamma)$.

The attachment of an answer is done by "Question Answer Pair" (QAP) introduced in Asher and Lascarides (1998).

QAP(α, β): It holds if α is a question and β is a (true direct) answer to that question, as determined by compositional semantics.

Roughly, this amounts to consider that semantics of questions and answer are unsaturated, and have to be combined.[4] In SDRT, the combination result is put in the SDRS of the answer itself and attached to the question. However we argue later that, due to a structural problem, another way of doing might be preferable. $IQAP$ is the indirect version of QAP in which the participant have to infer a direct answer to his question from his partner's utterance. Finally there is also $NEI(\alpha, \beta)$ a relation which appears when β does (N)ot supply (E)nough (I)nformation to satisfy the associated goal of α.

To recapitulate, Q-$elab$ captures the very common fact that when a speaker utters a question he does so in order to obtain a satisfying answer (it is the generic Question Related Goal). $Relation_q$ (where *relation* could be any traditional relation) makes this attachment precise by capturing the relation between events and individuals. However, an important claim of the present paper is to stress the lack of clarity of the hierarchical nature of these relations (subordinating or coordinating) since there may be a conflict between the subordinating nature of a question and the possible coordinating nature of the *Relation*.

1.3 Questions and other rhetorical relations

In this section we will look at the different rhetorical roles that a question could play in dialogue structure. In the following, we will present a set of examples (inspired from our corpus of route explanation dialogues) illustrating the case of question-elaboration. However, we will also have a look at some other cases where different relations are involved.

1.3.1 Elaboration

First, let's consider the case of a question elaborating the previous utterance. *Elaboration* is the canonical case, in discourse, of the sub-

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[4]The semantics of interrogatives is discussed in Hamblin (1973) Karttunen (1977) Ginzburg (1995).

ordination relation. In the figure, QAP_+ and QAP_- are employed to represent positive and negative answers.

(1.5) A_1 Tu tournes à gauche juste avant Monoprix.
               You turn on the left before Monoprix.
        B_2 La rue à sens unique?
               The one way street?
        A_3 Oui, celle-là.
               Yes, this one.

(1.6) A'_3 Non, celle d' après.
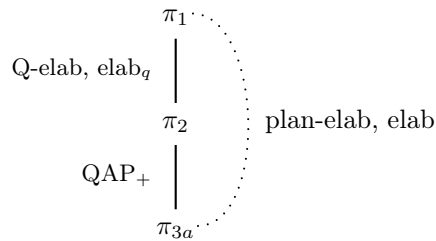   *No, the next one.*

FIGURE 2   Discourse structure for example 1.5

B_2 elaborates the SARG of A_1 (B asks a question in order to be able to follow A's prescription). Consequently B_2 is related to A_1 by *Q-elab*. But the description in B_2 also elaborates the event of turning in a street. It leads to a relation of content level: *elaboration$_q$* (See Fig. 2).

elab(α, β): "The content of the elaborated segment depends on the content of the elaborating material. So if β elaborates α, then the eventuality or eventualities that β describes are part of, or a sub-event of the eventuality described by α"Asher et al. (2001).

Now we will consider two answers to B's question: a positive B_{3a} and the negative one B_{3b}. If the answer is "Yes", it just resolves the question and allows us to infer *plan-elab* and *elaboration* between A_1 and A_{3a}.[5] The SDRS for this dialogue are given in given in figures 3-7.

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[5]A reformulation could be: '*"You turn on the left before Monoprix. It's a one way street."*

π_1:$\langle\, A, ., K_1\,\rangle$ where

K_1:

$y_1, y_2, d_1, u, t_1, e_1$
speaker(B,u)
name(y_1,"Monoprix")
turn(e_1,u,t_1)
on_the_left(e_1,u,y_2,t_1)
segment(y_2)
direction(d_1)
segment(t_1)
before(e_1,y_1,d_1,t_1)

FIGURE 3   SDRS for 1.5:A_1

π_2 :$\langle\, B, ?, K_2\,\rangle$ and π_3 :$\langle\, A, ., K_3\,\rangle$ where:

K_2:

$e_2\ y_3$
street(y_3)
one_way(y_3)
y_3 =?

K_3:

$\lambda P.P$

$e_2\ y_3$
street(y_3)
one_way(y_3)
y_3=t_1

FIGURE 4   SDRS for 1.5:B_2-A_3 and semantic content of the resolution

B_2 asks for a precision on an element of A_1: there is an object (the street) related to the event of A_1 (the turning), since the lexical representation[6] of the verb *"tourner"* implies a segment of a path where the turning ends up[7], and this is all the more obvious as B's answer is a phrasal fragment and not a sentence or a question (thus implying that some of the previous utterance has to be associated with the answer Ginzburg (1995)).

The negative case could not be a single "No" because of the cooperative nature of our dialogue. A is supposed to add some material to his negative answer. We will look at two different scenarii in the next section about narration.

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[6]For a more precise account on this point see Krause et al. (2001).

[7]The complete semantic representations of the dialogue turns are here just for completeness. What matters is just the information that allows for the bridging inference.

1.3.2 Narration

Now we consider a question introducing the next step of the itinerary which is in monologue the narration case. *Narration* is the canonical case of the coordination relation in discourse.

(1.7) A_1 Tu tournes à gauche juste avant Monoprix.
             You turn on the left before Monoprix.
         B_2 Et après, Dois-je aller jusqu'à la place du Capitole?
             And after that, do I have to go to the Capitole square?[8]
         A_3 Oui, exactement.
             Yes, exactly.

(1.8) A_3' Non, jusqu'au prochain carrefour seulement.
             No, just to the the next crossroad.

(1.9) A_3'' Non, cette rue ne mène pas à la place du Capitole.
             No, this street doesn't lead to the Capitole square.

In this example, question (B_2) asks for the following step of the prescription of the route. The temporal preposition "après" indicates this, but is not necessary (B_2' is correct too). Indeed the question is clearly about a segment of the explained route (part of the global topic) and by default we can assume this segment is the next step.[9]

At the cognitive level, things are slightly different from *elaboration.* The *plan-elaboration* involved previously corresponds to the *dominance relation* in the intentional structure of Grosz and Sidner (1986). Here, it is the *satisfaction-precedence* one which is involved. We suggest a new coordinating relation named *plan-sequence.* This relation is a cognitive one: A_1 and B_3'' elaborate a same higher SARG (Prescription of the Path) in the dialogue. In order to perform this higher SARG, participants have to perform A_1's SARG and then B_3's SARG which are prescription of two steps of this path.

Plan-sequence(α, β): It holds just in case where contents of α and β provides information which elaborates a plan for achieving a higher SARG. Thus α's SARG has to be satisfied before β's resolution.

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[8]B_2' Dois-je aller jusqu'à la place du Capitole?
Do I have to go to the Capitole square ?

[9]In contrast, if the preposition used was "before", it would be necessary because it is harder to backtrack on the route in an explanation: *"And before that, was it the Augustin's Museum that I had on my right?".* In the light of theses examples it seems reasonable to consider a temporal structure in the route explanation dialogue, and more generally in prescription dialogues, as in narrative monologue.

Q-sequence(α, β)**:** It holds if the SARG of all correct answers to β elaborates a higher SARG which is elaborated by α's SARG too.

Now we will consider two possible answers to B's question: the positive one B_3 and the negative one B_3' and B_3''. If the answer is "Yes", it just solves the question and allows us to infer *Plan-sequence* and *Narration* between A_1 and A_3.[10] Indeed, B_2 is about the next step of the route and so the topical relevance common to elements of a same narration is respected: it elaborates the global topic "How to go from ...to ...?"
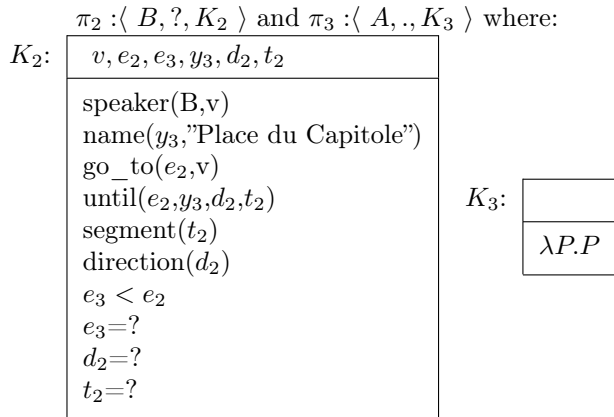
$\pi_2 : \langle\ B, ?, K_2\ \rangle$ and $\pi_3 : \langle\ A, ., K_3\ \rangle$ where:

K_2:

$v, e_2, e_3, y_3, d_2, t_2$
speaker(B,v)
name(y_3,"Place du Capitole")
go_to(e_2,v)
until(e_2,y_3,d_2,t_2)
segment(t_2)
direction(d_2)
$e_3 < e_2$
e_3=?
d_2=?
t_2=?

K_3:

$\lambda P.P$

FIGURE 5   SDRS for 1.7:B_2-A_3

After A_3 ("Yes"), the resolved question is (after anaphora resolution) illustrated by the figure 6

Again, there are two kinds of "No" answer. In the first case A_{3b} the extra-information gives an answer to the question. Thus, we again consider A_3' as a narration of A_1.[11] This is a negative narration but content gives some clues about the next step in the path.

But in terms of dialogue structure this case raises a difficult question. On the one hand B_2 is a question and if we follow the general proposition of SDRT it must be subordinated to the previous segment.

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[10]A reformulation could be: '"*You turn on the left before Monoprix. And after that you have to go to the Capitole square".*"

[11]We can reformulate it as *"Turn on the left just before Monoprix. Go on to the next crossroad".*

$$
\begin{array}{|l|}
\hline
v, e_2, e_3, y_3, d_2, t_2 \\
\hline
\text{speaker(B,v)} \\
\text{name}(y_3,\text{"Place du Capitole"}) \\
\text{go\_to}(e_2,v) \\
\text{until}(e_2, y_3, d_2, t_2) \\
\text{segment}(t_2) \\
\text{direction}(d_2) \\
e_3 < e_2 \\
e_3 = e_1 \\
d_2 = d_1 \\
t_2 = t_1 \\
\hline
\end{array}
$$

FIGURE 6 Semantic content of the resolution of $1.7B_2$ by A_3

On the other hand B_2 is a kind of "prescriptive narration" which should be a coordination relation. So do we attach B_2 by a subordination or a coordination ? If the two relations were of the same type it wouldn't be a problem, because we can attach a constituent by more than one relation, provided that their semantics are compatible, but this is not the case here.

In a more general perspective, this analysis still seems valid if we consider less specific kinds of dialogue: there is always a global topic and a part-whole relation between topics and subtopics, along with an order between subtopics of a same level; this more or less corresponds to the notion of "topic chain" of Polanyi (1988); in the case of task-oriented dialogue, the task to be accomplished can be seen as the global topic, which can be divided into sub-goals. Sub-goals of a same goal can sometimes be ordered and this is reflected for instance in the satisfaction-precedence relation of Grosz and Sidner (1986). The bottom line is that a question can be coordinating elements.

In the second negative answer, A_{3c} only corrects the question and doesn't give an answer. And following moves must resolve this "dispute". We focus here on questions and answers, and will not go any further on this correction problem[12].

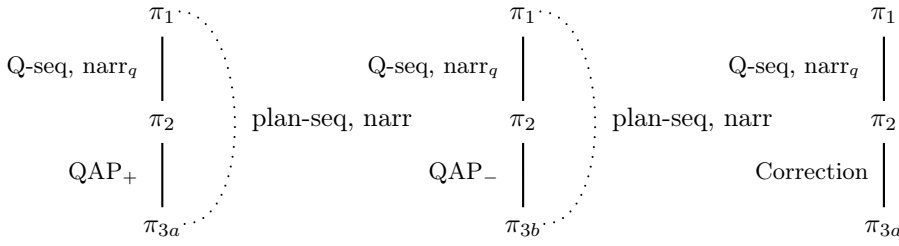[12]For more details see Asher et al. (2001) and Asher and Gillies (2003)

$$\pi_1 \qquad\qquad \pi_1 \qquad\qquad \pi_1$$

Q-seq, narr$_q$ | Q-seq, narr$_q$ | Q-seq, narr$_q$ |

$$\pi_2 \quad \text{plan-seq, narr} \quad \pi_2 \quad \text{plan-seq, narr} \quad \pi_2$$

QAP$_+$ | QAP$_-$ | Correction |

$$\pi_{3a} \qquad\qquad \pi_{3b} \qquad\qquad \pi_{3a}$$

FIGURE 7 Discourse scructures for 1.7, 1.8, 1.9

1.3.3 Acknowledge (Request for confirmation)

(1.10) A_1 Tu tournes à gauche juste avant Monoprix.
You turn on the left before Monoprix.

B_2 Avant Monoprix?
Before Monoprix?

A_3 Oui, avant Monoprix.
Yes, before Monoprix.

In this kind of question, there is no new material introduced in the question. It corresponds to what is usually called a request for confirmation[13] Bilange (1991) and appears when one of the participants has not well understood some part of the previous utterance, or wants a strong acknowledgement on a crucial information. B_2 doesn't bring any elaboration on the SARG of A_1, but an interrogative realization of the *Acknowledgement* relation. This relation has a twin one: *Plan-correction.*

Acknowledgement(α,β)**:** holds just in case β entails that his producer has accepted or achieved the SARG of α".

Q-Acknowledgement(α,β)**:** holds if all correct answers to β makes accepted or achieved the α's SARG.

Plan-correction(α,β)**:** holds just in case β entails that his pro-

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[13]Echo questions as in our example may have other lectures in addition to the request for confirmation. Here, we consider only clausal lectures of Ginzburg (2001) reformulated as *"Do you say before Monoprix?"* instead of *"What do you mean by before Monoprix?"* which is a kind of clarification request (treated as an elaboration in our framework).

ducer doesn't accept or is unable to achieve the SARG of α.

When a confirmation request is positively answered[14], the confirmation takes effect and the material enters into the common ground. Moreover we can infer a classical acknowledgement between A_1 and A_3.

(1.11) A_1 Tu tournes à gauche juste avant Monoprix.
              You turn on the left before Monoprix.
        B_2 Après Monoprix?
              After Monoprix?
        A_3 Non, avant.
              No, before.
        A_4 Puis, tu continues dans cette rue.
              Then, you continue on this street.

(1.12) B_4 D'accord.
              OK.

(1.13) B_5 Je ne vois pas cette rue!
              I don't know this street.

The negative answer is, as usual, more complicated than the positive one. Cooperativity forces the responder to re-utter the good information in addition to the negative answer. A_3 can be followed by the next step of explanation A_4. In this case there is an implicit acknowledgment of this sub-dialogue. But B can make an explicit acknowledge before the explanation goes on (ex. 1.12). B can also dispute the prescription given by A (ex. 1.13). These three scenarii are equally acceptable.

1.3.4 Correction

When corrections come up in disputes, a relation of *plan-correction* is assumed, and should modify a SARG of the agent. *Correction* otherwise only concerns the semantics of utterances. More precisely this relation presupposes some inconsistency between the contents of the two utterances that it relates.

(1.14) A_1 Tu tournes à gauche juste avant Monoprix.
              You turn on the left before Monoprix.
        B_2 N'est-ce pas juste après Monoprix plutôt?
              Isn't it before Monoprix instead?
        A_3 Oui, tu as raison.
              Yes, you're right.

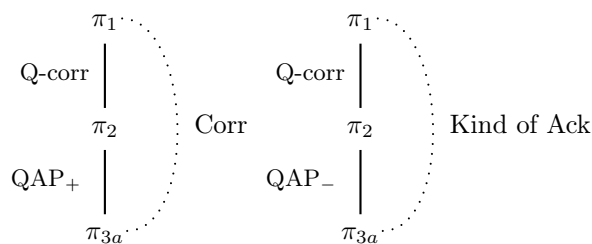[14]Very often, information during a request for confirmation is repeated.

FIGURE 8 Discourse structures for 1.14 and 1.15

(1.15) A$'_3$ Non.
  No.

The presence of a negation in the question introduces a correction of the prescription. Some elements of the correction B$_2$ are correcting the target A$_1$. The proper treatment of the classical case of a correction is the matching between the correction and the target except for the corrected parts.[15]

When the answer is positive (A$_3$) we can rephrase the resolved question with *"No, it is after Monoprix"* and it constitutes a *correction* of the previous utterance. It also leads us to infer a *plan-correction* between A$_1$ and A$_3$.

Notice here that A can answer by a single "No" without violating the cooperativity constraint. The results of this negative answer are comparable to those of an *acknowledgement* as illustrated in figure 8.
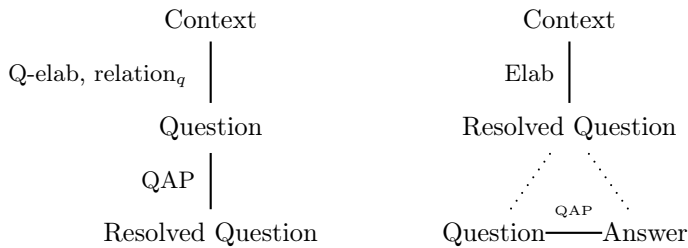
(1.16) A$_1$ Tu tournes à gauche juste avant Monoprix.
  You turn on the left before Monoprix.

  B$_2$ N'est-ce pas juste après Monoprix plutôt?

  A$_{3a}$ Non.
  No.

  A$_{3b}$ Maintenant, continues dans cette rue.
  Now you continue on this street.

  B$_4$ D'accord.
  OK.

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[15]The correction is thus usually closely linked to the information structure: Gardent et al. (1996), Txurruka (1997), Asher and Gillies (2003).

1.4 Defining new types of question/answer pairs relations

The previous section has shown difficulties with the current SDRT proposal for attaching questions. First there is an incompatibility in the structure itself. Remember the case of the interrogative narration: $Narration_q$ and QAP are subordination relations and $Narration$ is a coordination relation. Thus, it would seem impossible to keep the tree-like hierarchical structure induced by the subordination relations, something few authors would consider satisfying for a rhetorical approach.

The problem of the nature of the dialogic relations still remains open, especially when the corresponding monologic relation is a coordinating one. If we put the resolved question in the answer then it seems problematic to keep the structure of a narration (since the answer is below the question in the structure). A first step towards the solution is to keep the structural nature of the monologic relation.We could go one step further and consider the attachment on the right-hand side of the following figure for interrogatives[16] instead of the left-hand side one:
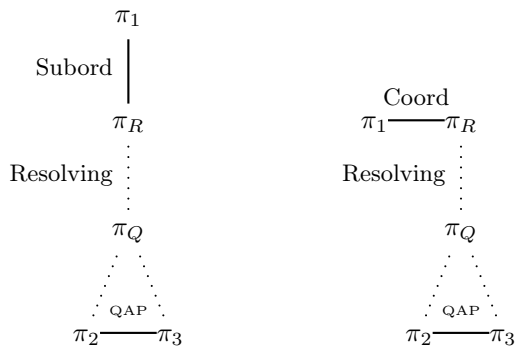

According to this treatment a question-answer pair is regarded as a single rhetorical unit in the global dialogue structure (whether there are embedded questions elaborating further the point under discussion or not). Thus we keep track of the different levels of resolution of questions (if there are embedded questions) and we can still represent the rhetorical functions of resolved question-answer sequences in the general dialogue.

Incidentally, this raises another point: if a question can take any

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[16]Dashed lines used in place of solid lines mark that lower constituents are only parts of the higher node. These links are not rhetorical relations.

rhetorical role, does "questioning" really add something to the rhetorical dimension? We could instead consider that the resolved question/answer pair plays that role. In a task oriented setting this means for instance we can represent successful question-answer pairs as partial accomplishments towards the task under discussion. If we adopt this view, the resulting structures are then the following for the previous examples:

$$
\begin{array}{ccc}
& \pi_1 & \\
\text{Subord} & | & \\
& \pi_R & \\
\text{Resolving} & \vdots & \\
& \pi_Q & \\
& \text{QAP} & \\
& \pi_2 \text{---} \pi_3 &
\end{array}
\qquad
\begin{array}{c}
\text{Coord} \\
\pi_1 \text{---} \pi_R \\
\text{Resolving} \quad \vdots \\
\pi_Q \\
\text{QAP} \\
\pi_2 \text{---} \pi_3
\end{array}
$$

This will also change the constraints on anaphoric resolution, once we have defined availability of referents between the context, a resolved Q/A pair and the content of questions and answers.

We have just looked at the two canonical relations and leave others for future work. Prévot (2004) looks more precisely into the semantics of these relations, especially in the light of other types of questions, such as wh-questions and alternative questions.

1.5 Conclusion

In this paper, we address an important aspect of questioning in dialogue : the rhetoric role of questions. We defend the position that a question can have different rhetoric roles. Up to now, SDRT has only explored the question at the cognitive level, leaving aside the semantic relations of the content level.[17] Yet, approaches using dialog acts already distinguish between requests for information and requests for a confirmation Bilange (1991) Poesio and Traum (1997). We claim in addition that any monologue relation can be realized by a question and its answer considered as a single unit. We have therefore investigated the different cases of question/answer sequences and tried to show how they are related to more discursive rhetorical functions. Our

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[17]In Asher and Lascarides (2003) a more complete account on dialogue issues is proposed.

proposal have some consequences on question attachment in SDRT or any rhetorical theory of dialogue.

First, we have seen that some $relation_q$ can be coordinations. However, the main issue from our point of view is really the following: is the interrogative nature of a segment of a discourse relevant to the rhetorical structure? Indeed, could we not consider attaching questions to the context with equivalent monologic relations (e.g. what we have called so far $narration_q$ would boil down to $narration$)? This solution need some sort of combining of the question and its answer in a higher node (composed by the semantically unsaturated question and answer) instead of in the answer node itself. This higher node could be seen as the discourse topic of the question/answer sequence. See Asher (2004), Asher and Vieu (2005), Prévot and Vieu (2005) about using the discourse topic for solving this issue. Then a question is only a part of this unit. This could moreover prove useful in the study of how participants establish a common ground through a series of questions and answers as it has been shown in Prévot (2004).

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